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The Impact of a Standardized Cognitive Information Processing Intervention on the Career Decision State of at-Risk Youth

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THE FLORIDA STATE UNIVERSITY
COLLEGE OF EDUCATION

THE IMPACT OF A STANDARDIZED COGNITIVE INFORMATION PROCESSING
INTERVENTION ON THE CAREER DECISION STATE OF AT-RISK YOUTH

By

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This dissertation is dedicated to my daughter, Sarah, whose smiling face, free spirit, precociousness and loving nature make life a precious gift every day. As it was said in the movie *Alice in Wonderland*, “never lose your Much!”

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ABSTRACT

How do children's career aspirations come to reflect the social inequalities among their elders? One theorist, Linda S. Gottfredson, 1996 was interested in explaining how at-risk children come to define themselves professionally and found that career choice is an effort to position oneself in the extensive social order in which the most public, social aspects (i.e., gender, social class, intelligence) play an integral part in this process, rather than the more personal, private elements (i.e., values, personality, siblings, family plans). Given this information, the next question would be, how do we break the cycle of underachievement, poverty, and under-education of at-risk youth, so that they can develop educational and career goals that are most suited to their values, interests and abilities?

The purpose of this study is to evaluate the impact of a Cognitive Information Processing (CIP) intervention structured by a standard decision-making tool, the Career Decision Making Tool (CDMT) on the career decision-state of at-risk youth. Impact is defined as the total effects, intentional and unintentional, of administering a human service intervention. Furthermore, the career decision state is defined in terms of (a) the extent to which individuals are certain of their educational and occupational choices and (b) their degree of satisfaction with their choice at a given moment in time (Bullock, Peterson, Lierer & Reardon, 2009). More simply, career decision state is defined in terms of career decidedness (certainty) and satisfaction.

This study was implemented as part of an existing summer, community-based prevention and health promotion program, Project K.I.C.K. (Kids in Cooperation with Kids), housed within a local Boy's and Girl's Club. While seventy-five youth participated in some of the intervention activities, complete data were available for forty-six participants. Forty-six predominately African American (83%) adolescent youth, ages 11 – 18, attending summer camp at a Boy's and Girl's Club in a medium-sized community in North Florida participated in the intervention. The goals of the CIP interventions are to ensure that the youth are: a) given information and experiences to broaden their educational and career knowledge base; b) prepared to make an informed choice of career; and c) are equipped to develop an educational plan conducive to attaining their career aspirations.

The results of this study indicated that, with respect to the development of the occupational goal decision state in terms of decidedness, certainty, or satisfaction, the means did not vary significantly across the observations, pretest, pretest, and posttest. Thus, collectively, the CIP intervention appeared to have no impact on these participants' choice of occupational goal. However, the chi-square ratios pertaining to frequencies of decidedness indicated there was a significant shift ($p \leq .05$, $\chi^2 = 32.01$, $df = 6$) in the level of decidedness from pretest 2 to the posttest in that 5 participants indicated a first choice of occupation on the second pretest, but no participants indicated a first choice on the posttest. Thus, there was a shift toward becoming more undecided in terms of occupational goal.

With regard to level of educational choice, satisfaction with choice, and certainty of choice, the CIP intervention had no significant impact on the participants' educational goal decision state. Nonetheless, there were changes from the second pretest to the posttest in terms of frequencies of individuals endorsing "Don't know" and "BA/BS degrees," with the former increasing by 8 participants and the latter decreasing by 8 participants. Thus, as with the case of occupational goals, there is a shift toward becoming more undecided in terms of educational goal as a result of participation in the CIP intervention.

On a four-point helpfulness scale where 1 = not helpful, 2 = somewhat helpful, 3 = helpful, and 4 very helpful, the participants expressed that the vast majority of activities were helpful to very helpful in formulating their educational and occupational goals. With respect to the entire CDMT experience in terms of satisfaction, the participants indicated that they were satisfied with the facilitation of educational goals and occupational goals.

In conclusion, the implementation of a CIP intervention structured by the CDMT appeared to provide an "awakening" experience for many of the participants regarding educational and occupational opportunities. The majority of the participants enjoyed the activities and expressed satisfaction regarding their impact on their educational and occupational goals. It appeared that this was an effective career intervention that could be improved with additional emphasis on preparing for field trips and in processing the experience afterward. The participant's responses to this career intervention were highly encouraging.

CHAPTER I

THE IMPACT OF A STANDARDIZED COGNITIVE INFORMATION PROCESSING INTERVENTION ON THE CAREER DECISION STATE OF AT-RISK YOUTH

INTRODUCTION

Social Consequences of Inadequate Career Decision Making

Super (1996) posits that guiding one through the development of life stages can be accomplished, partially by facilitating the maturing of abilities, interests, and coping resources and in part by aiding in reality testing and in the development of life stages. In Super's Growth stage, ages four to thirteen, one task is to move out of the Fantasy phase and to begin to identify and explore more appropriate careers (Super, Savickas & Super, 1996). Many social problems may arise from adolescents making uninformed and unsuitable career choices at a crucial time in their lives. One such social problem is youth setting career goals and aspirations that are incongruous with their interests, values, skills and abilities. These career goals can be set too high or too narrow, for example, "If I focus exclusively on basketball, I will be recruited to play for the San Antonio Spurs," or too low "Even though my high school grade point average is 4.0, I excel in advanced mathematics and science, realistically, my only career opportunity is work as a cashier." Such choices may result in frustration, discouragement or the lack of full utilization of individual potential. The aim of the CIP intervention was to enable participants to formulate realistic educational and career goals based on an accurate appraisal of self-knowledge and informed educational and occupational knowledge.

Professional Consequences of Inadequate Career Decision Making

Employing a CIP intervention in the CDMT format outside of the school environment may have professional implications for policy makers, taxpayers, community members, families, the educational system, and teachers in general. There has been an increased emphasis on encouraging middle and high school students to initiate career planning activities so as to make appropriate educational and career choices (Department of Defense Educational Activity, 2004; Graves, 1997). Further, "Middle school students who receive career interventions are better able to make educational decisions regarding specificity, sequencing, and college appropriateness (Gillie & Isenhour, 2003, p. 2). Moreover, in addition to choosing a possible occupation or career path, it is important for students to be able to formulate an educational plan that will

prepare them for their chosen career goals (Gillie & Isenhour, 2003). In short, the aim of career interventions designed for youth should be to enable them to become effective career problem solvers and decision makers.

Nevertheless, one difficulty in helping individuals become career decision makers lies in the fact that the career decision making process is not only a high memory load task (Peterson, Sampson, Reardon, & Lenz, 2002), but it is also influenced by many factors, including the context in which students live, their personal aptitudes, and educational attainment (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Germeijs & De Boeck, 2003). In addition, there is no agreed upon process for career decision making (Moon, Lilley, Morgan, Gray, & Krechoweicka, 2004). Further, offering career interventions within the school environment is fraught with impediments. For example, school schedules are filled with teaching toward passing high stakes standardized measures of achievement, in addition to the general education requirements (Amrein & Berliner, 2002). Thus, implementing the established school curriculum leaves little time for students to learn about careers and making informed choices. Therefore, offering a standardized career intervention designed to impart career decision making skills in a community setting will allow youth to experience a variety of experiences and time to focus in their career development without competition for attentional space (Kahneman, 1973) from a demanding school curriculum.

Cognitive Information Processing

Cognitive Information Processing theory (CIP; Newell & Simon, 1970) as applied to career decision-making (Peterson, et. al, 1991, Sampson, et. al, 2004) holds that career counselors assist their clients helping them to become effective decision makers by understanding how individuals process information about themselves and the world of work. Effective decision making is accomplished by assisting individuals: a) to identify suitable career options; b) to choose from among them; and c) to implement their choice.

Based in cognitive theory, CIP is composed of two central concepts, the Pyramid of Information Processing domains (Figure 1), which describe the content of career decision-making, and the CASVE Cycle (Figure 2), which describes the process of career decision-making. The Pyramid of Information Processing is composed of three domains of knowledge that are required for the effective processing of effective career problem

solving and decision making to lead to a career choice: 1) knowledge of self and career options; 2) decision-making skills; and 3) executive processing skills. These domains are arranged hierarchically to form a pyramid, with three domains, and is often referred to as the Pyramid of Information Processing. The three domains are executive processing, decision skills and knowledge. The Knowledge domain lies at the bottom of the pyramid and is composed of two subdomains: Self Knowledge and Occupational Knowledge. Self knowledge is comprised of our personal experiences, our interests, abilities and values. The subdomain of Occupational Knowledge holds facts associated with the world of work.



Figure 1. Pyramid of Information Processing

Above the Knowledge domain is the Decision Skills Domain. Human decision-making skills are akin to computer programs that can manipulate data stored in the memory of the computer. Decision-making skills are referred to as generic information processing skills. The Decision Skills domain consists of the processing skills

Communication, Analysis, Synthesis, Valuing and Execution (CASVE). A problem exists when information is received that signals such a problem. Communication occurs, after one becomes aware that there is a problem, when one inquires to oneself and the world to locate the gap between an existing state and a desired state. Analysis describes the phenomenon whereby the causes of the problem are identified and the relationships among them are placed in a conceptual framework. Synthesis occurs when the possible courses of action to solve the problem are formulated. Valuing describes the evaluation and prioritization of each course of action according to its likelihood of success or failure and its impact on oneself and others. Execution occurs when a course of action has been selected and a strategy had been formulated to carry out the action.

Above the Decision Skills Domain is the Executive Processing Domain, where metacognitions govern the selection and sequencing of cognitive strategies to achieve a goal (Flavell, 1979; Baron, 1978; Gagne, 1985)

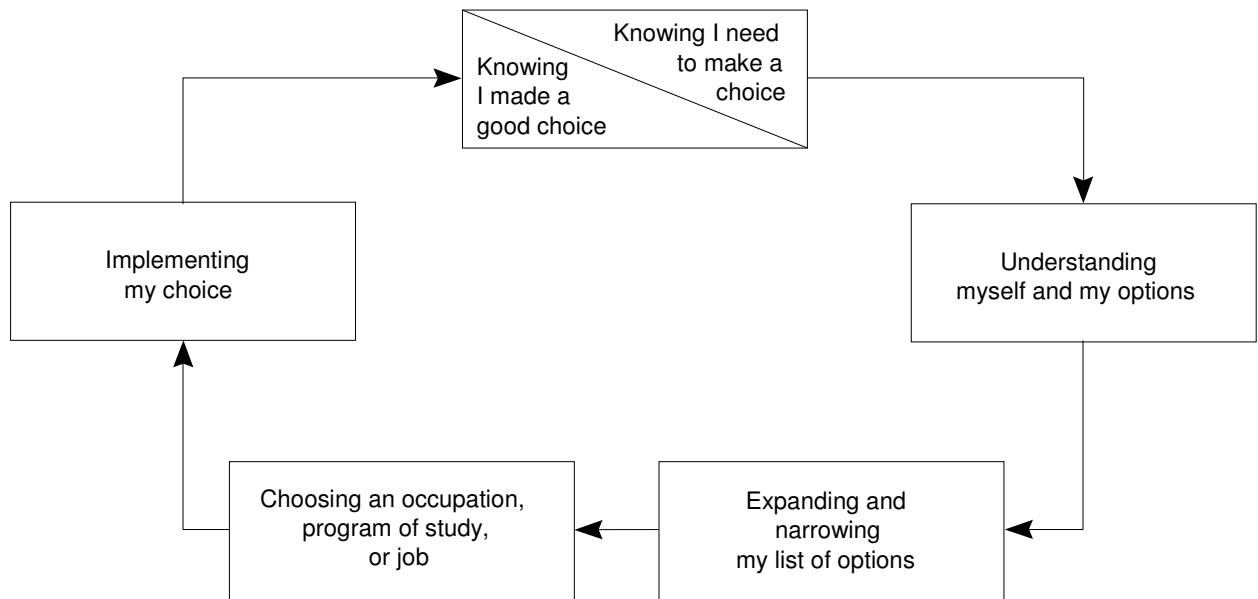


Figure 2. CASVE Cycle

The Career Decision-Making Tool as a Standardized CIP Intervention

The Career Decision-Making Tool. The Career Decision-Making Tool (www.acrnetwork.org, U.S. Department of Labor 2008), A Web-based Support Tool for Learning the Career Decision-Making Process model was developed jointly by the Center for the Study of Technology in Counseling and Career Development and the Learning Systems Institute (LSI) at Florida State University along with the U.S. Department of Education. The CDMT is an instructional system based on the CIP that assists teachers and career counselors in providing structured learning experiences to help students learn how to make career decisions, to locate appropriate career information and to develop an educational plan to help them achieve their chosen career goals.

The Career Decision-Making Tool (CDMT; U.S. Department of Labor, 2008) is designed to provide a web-based CIP intervention (www.acrnetwork.org), designed for teachers, guidance counselors, students, and even parents in gaining knowledge of the process for making decisions about career options and finding the information necessary for developing an educational plan to help them achieve their chosen career goals. The implementation of CIP through the CDMT allows for individualized instruction, the use of groups and tailored supplemental activities. The CDMT presents a standard sequence of activities that lead students through the CASVE cycle. Teachers, who have limited training in school guidance or career guidance, are facilitated in developing and implementing a CIP intervention through the CDMT.

The CDMT Facilitator's Manual (U.S. Department of Labor, 2009), also available on the web, leads a counselor or instructor through the different curricular units based upon the five phases of the CASVE cycle. The fundamental requirements of a facilitator are that they select and organize interventions given certain amount of time and resources, introduce each topic, provide visual media of the curricular content and introduce the activities. Teachers may approach using the CDMT in different ways. For instance, a teacher may: use small or large groups of participants; use additional assessments; choose activities and exercises to use together or separately; employ homework as an activity; download handouts; and chose the depth and pace of each activity. In addition, a teacher's approach to problem solving in other academic areas may be enhanced from the skills taught in the CDMT. A teacher may also be more apt to encourage students to approach activities and courses relevant to their RIASEC code

more enthusiastically. A RIASEC code is derived from Holland's (1994) interest inventory, the Self Directed Search. Interest inventories are measures that can help individuals clarify their interests. An interest inventory based on the RIASEC model is embedded in the CDMT. A RIASEC code represents six personality types: Realistic; Investigative; Artistic; Social; Enterprising; and Conventional.

Directors of community-based child enrichment programs may find the implementation of CIP through the CDMT to be an easily administered tool to use with youth as well. Such professionals may have the time necessary to devote to aiding youth in learning how to make decisions about career options and finding information necessary for developing an educational plan to help them achieve their chosen career goals. In addition, the low-pressure environment of a community based child enrichment program may lend the youth the cognitive space needed to concentrate on such an endeavor. Further, this environment provides for the flexible development of the learning event through multi-media, incentives to be built into the intervention, time for multiple guest speakers to provide varied practical occupational knowledge and field trips as a learning event. The lack of stress related to earning grades as well as inclusion of incentives can enhance the youth's self motivation to pursue an intervention targeted for educational and occupational exploration.

Career Decision State: An Outcome of a CIP Intervention. A Career decision state is a multivariate latent construct that describes the certainty and satisfaction with respect to (a) educational and (b) occupational choice at any given moment in time (Bullock, et al., 2009). In this study, the career decision state is assessed at entry to the CDMT intervention and at the exit. Differences or changes in career decision state between entry and exit may have attributed to the impact of the intervention itself. The changes in decidedness could be bi-directional. For students who are very undecided the CDMT intervention could increase their level of decidedness. On the other hand, individuals who are prematurely foreclosed may actually increase their level of indecision and move toward a state of tentativeness. Therefore, the hypothesis for the impact of CSMDT is couched in the null form with respect to certainty of choice. Conversely, the hypothesis for satisfaction is stated in the alternate form since satisfaction with choice is expected to increase regardless of the entry level of

decidedness. As the participants learn more about themselves and the world of work, they will become more satisfied with their level of decidedness.

Purpose of the Proposed Study

This study is designed to provide youth participating in a summer community-based prevention and health promotion program with problem solving and career decision-making skills using the Career Decision-Making Tool (CDMT) to implement a Cognitive Information Processing (CIP) intervention.

While the CDMT was developed and tested in a school-based learning environment, the present study focused on the applicability of the CDMT as a CIP intervention in a community-based learning environment. This study was implemented at the Greg McCray Boy's and Girl's Club in Tallahassee during the summer of 2007, and targeted male and female predominately African American youth ages eleven to seventeen years old. Many of these youth were living in government subsidized housing, are considered to be living in poverty, live in predominately single parent (mother) headed households and are by definition at-risk for substance abuse, juvenile delinquency, dropping out of school, unemployment and little work force readiness (Frydenberg & Lewis, 1991; Lohman & Jarvis, 2000; Luthar & D'Avanzo, 1999, Myers, Stice, & Wagner, 1997; Novacek, Raskin, & Hogan, 1991; Wills & Hirky, 1996; Wills & Shiffman, 1985).

Protective factors, such as community based interventions have been proven to interrupt the cycle of poverty, substance abuse, educational underachievement and unemployment (Benson, 1982; Capuzzi, 1998; Chapman & Mullis, 1999; Guzman, 1998; & Sandler et al., 1997). Given the goals of the CIP, the CDMT intervention is designed to ensure that the youth are: a) given information and experiences to broaden their educational and career knowledge base; b) prepared to make an informed choice of career; and c) are equipped to develop an educational plan conducive to attaining their career aspirations. In brief, the purpose of this research study is to ascertain the impact of the instructor led CDMT on the career decision state of at-risk youth in a non school-based setting during the summer.

Research Questions and Hypotheses

The general research question is as follows:

1. What is the impact of participation in a community-based CIP intervention structured by the CDMT on the development of the career decision state of at-risk youth?

The specific research questions are as follows:

1. What is the relationship between participation in a CIP intervention based on the CDMT and the occupational goal state, level of occupational indecision, and certainty and satisfaction with occupational choice; and
2. What is the relationship between the CIP intervention based on the CDMT and the educational goal state, level of educational indecision, educational goal development, and certainty and satisfaction with educational choice?

The research hypotheses are stated in the null form due to the bi-directional nature of the decision state. Depending upon the entry level of indecision, the CDMT intervention could increase the level of decidedness for students who are very undecided. Conversely, individuals who are prematurely foreclosed may increase their level of indecision as they move toward a state of tentativeness. Therefore, the hypothesis relating to the impact of CDMT is couched in the null form with respect to certainty of choice. Conversely, satisfaction with choice is expected to increase regardless of the entry level of decidedness. As the participants learn more about themselves and the world of work, they will become more satisfied with their level of decidedness.

The research hypotheses are stated as follows:

1. There is no relationship between participation in the instructor-led CDMT Focusing on My Future Workshop and the occupational goal state of at-risk youth; and
2. There is no relationship between participation in the instructor-led CDMT Focusing on My Future Workshop and the educational goal state of at-risk youth.

The following descriptive research questions were also investigated to ascertain the effectiveness of a CDMT, CIP career guidance intervention in a community-based prevention and health promotion program:

1. To what extent were the participants satisfied with the activities included in the workshop; and

2. To what extent were the participants satisfied with the overall workshop experience?

Definitions

1. Work – activity that produces something of value for oneself or others (Reardon, et. al, 2000).
 - a. Wage work – payment is for time and effort.
 - b. Fee work – payment is for results.
 - c. Home work – done in the home, child raising or lawn care, for example.
 - d. Gift work – voluntary or charitable work.
 - e. Learning work – studying and learning new skills (Reardon, et. al, 2000).
2. Career – time extended working out of a purposeful life pattern through work undertaken by the person (Reardon, et. al, 2000).
3. Career Development – the total constellation of economic, sociological, psychological, educational, physical, and chance factors that combine to shape one’s career (Reardon, et. al, 2000).
4. Occupation – a group of similar positions found in different industries or organizations (Reardon, et. al, 2000).
5. Position – a group of tasks performed by one person in an organization; a unit of work with a recurring or continuous set of tasks; a task is a unit of job behavior with a beginning point and an ending point performed in a matter of hours rather than days (Reardon, et. al, 2000).
6. Job – paid position held by one or more persons requiring some similar attributes in a specific organization. (Reardon, R., et al, 2000)
7. Aspiration – something that you hope to achieve; a strong hope or wish for achievement or success (Cambridge dictionary [on line] (<http://dictionary.cambridge.org/define>)).
8. Career Decision State – A Career decision state is a multivariate construct that describes the certainty and satisfaction with respect to educational and occupational choice at any given moment in time (Bullock, Peterson, Reardon, Lierier, 2009).

9. Occupational Goal State – An occupational goal state is a multivariate construct that describes the certainty and satisfaction with respect to level of occupational goal indecision at any given moment in time.
10. Educational Goal State – An educational goal state is a multivariate construct that describes the certainty and satisfaction with respect to educational aspirations at any given moment in time.
11. Impact – Impact is defined as the total effects, intentional and unintentional, of administering a human service intervention.
12. At-Risk Youth - Previous literature has shown children categorized as living in a low socio-economic status are at greater risk for maladaptive coping styles, low self-esteem, increased drug use, and increases in violence and aggressive behaviors (Champman & Mullis, 1999; Cummings, Vogel, Cummings, & El-Sheikh, 1989; & Rollin, Rubin, Ferullo, & Buncher, 1995).

Delimitations

- The scope of this study encapsulated youth aged 11 to 17, participating in the summer Boys and Girls Club program in a medium sized southeastern city who volunteered to participate in a career education intervention designed to facilitate the development of educational and career decision state.
- The results of this study may only be generalized to such groups using the educational resources contained in the CDMT and procedures used in this study.
- An additional limitation is the characteristics of the facilitator and co-facilitators. The personal characteristics, ethnicity, level of experience, and other characteristics of the facilitators and co-facilitators may affect the youth's response to the intervention.
- Although the interventions included speakers and field trips, the materials used for the interventions are restricted to the material contained within the web-site of the CDMT as of 2008.
- Further, the physical facility (Boys and Girls Club) may be a limitation due to possible distractions, such as other children, small meeting rooms,

hot temperature, noisy environment and competing activities. The facility also offered limited available human and financial support. In sum, the results will reflect the influence of the web-based CDMT materials, the speakers, field trips, facilitators and the Boy's and Girl's Club organizational content and program.

- This study is evaluating selected outcomes of the intervention, which may also be a limitation.
- Data were collected in the summer of 2007, prior to the economic recession; therefore, if evaluated currently, the impact of the CDMT on the educational and career aspirations of at-risk youth may or may not be tempered by the recession.
- Finally, the interventions conducted during the study used only selected portions of the CDMT.

Assumptions

The assumptions of this study are listed below:

1. The participants were motivated and curious regarding the exploration of career and educational goals;
2. The participants were capable of listening and understanding the content of the curriculum and the activities;
3. The participants answered all instruments honestly and forthrightly;
4. Cooperation from Tallahassee Community College and Tallahassee Memorial Regional hospital provided an enriching and enjoyable encounter; and
5. The participants were able to attend all interventions.

Significance of the Proposed Study

The restrictive school-based setting of career guidance service delivery for adolescents places exceptional demands on school systems to the extent that career guidance is often given in a condensed manner that may dilute the process. While the Boys & Girls Club provides some Career Development Education, the services are not comprehensive and, most importantly, are not offered during the summer program. This study will increase knowledge about career guidance service delivery (of a web-based career guidance tool) in a community based setting during the summer as an alternative to

school-based career guidance. This study will reveal the impact of the CIP intervention using the CDMT on multivariate educational and career decision states. The information derived from this study may also be available to other potential users of the tool worldwide.

CHAPTER II

LITERATURE REVIEW

Introduction

This study was designed to investigate the impact of a Cognitive Information Processing (CIP) intervention using the Career Decision-Making Tool (CDMT) to implement a problem solving and career decision-making skills intervention with at-risk youth participating in a summer community-based prevention and health promotion program. The following is a literature review pertaining to characteristics of at-risk youth, community based interventions, career development of adolescents, Cognitive Information Processing Theory (CIP), the Career Decision-Making Tool and aspects of Schema Theory.

At-Risk Youth

Socioeconomic status (SES) is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position relative to others, based on income, education, and occupation (Demarest, Reisner, Anderson, Humphrey, Farquhar, & Stein, 1993). When analyzing a family's SES, the household income earners' education and occupation are examined, as well as combined income, versus with an individual, when their own attributes are assessed. (National Center for Educational Statistics, 2008).

Socioeconomic status is typically broken into three categories, high SES, middle SES, and low SES to describe the three areas a family or an individual may fall into (Goode, 1999).

When placing a family or individual into one of these categories any or all of the three variables (income, education, and occupation) can be assessed. A fourth variable, wealth, may also be examined when determining socioeconomic status (Marmont, 2004). Additionally, income, occupation and education have shown to be strong predictors of a range of physical and mental health problems, ranging from respiratory viruses, arthritis, coronary disease, and schizophrenia (Werner, Malaspina, & Rabinowitz, 2007).

Previous literature has shown children who stem from families that are categorized as low socio-economic status (SES) are at greater risk than their middle or high SES counterparts for maladaptive coping styles, low self-esteem, substance abuse, and violent/aggressive behavior, dropping out of school, unemployment and

underemployment (Champman & Mullis, 1999; Cummings, Vogel, Cummings, & El-Sheikh, 1989; Rollin, Rubin, Marcil, Ferullo, & Buncher, 1995).

Community-based intervention programs have demonstrated effectiveness in increasing protective factors in adolescents (Benson, 1982; Capuzzi, 1998; Chapman & Mullis, 1999; Guzman, 1998; Rollin et al., 1995; Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997). Specifically, Recklits and Noam (1999) found that empowering adolescents with active coping skills (problem solving and decision-making skills) is positively correlated with better overall adjustment and also serves as a protective factor.

The Community

The federal definition of poverty usually refers to an individual or family that has an income that is short of the amount needed for food, shelter, and other items as distinguished by the United States Government (U. S. Department of Education, 1991). Poverty is typically operationalized by “income-to-need ratios calculated on the basis of official poverty thresholds, family per capita income, eligibility for subsidies to the poor (e.g., free or reduced-cost lunch), or family income cutoffs corresponding to those used to determine eligibility for subsidies” (p. 9) (McLoyd, 1997). Socioeconomic status (SES) typically delineates the ranking of a person’s access to wealth, power, and social status. Some of the defining characteristics that contribute to the SES ranking include the occupation of the father, mother, or both, family income, education, prestige, power, and life style (McLoyd, 1997).

Using the aforementioned guidelines, the children and families participating in Project K.I.C.K. and in the Boys and Girls Club are classified as low SES and live in poverty (U. S. Department of Education, 1991). Previous research has shown that children who live within a lower SES/poverty level are at an increased risk for: 1) low adaptive functioning; 2) low self-confidence and self-esteem; 3) strained peer relations; 4) temper tantrums; 5) social maladaptation (shyness, aggression, immaturity, learning/cognitive problems); 6) psychological distress (sadness, tension, nervousness); 7) delinquent behavior; 8) living in a single parent household; 9) substance abuse; 10) criminal behavior; 11) illiteracy; 12) unemployment; and 12) depression, to name a few (Aber, 1994; Diong, & Bishop, 1999; Jarrett, 1995; Lohman & Jarvis, 2000; McLoyd, 1997; Novacek, Raskin, & Hogan, 1990; Novaco, 1975; Rollin, Anderson, & Buncher, 1999).

Typically, youth who participate in Project K.I.C.K. stem from familial constellations that involve extended families living in the same household, often headed by single female parents, grandmothers, godparents, or aunts. Frequently, the head of the household is unemployed or employed in an entry-level service industry job. This type of living environment has proven to affect a child's career and educational aspirations (U. S. Department of Education, 1991; Rollin, Rubin, Shelby, Holland-Gorman, Kourofsky, Arnold, Laird, Santorsola, & Solomon, S. (2001).

In sum, the participants in this study stem from families and communities that could potentially negatively affect their career and educational goal aspirations, and community-based interventions have proven to increase protective factors. Therefore, the CIP intervention using the CDMT in a community-based setting was designed to help the youth identify suitable career options and identify the educational requirements of such career options.

Boys and Girls Club as a Context for Learning

Greg McCray Boys & Girls Club. Kerr and Downs (1989. [On-line] Available: <http://www.thepositiveplaceforkids.com/history>) conducted a community household survey for the City of Tallahassee which identified substance abuse, crime and teen pregnancy as the top three social problems facing the Leon County community. In addition, in the mid 1980s the Tallahassee Police Department identified a noticeable increase in violent crime committed by youth. These two discoveries led community members to seek a solution to the social problems facing Leon County youth.

In April of 1990 six concerned citizens of Leon County assembled to address their concerns about the issues that were identified by the two-above mentioned studies. These community members believed it best to associate with a national youth development organization that already had an established track record of working with at-risk kids instead of creating a new program for the youth. The founding members chose the Boys & Girls Clubs of America (BGCA)—a nationwide affiliation of local, autonomous Clubs serving over two million youth throughout America to serve the at-risk youth in Leon County. At the time of inception of the Leon County Boys and Girls Club, The BGCA had been, in existence for 127 years.

The original group of six became twenty individuals who were concerned about the future of youth in Tallahassee. With the assistance of BGCA, they formed a Board of

Directors and raised money from local businesses and civic leaders for the first year of operation, obtained the use of an already existing structure, and hired an executive director.

In February of 1991 the Boys & Girls Club of Tallahassee/Leon County was chartered by the State of Florida and received the 501(c)(3) designation from the Internal Revenue Service (IRS) in August 1991. The official opening of the organization was in January 1993. The name of the club was changed to the Boys & Girls Clubs of the Big Bend, Inc., in April of 1996. The Boys & Girls Clubs of the Big Bend offer five fundamental areas of programming to meet the diverse needs, interests and inclinations of all members. According to the Director (K. Dennis, personal communication, June 1, 2007) and the club web-site, the Boys & Girls Club staff incorporates the following themes into daily activities, allowing youth to learn in a fun and educational environment:

1. Character and Leadership Development: Empowers youth to support and influence their Club and community, sustain meaningful relationships with others, develop a positive self image, and respect their own and others' cultural identities;
2. Education and Career Development: Enables youth to develop aspirations for the future, apply learning to everyday situations and explore opportunities for career and educational enhancement;
3. Health and Life Skills: Develops young people's capacity to achieve and maintain healthy lifestyles, set personal goals and develop the competencies to live successfully as self-sufficient adults;
4. Arts and Cultural Enrichment: Helps young people develop self-expression and creativity, acquire multicultural appreciation, and enhance skills in crafts, performing and literary arts; and
5. Sports, Fitness and Recreation: Encourages youth to develop fitness, positive use of leisure time, skills for stress management, appreciation for the environment and social and interpersonal skills.

The Greg McCray Boys & Girls Club Director, Kacy Dennis, reported (personal communication July, 5, 2007) that the Career Development programming area employs the Career Launch and Money Matters curriculums. Both programs utilize computer-based and classroom activities that target adolescents. The Career Launch program

provides occupational information and occasionally incorporates guest speakers. The Money Matters program teaches money management skills, like how to balance a check book, to the adolescents who choose to participate. Mr. Kacy reported (personal communication July, 5, 2007) that both programs are offered irregularly, have few participants and the youth did not enjoy the programs due to the classroom type instruction. He attributed the lack of participation to the program's implementation during the school year, stating, "the kids don't want to participate in a classroom activity after being in school all day" (personal communication July, 5, 2007) Mr. Kacy strongly supported implementing a career intervention using the Career Decision Making Tool during the summer program (personal communication, June 20, 2007).

The Boys & Girls Clubs of the Big Bend offer areas of programming designed to foster; character and leadership development; education and career development; health and life skills; arts and cultural enrichment; and sports, fitness and recreation in a community-based setting. Since the education and career development program within the Boys & Girls Club is offered infrequently and lacks participation when it is offered, the CIP intervention using the CDMT fit nicely into the club's programming needs.

Interventions to Help At-Risk Youth

Community Based Interventions. This study defines an intervention according to Topping and Wolfendale's (1985) definition, which states that an intervention is an intentional fit between precisely articulated educational and curricular goals and the essential objectives towards realization of these. These researchers characterize an intervention according to additional input in the way of resources, including staff, equipment and in-service; special curricula, language programs, cognitively oriented approaches; and the fostering of home-school-community links (Topping and Wolfendale, 1985). The CDMT Focusing on My Future Workshop will utilize these characteristics during the interventions by providing staff, equipment, in-service, a curriculum, and cognitively oriented approaches to learning about self and career through a home-school-community approach.

Hutchins and McPherson (1991) contend that families are the most important support system for children with special health needs. Furthermore, health care services for children are best delivered by a comprehensive approach centered on the child, the family, and the community (Hutchins, & McPherson, 1991). Community-based

interventions that focus on the child, the family and the community appear to better serve children.

Parental involvement has oftentimes been considered an important element in fostering children's scholastic achievement. Kinard (1974) measured children's achievement scores in relation to the amount of parental involvement and found that parental involvement had a significant effect on children's achievement scores. Wolfendale (1985) concludes, after a review of research, that intervention projects that include parental involvement in educational and community-based programs exert a positive influence on the child. Wolfendale (1985) further states, that although child-rearing practices of lower socioeconomic families are generally found to be deficient in promoting optimal academic functioning of the child, community based programs with active parent involvement tend to constructively alter the parenting practices of the participants. This implies that as parents learn more appropriate skills in promoting academic functioning of the child, the child, in turn, performs better scholastically, which in turn has a direct effect on the child's future career choices.

For the child, the influence of parents is the greatest predictor of their academic, social, and mental success (Bempechat, Graham, & Jimenez, 1999). Encouraging parental involvement in the educational aspirations and general lives of their children has been proven to positively influence the child (Olmsted & Rubin, 1983). Studies show that regular, consistent family routine and healthy parent-child relationships increase the child's achievement in school and elsewhere (Brody & Flor, 1997; Bempechat, Graham, & Jimenez, 1999).

Parental involvement in education and learning positively affects children and enables them to excel in the cognitive and affective domains (Bronfenbrenner, 1979). It is apparent that parental involvement benefits the child's academic achievement (Brody & Flor, 1997; Bempechat, Graham, & Jimenez, 1999) it has also been shown to improve the child's self-confidence, decrease depression, and anxiety and aid in healthier friendships and self-regulation (Zimmerman, Ramirez-Valles, Zapert & Maton, 2000; Brody & Flor, 1997). Specifically, Zimmerman, et al (2000) found that parental support among African Americans might help insulate adolescents from anxiety and depression. Involving parents in a community-based career intervention should enhance the youth's learning experience.

The CIP intervention using the CDMT in a community-based setting was designed to promote parental involvement with the participant's career and educational goal exploration activities. The participants were instructed to discuss with their parent/guardian their parent's/guardian's educational level and career path. This information was included in the Demographic Survey that the youth completed (e.g., highest grade completed by your mother). The youth could complete several of the activities at home with the assistance of their parent or guardian. In addition the participants were instructed to communicate with their parents about the activities, surveys, field trips and information that they learned during the CDMT intervention.

Adolescent Career Development

Gottfredson. Gottfredson's Theory of Circumscription and Compromise is concerned with the origins of individual and group differences in career development (Gottfredson, 1996). Gottfredson was interested in explaining how children's career aspirations come to reflect the social inequalities among their elders. This theory combines elements of trait and factor theories and those of developmental theories and is concerned with the course of career development and career aspirations.

As with other theories in vocational psychology, the theory of circumscription and compromise describes career choice as: a developmental process commencing in childhood; efforts to implement self-concept is reflected in an individual's occupational aspirations; and career choice satisfaction is contingent upon the fit between career choice and self-concept. This theory is distinctive from other vocational psychology theories in four ways: (1) career choice is an effort to position oneself in the extensive social order and the most public, social aspects (gender, social class, intelligence) rather than the more personal, private elements (values, personality, family plans) is emphasized; (2) it examines cognitive development and its effect on career development beginning in the preschool years and focuses on how cognitions of self and occupations develop; (3) beginning in early childhood, vocation choice is a process of eliminating options and narrowing one's choices; and (4) as an individual attempts to implement their career aspirations, it examines how individuals compromise their goals in coming to terms with reality (Ginzberg, Ginsburg, Axelrad, & Herma, 1951).

Gottfredson (1996) describes occupational choice as an elimination of the negative rather than selecting the most positive occupational choice. This process is

derived through one's view of self and their cognitive map of occupations. Children have an equipped capacity to construct common social maps, although they are primitive early in life, but with increasing cognitive maturity they come to perceive the same occupational map of the social order as adults do (Cairns & Cairns, 1988). Reeb (1974) posits that adolescents and adults distinguish occupations along a few major dimensions: masculinity/femininity, occupational prestige level; and field of work to create a two dimensional map.

Gottfredson (1996) outlines the following theoretical concepts:

- Congruence and person-environment fit are referred to as compatibility, which is how individuals identify the occupations they most prefer;
- Occupational aspirations are the joint product of assessments of compatibility and accessibility;
- Social space refers to the range of alternatives in the cognitive map of occupations that are acceptable to the individual;
- Circumscription is the process by which youngsters narrow their territory, or acceptable alternatives through progressive elimination of unacceptable alternative to create a social space, or zone of acceptable alternatives;
- Compromise is the process by which youngsters begin to abandon their most favored occupational alternatives for less compatible but more accessible ones.

The circumscription of occupational aspirations from early childhood through adolescence is conditioned on cognitive development and can be described by five principles, which occurs in four stages of development (Gottfredson, 1996). These principles and stages are: Circumscription Principle One: Increasing Capacity for Abstraction; Circumscription Principle Two: Interactive Development of Self and Aspirations; Circumscription Principle Three: Overlapping Differentiation and Incorporation; Circumscription Principle Four: Progressive, Irreversible Elimination; Circumscription Principle Five: Taken for Granted and Lost to Sight; and Stage One: Orientation to Size and Power (Ages Three to Five); Stage Two: Orientation to Sex Roles (Ages Six to Eight); Stage Three: Orientation to Social Valuation (Ages Nine to Thirteen); and Stage Four: Orientation to the Internal, Unique Self (Ages Fourteen and Above).

The Theory of Circumscription and Compromise highlights the need for career counselors to encourage both exploration and realism to aid adolescents in identifying what is possible and what is required to achieve it. The CIP intervention using the CDMT was designed to help the youth identify suitable career options and identify the educational requirements of such career options.

Cognitive Information Processing Theory. Cognitive Information Processing (CIP) Theory (Newell & Simon, 1970) as applied to career decision-making (Peterson, et. al, 1991, Sampson, et. al, 2004) holds that career counselors must aid their clients in how to become effective decision makers by understanding how individuals process information about themselves and the world of work. This is accomplished by assisting individuals to: a) integrate self knowledge and occupational knowledge to identify appropriate career options; b) choose from among them; and c) implement their choice. The CIP paradigm is comprehensive career decision-making paradigm and incorporates and unifies existing theories of career development (Peterson, Sampson & Reardon, 1991).

Cognitive Information Processing theory (Peterson, et. al, 1991, Sampson, et. al, 2007) provides a parsimonious method for organizing career development interventions in terms of content and process for practitioners. Based in cognitive theory, it is composed of two central concepts, the Pyramid of Information Processing domains, which describe the content of career decision-making, and the CASVE cycle, which describes the process of career decision-making. The Pyramid of Information Processing is composed of three hierarchical domains of knowledge that are required for the effective processing of effective career problem solving and decision making to lead to a career choice: 1) knowledge of self and career options at the base; 2) decision-making skills at the mid range; and 3) executive processing skills at the apex.

As applied to career development, the CIP paradigm must delineate the difference between problem solving and decision making. According to Peterson, Sampson and Reardon (1991), a problem is defined as a gap between an existing state and a desired state of decisiveness regarding a career option. These researchers define problem solving as a series of thought processes in which information about a problem is used to arrive at a course of action to remove the gap. In order to remove the gap one must recognize a gap exists, analyze its causes, formulate alternative courses of action and select one of

these alternatives. Decision-making includes the problem-solving process, and also the cognitive, affective, and at times psychomotor process that convert a chosen solution into an action. Translating the solution into action involves two additional components, a plan, and a venturesome attitude and commitment to carry out the plan (Peterson, et. al, 1991).

CIP posits that certain information processing capabilities must be developed and nurtured in order for individuals to become independent career problem solvers and decision makers. These cognitive capabilities are arranged hierarchically to form a pyramid, with three domains and is often referred to as the pyramid of information processing. The three domains are executive processing, decision skills and knowledge described below:

1. Self Knowledge and Occupational Knowledge includes (a) perceptions of values, interests and skills and (b) knowledge of individual occupations and developing a schema for how the world of work is organized;
2. Decision Making Skills: are generic information processing skills used to solve problems and make decisions and include the subcomponents:
 - a. Communication: awareness that a gap exists between an existing state and a desired state as a result of external and internal cues;
 - b. Analysis: formation of a mental model of the problem and relationships among the components;
 - c. Synthesis: expansion (elaboration) and then narrowing (crystallization) of alternatives;
 - d. Valuing: evaluation of the costs and benefits of each of the remaining alternatives, which leads to a first choice; and
 - e. Execution: formulation and commitment to an implementation plan for the first choice, which includes preparation, reality testing and employment seeking.
3. Executive Processing: metacognitions, which control the selection and sequencing of cognitive strategies used to solve the problem through self-talk, self-awareness, and control and monitoring.

The above domains were organized into eight cognitive information processing (CIP) content dimensions listed below:

1. Self-Knowledge;
2. Occupational Knowledge;
3. Communication;
4. Analysis;
5. Synthesis;
6. Valuing;
7. Execution; and
8. Executive Processing.

According to CIP Theory dysfunctional thinking in any of the above content dimensions could impair the ability to solve career problems and to make career decisions (Peterson, et. al; 1991; Sampson, Peterson, Lenz, Reardon, & Saunders, 1996; Brown & Brooks, 1996). The Career Decision-Making Tool (CDMT, 2007) employs a web-based delivery system that incorporates each of these domains and fosters information processing capabilities to aid the participants in becoming independent career problem solvers.

Career Decision State. Career decision state has been defined as, the degree of indecision or uncertainty with respect to a choice and the extent of dissatisfaction with the choice (Bullock, et. al., 2009). Individuals engage in the process of career problem solving and decision making in response to career and life stress. According to CIP Theory, (Peterson et al.; Sampson et al., 2004), The CIP's decision cycle is comprised of Communication, Analysis, Synthesis, Valuing and Execution. For the purposes of this study, the changes in decidedness could be bi-directional. The CDMT intervention could increase the level of decidedness for students who are very undecided. Conversely, individuals who are prematurely foreclosed may increase their level of indecision as they move toward a state of tentativeness. Therefore, the hypothesis relating to the impact of CDMT is couched in the null form with respect to certainty of choice. Conversely, satisfaction with choice is expected to increase regardless of the entry level of decidedness. As the participants learn more about themselves and the world of work, they will become more satisfied with their level of decidedness.

Computer-Assisted Career Guidance and Web-based Instruction. Computer-assisted career guidance (CACG) has been defined as a system of interconnected assessments, career options generation, and information dissemination subsystems,

employed often with counseling and various print and media-based support resources. These components are used within an organization to assist individuals to make current career decisions, as well as to improve their capacity to make effective career decisions in the future (Sampson, 1996). CACG services can be self-help, brief staff-assisted, or individual case-managed services (Sampson, 1997).

One study found that the participants preferred computer based (stand alone personal computer) and web-based career assessment instruments to paper and pencil versions. Further computer and web-based career assessment may be particularly appropriate for circumstances where time is limited (Lumsden, et. al, 2002).

Although the CIP intervention using the CDMT was implemented out using paper and pencil activities for this study, it was designed as a computer-assisted career guidance tool.

The Career Decision-Making Tool

The Career Decision-Making Tool (CDMT, 2007), A web-based support tool for learning the career decision-making process model was developed by the Center for the Study of Technology in Counseling and Career Development and the Learning Systems Institute (LSI) at Florida State University. The CDMT is an instructional system that assists students in learning how to make decisions about career options and how to find information necessary for developing an educational plan to help them achieve their chosen career goals. It was designed and developed based on research and theory and is a key resource for teaching and learning the decision-making process as it applies to Career Decision-Making (Peterson, Sampson, & Reardon, 1991; Peterson, Sampson, Lenz, & Reardon, 2002; Reardon, Lenz, Sampson, & Peterson, 2006; Sampson, Peterson, Lenz, & Reardon, 1992; Sampson, Peterson, Reardon, & Lenz, 2000; Sampson, Peterson, Reardon, & Lenz, 2004). The CDMT is supported by the Department of Education and maintained by the U.S. Department of Labor and formerly the American Career Resource Network (ACRN). It is available free of charge from www.acrnetwork.org.

The CDMT was designed to be used by students (grades 9-12) teachers, guidance counselors, parents/guardians and trainers. It is comprised of guidebooks, instructional strategies, activities, materials, worksheets, assessments, support materials, references and resources. The CDMT begins with an overview and orientation to the CDMT

Website and the career decision-making process. The CASVE Decision Cycle is separated into six sections, following the phases of the CASVE cycle:

- Engaging (Communication);
- Understanding (Analysis);
- Identifying (Synthesis);
- Deciding (Valuing);
- Acting (Execution); and
- Reflecting (Communication).

The CDMT assists students with choice of high school programs of study, choice of major field and area of emphasis and with choice of occupational or career goals.

Schema Theory

Some (Rumelhart, D.E., 1975, in Driscoll, M.P., 2005), have defined the term schema to mean an organizing and orienting attitude that includes active organization of past experiences whereby an individual's recall contained inaccuracies that could be directly related to their own interests and attitudes. When given a story, it was theorized that individuals invoked a relevant schema for understanding the story, and then, at recall, reconstructed in accord with the schema details about the story that they had forgotten (Bartlett, 1932, in Driscoll, M.P., 2005).

Other theorists (Ausubel, Novak, & Hanesian, 1978), pose that recall is not merely reconstructing original meanings, it is reproducing information that has undergone consolidation. One can conceive of schema as a generic characterization of things and events. For example, using schema to interpret a particular situation is to match the elements in the situation with the generic characterization in the schematic knowledge structure (Anderson, Spiro, & Anderson, 1978, in Driscoll, M.P., 2005). Thus, a schema is a data structure for symbolizing the generic concepts stored in memory (Rumelhart, 1975, in Driscoll, 2005).

Schemata are containers of knowledge, and schema theory is a presumption of how these containers are represented and how that representation facilitates the use of the knowledge in particular ways. Thus, schemata are “representing our knowledge about all concepts: those underlying objects, situations, events, sequences of events, actions, and sequences of actions” (Rumelhart, 1980, p.37, in Driscoll, M.P., 2005). More simply, schemata are akin to theories; they enable us to interpret events and happenings about us.

However, unlike theories schemata are an active procedure that evaluates incoming information for the quality of fit, and involve a network of subprocedures. For instance, a child observes a teacher pass out a paper to each student in the class with the instructions that the paper is to remain face down. The child then interprets this event to signal that the class will be given a timed test of some sort. The teacher then passes out art supplies and the student realizes that there will be no timed test.

Schemata are active in impacting how people interpret events and solve problems and as such they have also been considered as mental models. Mental models are schemata that correspond to one's knowledge about specific subject matter, and also include perceptions of task demands and task performances. Thus, mental models are schemata that guide and govern performances as one undertakes some task or attempts to solve some problem (Driscoll, 2005). Examples of schemata in CIP include elements of self knowledge, occupational knowledge, world of work, sequences of stages in career problem solving and decision making (i.e., cognitive strategies), and dysfunctional thoughts.

Schema Acquisition and Modification. Three methods that have been proposed to explain changes in existing schemata and the acquisition of new schemata due to learning, accretion, tuning, and restructuring (Rummelhart & Norman, 1978; Rummelhart, 1980; Vosniadou & Brewer, 1987). Accretion occurs when information is remembered that was absorbed within a schema as a result of text comprehension or understanding of an event and is generally equivalent to fact learning. Tuning occurs when existing schemata evolve to become more consistent with experience. Rummelhart and Norman (1978) suggest that this process accounts for the minor schema modifications that are attributable to new examples of concepts and philosophies. Restructuring involves the construction of completely new schemata which replace or incorporate the old schemata. This may occur through schema induction (Rummelhart, 1980), in which a new schema is fashioned from repeated experiential consistencies. Conversely, Rumelhart and Norman (1981) posed that learning by analogy leads to restructuring, whereby, a new schema is configured by modeling it on an existing schema and then altering it to fit the new situation. During restructuring, learners attempt to use an existing schema to interpret a new situation and areas of disparity suggest the manner

in which the new schema must differ from the old, while areas that were not contradicted are carried over into the new schema (Rumelhart & Norman, 1981).

Some pose that there are two fundamental processes for knowledge acquisition: schema specialization and schema generalization (Rummelhart & Ortony, 1977). Schema specialization refers to a top-down process in which subordinate concepts are derived from an abstract concept when more concrete and detailed information is acquired. For example, the concept of a police officer may acquire subordinate concepts regarding the type of tasks a police officer may perform, such as ticketing speeders, providing protection, driving a car with blue and red lights, etc. Schema generalization refers to a bottom-up process, in which concrete concepts are tied together to form a more abstract concept. For example, the concepts welder, roofer, and landscape designer may be linked together under the concept blue collar occupations. The CIP intervention using the CDMT was designed to utilize schema specialization and schema generalization to assist the participant in identifying suitable career options and identify the educational requirements of such career options.

Schema and Problem Solving. Schema-based processing occurs as people solve problems as demonstrated in studies on the knowledge structure of experts and novices (Chase & Simon, 1973a, 1973b; Chi, Glaser & Rees, 1982; Larkin, McDermott, Simon & Simon, 1980), whereby by experts and novices build different mental models to direct their efforts when problem solving. Glasser's (1984), research suggested that the knowledge of novices is organized around the literal objects explicitly given in a problem statement, whereas expert's knowledge is organized around principles and abstractions that subsume these objects. This study was designed to help the participants understand the literal objects in their problem statement (e.g., prematurely foreclosed) and organize principles and abstractions to subsume these objects (e.g., increase in indecision due to a better understanding of occupational and educational goal options).

Acquiring Self-Knowledge

Holland's Theory. Holland's typological theory is an enhanced person-environment interaction model that includes identity, information retrieval and processing, and behavioral modus operandi as vital components in the transactions between person and environment. This theory aims to link personal characteristics to jobs by connecting vocational personalities and work environments (Reardon, Reed, &

Vernick, 2001). Holland's theory posits that the choice of an occupation is an expressive act which reflects the person's motivation, knowledge, personality, and ability.

(Spokane, 1996). Thus, the choice of one's occupation is an illustrative act which reflects the personal motivation, knowledge, ability and personality of that individual.

The occupation itself represents not a set of isolated work functions or skills, but instead a way of life, an environment. To work as a police officer translates into a certain status, community role and a special pattern of living.

Holland's theory describes six types which reflect certain traits that are organized into a hexagonal model to interpret person-environment relations through the Self-Directed Search (SDS). Gottfredson (1989, 1982) founded the Dictionary of Holland Occupational Codes which stimulated a revision of the Occupations Finder using job activities and stimulated a shift in emphasis from theory construction to vocational intervention. The six types, or RIASEC codes and a brief description of each are as follows:

1. Realistic: mechanical and athletic abilities, interests and skills; enjoys working outdoors with tools and objects; prefers dealing with things, rather than people;
2. Investigative: Math and science abilities interests and skills; likes working alone and solving complex problems; enjoys dealing with ideas, rather than people or things;
3. Artistic: artistic abilities, interests and skills and imagination; enjoys creating original work; likes dealing with ideas rather than things;
4. Social: social abilities, interests and skills; interested in social relationships and helping others solve problems; likes dealing with people rather than things;
5. Enterprising: Leadership and speaking abilities interests and skills; likes to be influential; interested in politics and business; enjoys dealing with people and ideas, not things; and
6. Conventional: clerical and math abilities, interests and skills; prefers working indoors and organizing things; likes to deal with words and numbers rather than people or ideas.

The CDMT was designed to incorporate Holland's six types and the SDS to help participants to identify suitable career options and understand the educational requirements of these career options.

Schema and Self-Knowledge. Research has shown that what is remembered is chiefly a function of what was understood to begin with. In addition, Bransford and Franks (1971) posit that both comprehension and memory are driven by meaning, or gist and learners construct and store the gist of sentences together. Similarly, learners comprehend and remember information better when they can relate it to a familiar theme.

In addition to gist and theme, the amount of prior knowledge possessed by learners and their interests can affect their interpretation and recall of information as well as their ability to solve problems. Several studies (Chiesi, Spilich, & Voss, 1979; Spilich et al., 1979; Chi, 1979; Chase & Simon, 1973a, 1973b; Anderson, 1977) have shown that individuals were able to remember much more from a summary of a subject they were familiar with than a summary of a subject they were not familiar with. The above-mentioned studies also showed that an ambiguous passage could be interpreted in two different ways; (1) interpreted in the manner in which it was intended; and (2) when the passage was read to experts in a certain area, the passage was interpreted according to the subject matter the experts were well versed in. Additionally, these researchers examined the effect of perspective on learning and memory and found that perspective affected recall. All of these studies suggest that prior knowledge was found in schema theory.

Shank and Abelson (1975, 1977) found that when people find themselves in situations in which they must interpret what is going on and respond appropriately, schemata also guide human actions. More simply, individuals used their general knowledge to comprehend particular events. The CIP/CDMT intervention should aid the participants in understanding the information presented, develop meaning and gist, gain additional knowledge and develop occupational and educational goal aspirations. As a result, they should comprehend, interpret and remember the information pertaining to self knowledge with greater clarity and, thus, improve their career problem solving ability.

Acquiring Occupational Knowledge

Holland's RIASEC Theory. Holland's typological theory (1958, 1959) is an enhanced person-environment interaction model that includes identity, information retrieval and processing, and behavioral modus operandi as vital components in the

transactions between person and environment. This theory aims to link personal characteristics to jobs by connecting vocational personalities and work environments (Reardon, Reed, & Vernick, 2001; Reardon, Lenz, Sampson, & Peterson, 2006). The six types or RIASEC codes delineated in Holland's theory can be considered a world of work schema.

Schema and Occupational Knowledge. Schema theory assumes that schema development occurs when existing knowledge is utilized to acquire new knowledge. Tulving (1972, 1983, & 1984) posits that semantic knowledge is one of the principal forms of occupational knowledge. Researchers (Peterson, Sampson and Reardon, 1991) adapted an information processing model from Greeno (1973) that describes the basic memory components involved in career problem solving. This model is a short-term sensory register and large, but brief storage capacity for visual and auditory information and serves to screen out irrelevant information. The two types of memory store are short-term, which holds information for 10 to 15 seconds (Shiffrin & Schneider, 1977) and long-term, which holds a large amount of information for up to 25 years or longer (Bahrick, 1984). Peterson, et al (1991) pose that long-term memory is composed of two types: semantic and visual memory and metacognitive memory. The semantic and visual memory contains declarative, personal, and visual knowledge, and algorithms. The metacognitive memory contains higher order algorithms, or heuristics, that guide the use of knowledge and lower-order algorithms. The short-term memory and long-term memory information interact to represent a problem and generate a solution to the problem in the working memory store.

Effective career counseling strategies should facilitate the movement from unstable, situational and concrete representations of experience and occupations to a more stable, higher-order, abstract representations of self and occupations that enable the clients to consistently interpret and reconstruct their experiences. The purpose of the present study is to implement the CIP paradigm using the CDMT intervention to enhance the participant's self-knowledge, occupational knowledge, and career problem solving skills and to help the participants examine and develop the metacognitions that govern the career problem solving process.

Acquiring Career Decision Skills. A cognitive skill can be described as a highly developed sequence of procedures that become an automatic processing (Peterson, et. al,

1991). Research has shown (Shiffrin & Schneider, 1977; Schneider & Shiffrin, 1977) that skilled performance is developed through a transition from controlled processing to automatic processing of information. The interface between short-term memory and long-term memory, or the conscious processing of information by the working memory is controlled processing. When a learned sequence of elements in long-term memory is activated by appropriate inputs and the proceeds automatically, automatic processing has occurred (Schneider & Shiffrin, 1977).

Research suggests (Anderson, 1982; Neves & Anderson, 1981), that the acquisition of problem-solving skills involves three stages: (1) a declarative stage; (2) a knowledge compilation stage; and (3) a procedural stage. It is the declarative stage in which the learner received instruction about the nature of the skill to be learned. During the knowledge compilation stage a set of activities are planned to help the learner acquire the new skill. Finally, during the procedural stage the planned activities are carried out. The speed of thinking increases with practice and repetition and the amount of attentional space (Kahneman, 1973) and the working memory load required to problem solve decreases (Neves & Anderson, 1981). As such, complex skills required for career problem solving and decision making should be introduced early and practiced often (Snow, 1986).

In line with the fact that this study aims to enhance the participant's self-knowledge, occupational knowledge, and career problem solving skills, the general research question is as follows:

1. What is the relationship between participation in a CIP intervention based on the CDMT and development of the career decision state?

Conclusion

The aim of the CIP intervention was to enable participants to formulate realistic educational and career goals based on an accurate appraisal of self-knowledge and informed educational and occupational knowledge. This study was designed to provide youth participating in a summer community-based prevention and health promotion program with problem solving and career decision-making skills using the Career Decision-Making Tool (CDMT) to implement a Cognitive Information Processing (CIP) intervention.

The rationale for offering a standardized career intervention designed to impart career decision making skills in a community setting was to allow the participants to experience a variety of experiences with time to focus in their career development without competition for attentional space (Kahneman, 1973) from a demanding school curriculum. Additionally community-based intervention programs have demonstrated effectiveness in increasing protective factors in adolescents (Benson, 1982; Capuzzi, 1998; Chapman & Mullis, 1999; Guzman, 1998; Rollin et al., 1995; Sandler, Wolchik, MacKinnon, Ayers, & Roosa, 1997).

The basis for offering this intervention to youth categorized as low SES, lies within the previous literature that has shown children who stem from families that are categorized as low socio-economic status (SES) are at greater risk than their middle or high SES counterparts for negative outcomes including dropping out of school, unemployment and underemployment (Chapman & Mullis, 1999; Cummings, Vogel, Cummings, & El-Sheikh, 1989; Rollin, Rubin, Marcil, Ferullo, & Buncher, 1995).

The CIP/CDMT intervention was intended to build self knowledge schemas through the Values, Interests and Abilities Activities; occupational knowledge schemas through the 16 Career Clusters Activity, guest speaker and field trips to the Tallahassee Community College and the Tallahassee Memorial Regional Medical Center; and problem solving and decision-making strategies through the CDMT D curriculum. The proposed outcome of this schema development is a change in career decision state, certainty of occupational and educational choice and satisfaction with occupational and educational choice.

CHAPTER III

METHOD

Participants

Seventy-five (75) participants attended on or more of the interventions. Of these, complete data were available for forty-six (46) male and female predominately African American (83%) youth ages eleven to seventeen years old, enrolled in the Boys & Girls Club during the summer of 2007 participated in this study. Complete data were gathered from 46 of 75 youth who volunteered and attended one or more sessions or activities included in the CIP intervention. One hundred fifty five (155) predominantly African American youth were enrolled in the Boy's and Girl's Club summer program in a medium sized city (250,000) in the southeast. Of the 46 participants on whom complete data were secured, their age spanned 8 – 17 years, $M = 11.7$, $SD = 1.3$, and grade, 3 – 12, $M = 6$, $SD = 1.8$. Regarding gender, 54.3% were female, and in terms of race, 82.6 % were Black, 6.5% Caucasian, and 10.9% were mixed.

During the summer of 2007, 120 youth were registered and attend the program. Of the current one hundred and fifty-five (155) youth, three (3) were Caucasian, one (1) was Hispanic and the remaining one hundred and fifty-one (151) were African American. The Boys & Girls Club operates for low-income families and provides supervision and enrichment activities for youth in local communities after school and all day during the summer months. In 2007, the summer program began in May and continued until county schools began in early August.

The participation in this study was voluntary and the participants were allowed to withdraw from the study at any time. A brief orientation seminar was offered to all youth who attend the Boy's and Girl's Club summer program. The orientation seminar lasted forty-five (45) minutes and was held in an informal manner, which allowed the participants to ask questions, and included refreshments. During the orientation seminar, the youth were given a description of the CDMT, an outline of the activities, the dates and times of the interventions and a description of the field trips. Youth who were interested in participating were given parental/legal guardian consent form and field trip permission forms. The youth who returned with a signed parental/legal guardian consent form participated in the study. The consent forms were collected by Project K.I.C.K. staff and the director of the Boy's and Girl's Club, Kacy Dennis. In addition, consent

forms were sent home with the children after each intervention, to encourage participation in the interventions regardless of data use. Data collection took place July 2, 2007 through August 3, 2007.

Instructors. The present researcher facilitated the interventions with staff assistance from the Boys and Girls Club staff. One Boys and Girls Club staff assisted with each intervention by ensuring the participants were present, assisted with material distribution, e.g., pens, activity sheets, they provided explanations to and assisted the younger participants with the activity sheets and ensured the environment was relatively quiet and orderly. On July 23, 2007 and July 30, 2007 Graduate Research Assistants, who are employed with Project K.I.C.K. and work regularly with the youth, assisted with the collection of worksheets and questions from the participants. During these interventions, five Graduate Research Assistants assisted with the interventions. Three of the assistants were male, two were female and ethnicity was as follows: three African American; one Asian; and one was Caucasian. Each Graduate Research Assistant and Boys and Girls Club staff member who had contact with the participants had multiple years of research and/or direct service experience. The CDMT activities were supplemented with games, group work, acting and field trips, which served as incentives, fostered social connectedness and promoted visual processing.

Lourena Maxwell, Recruiter for the Tallahassee Community College facilitated the field trip to the Tallahassee Community College (T.C.C.) on July 20, 2007. Cody Johnson, Student Ambassador for the Tallahassee Community College, assisted Ms. Maxwell with her interactive presentation. Ms. Maxwell and Mr. Johnson provided information and orientation sessions to potential students and their families. They provided information to the participants about courses, majors, costs, including tuition, and the general environment at T.C.C.

The field trip to the Tallahassee Memorial Regional Medical Center (TMRMC) was facilitated by the Communications Coordinator on July 23, 2007. The Chief Executive Officer of TMRMC met with the children briefly in the atrium and provided an overview of all of the employment opportunities at the hospital. The children were then taken to a conference room where presentations were given by a Neonatal Nurse, an Accountant, a Physician, the Marketing Director and a Registered Nurse. After the presentations the children split up into groups and visited one of the following areas:

Nuclear Medicine, the Cancer Center, Women's Pavilion (Labor and Delivery); the Laboratory; and the Heart and Vascular Center.

Facilities

The CIP intervention facilitated by the CDMT was implemented at the Greg McCray Boys & Girls Club in Tallahassee, Florida during the summer program. The Greg McCray Boys & Girls Club was opened in 2003 to replace the Orange Avenue Boys & Girls Club, due to the small size and state of disrepair of the building. The Greg McCray Boys & Girls Club is significantly larger than the Orange Avenue Boys & Girls Club, boasting ten (10) activity rooms and a lunchroom.

The Greg McCray Boys & Girls Club provides services for one hundred and fifty-five (155) youth during the school year in an after school format. During the summer of 2007, 120 youth were registered and attend the program. Of the current one hundred and fifty-five (155) youth, three (3) were Caucasian, one (1) was Hispanic and the remaining one hundred and fifty-one (151) were African American.

The CDMT interventions were held in the lunchroom, which is centrally located on the bottom floor of the building. The lunchroom is equipped with five large tables with attached seats that are welded to the floor. Each table seats about six (6) to seven (7) children. The lunchroom also had a large wall-mounted dry-erase board, a refrigerator and freezer and a table along the entry wall. Along the back wall were small windows that were positioned close to the ceiling. A table at the front of the room provided a working area for the facilitator and held the sign in sheets, activity sheets and other information. The room dimensions are approximately 30' X 50', had limited acoustics and no carpet. Typically, the door remained open, as the temperature in the room was rather warm, which contributed to the noise level.

Procedures

Parental and participant consent forms were distributed and collected prior to administration of the CDMT Pre Test. In order to assure confidentiality all students were assigned a uniquely random number that will be cross-referenced to a list of the participant's names. Only the principal investigator has access to the list of names and corresponding assigned numbers. All pre and post tests, participant activity sheets and any other materials collected from the participants were stored in a locked file cabinet during the study and will be destroyed by shredding after the defense of the dissertation

and completion of a journal article. All data were coded to ensure the protection and anonymity of all participants.

Upon completion of the CDMT, the principal investigator and co-investigators debriefed the participants. The debriefing process served several purposes: 1) to allow the participants to process any emotions relating to the investigative process; 2) to screen for additional career guidance referral needs; 3) to thank the youth for participating and remind them of their rights as research participants; and 4) to review instructions for contacting the principal investigator if questions arose.

Project K.I.C.K. has obtained IRB approval from Florida State University for the past 17 years and obtained re-approval by the Human Subjects Committee for this study on March 3, 2007. Data collection took place from July 13, 2007 through August 6, 2007.

The present study included components from all five phases of the CASVE as follows: Communication (identifying a gap); Analysis (clarifying interests and acquiring occupational knowledge); Synthesis (identifying options); Valuing (considering peers, parents and significant others); and Execution (examining educational aspirations and goals). Components of the CDMT were chosen based upon the assumed impact to the youth's educational and occupational certainty and satisfaction of the participants. The components were chosen given the following considerations: time; facilities; support; and the needs of the adolescents.

Intervention. The participants met twice weekly for one hour, with the exception of the field trips to the Tallahassee Community College and the Tallahassee Memorial Regional Medical Center, which required approximately four hours for each trip. Additional meetings were conducted as make-up sessions for the children who missed an intervention. Each of the bi-weekly sessions began with a re-cap of information covered in the previous session and a question and answer session then proceeded to the relevant curricular units of the CDMT. The participants were given handouts from the CDMT to complete and take home and were encouraged to include family members with this process at home. Each participant was encouraged to complete the Daily Log of Career Related Activities each day, in order to identify supplemental activities and the amount of time involved in the career decision-making process. The Daily Log of Career Related Activities was collected from the participants once per week.

The daily schedule and activities were as follows:

- Day one (Monday, July 2, 2007): Participants completed the CDMT Pre Test;
- Day two (Monday, July 9, 2007): Participants completed the CDMT Pre Test;
- Day three (Friday, July 13, 2007): A speaker presented an overview of his career, how he chose his career, and the education/training requirements of his career. This presentation provided the participants with a real world example of the career decision making process. Participants began the Orientation section of the curriculum, which included: a review of what the participants should be able to do after completing the intervention; an opportunity for the participants to express their current career choice, if any; and monitor where they were in the decision cycle. The participants learned aspects of Section 1: Engaging, which focused on: a review of why educational and career decision-making are necessary; identification of the important people in their lives and what roles they play in the participant's decision making; and identification of the participant's readiness to make these decisions. The participants completed the Interests Activity as a baseline measurement of the participant's interest code (RIASEC) and career aspirations. Section 2: Understanding was introduced. The Understanding section focused on: the identification of how the participants made decisions; the identification of their interests, abilities and values; a review of how the world of work is organized; and a review of how interests can be matched to career choices. The participants completed the Abilities Activity to help them identify their abilities and completed the Values Activity to aid with the identification of their values. The participants were introduced to "knowing my world" and "knowing myself," while interests, abilities, and values were highlighted. The participants completed the second administration of the Interests Activity (as a post test measure of career aspirations);
- Day four (Monday, July 16, 2007): The curriculum focused on knowing occupations and used the Career Clusters as a teaching tool. The Career Clusters Activity included 16 Career Clusters, or groupings of occupations

and broad industries based on some shared and common characteristics. The participants were instructed to think about their interests and choose their top 2 to 4 career choices. Next, the participants were instructed to identify their preferred pathway (direct entry from high school, technical training, two-year colleges, four-year colleges, advanced degree, or I don't know the pathway) to their chosen career fields. The participants reviewed interests, narrowed their choices, reviewed abilities, set study goals and matched career options and study goals;

- Day five (Friday, July 20, 2007): Field trip to the Tallahassee Community College to explore educational options and financial aid programs. The participants were given an overview of the admission requirements, courses offered, majors, programs of study, financial aid, dual enrollment, and other information pertinent to attending Tallahassee Community College;
- Day six (Monday, July 23, 2007): Field trip to the Tallahassee Memorial Regional Medical Center to explore career options and training and educational requirements of various careers. The participants were given presentations by various employees (neonatal nurse, personnel administrator, dietitian, physician, accountant, billing administrator, etc.) of the hospital. The youth were also broken into groups and provided an in-depth, experiential tour of various departments. For instance, a group was taken to the oncology department and given demonstrations of the medical equipment.
- Day seven (Friday, July 27, 2007) Completion of the CDMT Post Test and debriefing, followed by a celebration of completing the CDMT with a pizza party;
- Day eight (Monday, July, 30, 2007) Make-up activities; and
- Day nine (Friday, August, 3, 2007) Make-up activities.

Materials

Students completed activity sheets embedded within the Career Decision-Making Tool, which is a support tool for learning the career decision-making process. The CDMT begins with an overview and orientation to the CDMT Website and the career decision-making process, including the CIP Decision Cycle. This study will examine the

implementation of a CIP intervention using the Web-based Career Decision-Making Tool (CDMT) as was available online during November 2005 due to changes that were made to the content after those dates. The CDMT instructional system of information is comprised of guidebooks, instructional strategies, activities, materials, worksheets, assessments, support materials, references and resources. For this study, the CDMT information was provided to the participants via handouts and through completion of the activity worksheets. The CDMT was used as a guide and a resource for this CIP intervention.

Instruments

The following instruments were used: Career Decision-Making Tool, Focusing on My Future Workshop Satisfaction Survey (Appendix C), CDMT Interests Activity (Appendix E), CDMT Abilities Activity (Appendix F), CDMT Values Activity (Appendix G) and CDMT Career-Clusters Activity (Appendix H).

Research Design

To test the hypotheses, this study used a pretest, pretest and posttest criterion group design (C O₁ O₂ X O₃). This design was chosen for several of reasons: (a) this study was a field-based study; (b) this study will measure the impact of an intervention; and (c) the participant pool is small.

Myers and Hansen (1997) state that using a pretest/posttest design to measure the level of behavior before and after the event is useful in comparing the levels of behavior. The pretest/posttest design is one of the most frequently used quasi-experimental designs in the social sciences (Cook & Campbell, 1979). It is often used to assess the effects of naturally occurring events when a true experiment is not possible. Since the participants will serve as their own controls a one way repeated-measures MANOVA will be used to assess changes in career decision states over time.

Data Analysis

Research Hypothesis.

1. There is no relationship between participation in the instructor-led CDMT Focusing on My Future Workshop and; (a) the educational decision state of at-risk youth; and (b) the occupational decision state of at-risk youth. These hypotheses (a and b) will be tested using a 1 by 3 repeated measures MANOVA with level of indecision (OAQ), certainty and satisfaction of

choice as dependant variables for career decision state and level of educational goal, certainty and satisfactions as dependant variables for educational goal decision state. Univariate tests follow.

Descriptive Analysis.

The following descriptive analysis will be discussed:

1. Satisfaction with the Workshop will be measured by satisfaction survey results for:
 - a. The activities (See Appendices E, F, G and H, pages 115, 119, 120 and 122 respectively); and
 - b. Overall satisfaction with the Workshop (See Appendix C, page 109).

CHAPTER IV

RESULTS

Career Decision State

The present study evaluates the impact of a cognitive information processing (CIP) intervention structured by a standard decision making tool (Career Decision Making Tool; CDMT) on the career decision state of an at-risk youth. Career decision state is defined in terms of (a) the extent to which individuals are certain of their educational and occupational choices, and (b) the degree of satisfaction and certainty with their choices at any given moment in time. The goals of the CIP intervention were to clarify and broaden adolescents' knowledge of self as well as educational and occupational opportunities; to facilitate the acquisition of career decision skills to arrive at a career choice; and to enable the formulation of a plan of action to implement a choice. Forty-six adolescent youth, ages 11 – 18, attending summer camp at a Boy's and Girl's Club in a medium-sized community in North Florida participated in the intervention.

To test the hypotheses, this study used a quasi-experimental pretest, pretest and posttest criterion group design ($C O_1 O_2 X O_3$) was used to test the impact of the CIP intervention on the career decision state. Since the participants served as their own controls, a one way repeated-measures MANOVA was employed to assess changes over time. The first two observations (O_1 and O_2) were considered as a baseline, since these were taken one week apart and there was no intervention. A one-way, repeated-measures MANOVA provided a multivariate test of whether there were significant differences in the career decision state across three observations, pretest 1, pretest 2 and posttest. The pretest/posttest design is one of the most frequently used quasi-experimental designs in the social sciences (Cook & Campbell, 1979). It is often used to assess the effects of naturally occurring events when a true experiment is not possible. The null hypothesis was that there are no differences in decision state across the three occasions, O_1 , O_2 , and O_3 .

Occupational Goal State

A repeated-measures MANOVA, with OAQ, satisfaction with choice and certainty of choice of occupation as dependent variables, revealed there was no significant multivariate effect (Wilks Lambda = .953, $F = 1.02$, $df = 6, 254$, $P = .411$)

across three observations, pretest1, pretest2, and posttest. Univariate tests (See Table 1) indicated there were also no significant differences among observations for OAQ ($F = 1.96$, $df = 2$, $P = .145$), certainty of occupational choice ($F = 1.47$, $df = 2$, $P = .234$) and satisfaction with occupational choice ($F = .47$, $df = 2$, $P = .627$). Even though there was evidence of skew regarding ratings of certainty and satisfaction (See Tables 2 & 3), a square root transformation rendered no differences in results of the statistical tests. Post hoc pairwise comparisons among the means of the three dependent variables were not undertaken since there were no significant multivariate or univariate effects. Therefore, with respect to the development of the occupational goal decision state in terms of decidedness, certainty, or satisfaction, the results indicated that the means did not vary significantly across the observations, pretest, pretest, and posttest. Thus, collectively, the CIP intervention appeared to have no impact on the participants' occupational goal decision state.

Nonetheless, at the individual level it is believed there was an appreciable influence of the CIP intervention in terms of level of decidedness. The chi-square ratios pertaining to frequencies of decidedness indicated there was a significant ($p \leq .05$, $\chi^2 = 32.01$, $df = 6$) shift in level of decidedness from pretest 2 to the posttest in that 5 participants indicated a first choice of occupation on the second pretest, but no participants indicated a first choice on the posttest. Thus, in terms of occupational goal, there was movement toward becoming more undecided from pretest 2 to the posttest indicating an appreciable impact on the participant's level of decidedness. Descriptive and inferential data regarding occupational goal decision state across three observation points are presented in Table 1.

Table 1. Career Decision State Across Observations (n = 46)

Decidedness Frequencies By Level	Pretest 1		Pretest 2		Post test		X ²
No alternatives	2		4		4		
Alternatives only	37		35		40*		32.01**
Alternatives plus first choice	5		5		0*		
First choice only	0		0		0		

	M	SD	M	SD	M	SD	F (2,129)
Decidedness ^a	1.07	0.40	1.02	0.46	0.91	0.29	1.96
Certainty ^b	3.16	1.26	3.50	0.98	3.50	0.98	1.47
Satisfaction ^c	3.18	1.26	3.41	0.89	3.32	1.16	0.47

* p < .05

**p < .01

a. OAQ, where 0 = no alternatives, 1 = alternatives only, 2 = alternatives plus first choice, and 3 = first choice only

b. Certainty, where 0 = I have not made a choice of occupation, 1 = not certain of choice(s) of occupation, 2 = mildly certain, 3 = certain, and 4 = very certain

c. Satisfaction, where 0 = I have not made a choice, 1 = not at all satisfied with choice(s) of occupation, 2 = somewhat satisfied, 3 = satisfied, and 4 = very satisfied.

The descriptive data in Table 1 indicate most participants were at the level of alternative only (Means = 1.07 - .91), were certain of their choices of options and were satisfied with the options they were considering. Table 2 and 3 describe the frequency data for certainty and satisfaction with occupational choice.

Table 2. Satisfaction with Occupational Choice (n = 46)

Satisfaction Frequencies And Percentages By Level ^a	Pre 1	Pre 2	Post
No Choice	4, 9%	1, 2%	4, 9%
Not Helpful	2, 4%	2, 4%	2, 4%
A little Helpful	7, 15%	5, 11%	6, 13%
Helpful	5, 11%	11, 24%	4, 9%
Very Helpful	28, 61%	27, 59%	30, 65%

	Pre 1 ^a	Pre 2 ^a	Post ^a
M	3.11	3.33	3.17
SD	1.32	.990	1.32

a. Satisfaction level, where 0 = I have not made a choice, 1 = Not helpful, 2 = A little helpful, 3 = Helpful, 4 = Very helpful

The descriptive data in Table 2 indicate most participants were satisfied with the options they were considering across the measures (Means = 3.11, 3.33 and 3.17).

Table 3. Certainty of Occupational Choice (n = 46)

Satisfaction Frequencies And Percentages By Level ^a	Pre 1	Pre 2	Post
No Choice	4, 9%	2, 4%	2, 4%
Not Certain	2, 4%	2, 4%	1, 2%
Mildly Certain	7, 15%	3, 7%	6, 13%
Certain	6, 13%	7, 15%	3, 7%
Very Certain	27, 59%	32, 70%	34, 74%

Table 3. Certainty of Occupational Choice (n = 46) Continued

Satisfaction Frequencies	Pre 1 ^a	Pre 2 ^a	Post ^a
M	3.09	3.41	3.43
SD	1.31	1.09	1.09

^aCertainty, where 0 = I have not made an educational choice, 1 = not certain, 2 = mildly certain, 3 = certain, and 4 = very certain

The descriptive data in Table 3 indicate most participants were certain of the options they were considering across the measures (Means = 3.09, 3.41 and 3.43).

Educational Goal State

The results of a repeated-measures MANOVA with level of educational choice, satisfaction with choice, and certainty of choice, indicated there was no significant multivariate effect (Wilks Lambda = .922, $F = 1.76$, $df = 6, 254$, $P = .107$) across occasions, pretest 1, pretest 2, and post test. Univariate tests (See Table 4) also revealed no significant differences with respect to level of educational choice ($F = 1.37$, $df = 2$, $P = .257$), educational certainty ($F = 1.025$, $df = 2$, $P = .362$), and educational satisfaction ($F = 2.372$, $df = 2$, $P = .097$). Since there were no significant multivariate or univariate effects, tests of significance regarding pairwise comparisons between observations with respect to the three dependent variables were not undertaken. The conclusion is that the CIP intervention had no significant impact on the participants' educational goal decision state.

Despite the above findings representing the collective impact of the CIP intervention, there is evidence of an appreciable impact on the participant's level of decidedness with respect to choice of educational goal. Chi square ratios suggest significant ($p \leq .05$) changes from the second pretest to the posttest in terms of frequencies of individuals endorsing "Don't know" and "BA/BS degrees," with the former increasing by 8 participants and the latter decreasing by 8 participants. Thus, as with the case of occupational goals, there is a shift toward becoming more undecided in terms of educational goal indicating an appreciable impact on the participant's level of decidedness as a result of participation in the CIP intervention. Descriptive data regarding educational goal decision state are presented in Table 4.

Table 4. Educational Decision State Across Observations (n = 46)

Education Frequencies	Pretest 1	Pretest2	Posttest	X ²
<u>By Level^a</u>				
No Response	6	7	6	
Don't know	8	5	13*	
GED	10	6	6*	
High School Diploma	1	1	2	78.68**
Trade/Tech School	0	2	2	
Some College	4	3	3	
BA/BS Degree	15	20	12*	
Advanced Degree	0	0	0	

	M	SD	M	SD	M	SD	F (2,129)
Educational Level ^a	3.20	2.39	3.70	2.46	2.86	2.40	1.37
Certainty ^b	3.11	1.19	3.14	1.17	3.43	1.30	1.03
Satisfaction ^c	3.30	0.88	3.18	1.19	3.64	1.03	2.37

* p < .05

**p < .01

a. Educational level, where 0 = No response, 1 = Don't know, 2 = GED, 3 = High School Diploma, 4 = Trade/Technical School, 5 = Some College, 6 = BA/BS Degree, 7 = Advanced Degree

b. Certainty, where 0 = I have not made an educational choice, 1 = not certain, 2 = mildly certain, 3 = certain, and 4 = very certain.

c. Satisfaction, where 0 = I have not made an educational choice, 1 = not at all satisfied, 2 = somewhat satisfied, 3 = satisfied, and 4 = very satisfied

The descriptive data in Table 4 indicate the educational goal level for most participants hovered around the high school diploma level (Means = 2.86 – 3.70), most participants were certain of their educational goal (Means = 3.11 – 3.43) and most participants were satisfied with their educational goals (Means = 3.18 – 3.64). Frequency data for satisfaction with educational goal and certainty of educational goal are described in Table 5 and 6.

Table 5. Satisfaction with Educational Choice (n = 46)

Satisfaction Frequencies	Pre 1	Pre 2	Post
<u>And Percentages By Level^a</u>			
No Choice	3, 7%	5, 11%	4, 9%
Not Helpful	3, 7%	2, 4%	1, 2%
A little Helpful	7, 15%	3, 7%	0, 0%
Helpful	9, 20%	14, 30%	5, 11%
Very Helpful	24, 52%	22, 48%	36, 78%
	Pre 1 ^a	Pre 2 ^a	Post ^a
M	3.22	3.04	3.48
SD	.987	1.33	1.21

a. Satisfaction level, where 0 = I have not made a choice, 1 = Not helpful, 2 = A little helpful, 3 = Helpful, 4 = Very helpful

The descriptive data in Table 5 indicate most participants were satisfied with the educational goal options they were considering across the measures (Means = 3.22, 3.04 and 3.48).

Table 6. Certainty of Educational Goal (n = 46)

Certainty Frequencies	Pre 1	Pre 2	Post
<u>And Percentages By Level^a</u>			
No Choice	3, 7%	5, 11%	4, 8%
Not Certain	3, 7%	2, 4%	2, 4%
Mildly Certain	7, 15%	3, 7%	3, 7%
Certain	9, 20%	14, 30%	6, 13%
Very Certain	24, 52%	22, 48%	30, 65%

Table 6. Certainty of Educational Goal (n = 46) Continued

Certainty Frequencies			
	Pre 1 ^a	Pre 2 ^a	Post ^a
M	3.04	3.00	3.28
SD	1.25	1.32	1.31

^aCertainty, where 0 = I have not made an educational choice, 1 = not certain, 2 = mildly certain, 3 = certain, and 4 = very certain

The descriptive data in Table 6 indicate most participants were certain of the educational goal options they were considering across the measures (Means = 3.04, 3.00 and 3.28).

Satisfaction with the CDMT Intervention.

On a four-point helpfulness scale where 1 = not helpful, 2 = somewhat helpful, 3 = helpful, and 4 very helpful, the participants expressed that the vast majority of activities were helpful to very helpful in formulating their educational and occupational goals. With regard to career exploration activities, the participants rated their satisfaction with exploration of interests, M = 3.0, abilities M = 3.2, and values M = 3.1. In terms of the field trip to the Community College, the participants rated their satisfaction with the tour itself M = 3.1, information about degrees M = 3.3, information about courses M = 3.4, information about financial aid M = 3.1, and information about dual enrollment M = 3.1. With respect to the field trip to a regional hospital, the participants rated their satisfaction with the tour itself M = 2.7, information about specific health care occupations M = 3.2, information about job duties within occupations M = 3.4, and information about educational and training prerequisites M = 3.5. Finally, the participants rated the entire CDMT experience in terms of satisfaction, where 1 = not at all satisfied, 2 = somewhat satisfied, 3 = satisfied, and 4 = very satisfied. Satisfaction with facilitating educational goals was rated M = 3.1, and facilitating occupational goals M = 3.1. Descriptive data regarding satisfaction means, frequencies and standard deviations are listed in Table 7, 8, 9, and 10 below.

Table 7. Satisfaction with Interests, Abilities and Values Activities (n = 46)

Satisfaction Frequencies	Interests	Abilities	Values
<u>And Percentages By Level^a</u>			
Not Helpful	3, 7%	2, 5%	3, 7%
A little Helpful	10, 23%	6, 14%	8, 18%
Helpful	15, 34%	16, 36%	15, 34%
Very Helpful	16, 36%	20, 46%	18, 41%
	Interests ^a	Abilities ^a	Values ^a
M	3.00	3.23	3.09
SD	.940	.859	.935

a. Satisfaction level, where 1 = Not helpful, 2 = A little helpful, 3 = Helpful, 4 = Very helpful

Table 8. Satisfaction TCC Trip: Tour, Degrees, Classes, Financial Aid, Dual Enrollment (n = 46)

Satisfaction Frequencies	Tour	Degrees	Classes	Financial	Dual
<u>And Percentages By Level^a</u>					
Not Helpful	3, 7%	2, 5%	1, 2%	3, 7%	5, 11%
A little Helpful	5, 11%	3, 7%	3, 7%	9, 21%	1, 2%
Helpful	15, 34%	15, 35%	15, 34%	8, 18%	18, 41%
Very Helpful	16, 36%	19, 43%	20, 45%	19, 42%	15, 34%
Missing	5, 11%	5, 11%	5, 11%	5, 11%	5, 11%
	Tour	Degrees	Classes	Financial	Dual
M	3.13	3.31	3.40	3.10	3.10
SD	.923	.832	.750	1.02	.970

a. Satisfaction level, where 1 = Not helpful, 2 = A little helpful, 3 = Helpful, 4 = Very helpful

Table 9. Satisfaction TMRMC Trip: Tour, Jobs, Duties, Education (n = 46)

Satisfaction Frequencies And Percentages By Level ^a	Tour	Jobs	Duties	Education
Not Helpful	3, 7%	3, 7%	2, 5%	0, 0%
A little Helpful	15, 34%	5, 11%	6, 14%	4, 9%
Helpful	13, 30%	14, 32%	17, 16%	13, 29%
Very Helpful	10, 23%	19, 43%	26, 59%	24, 55%
Missing	3, 7%	3, 7%	3, 7%	3, 7%
	Tour	Jobs	Duties	Education
M	3.00	3.20	3.40	3.50
SD	.923	.930	.920	.700

a. Satisfaction level, where 1 = Not helpful, 2 = A little helpful, 3 = Helpful, 4 = Very helpful

Table 10. Overall Satisfaction: Educational Goal and Occupational Goal (n = 46)

Satisfaction Frequencies And Percentages By Level ^a	Educational	Occupational
Not Helpful	2, 5%	3, 7%
A little Helpful	7, 16%	9, 21%
Helpful	18, 41%	12, 27%
Very Helpful	17, 39%	20, 46%
	Educational	Occupational
M	3.14	3.11
SD	.900	.970

a. Satisfaction level, where 1 = Not helpful, 2 = A little helpful, 3 = Helpful, 4 = Very helpful

The results of this study indicated that, with respect to the development of the occupational goal decision state in terms of decidedness, certainty, or satisfaction, the

means did not vary significantly across the observations, pretest, pretest, and posttest. Thus, collectively, the CIP intervention appeared to have no impact on these participants' choice of occupational goal. However, there was a shift in the level of decidedness from pretest 2 to the posttest in that 5 participants indicated a first choice of occupation on the second pretest, but no participants indicated a first choice on the posttest. Thus, there was a shift toward becoming more undecided in terms of occupational goal.

With regard to level of educational choice, satisfaction with choice, and certainty of choice, the CIP intervention had no significant impact on the participants' educational goal decision state. Nonetheless, there were changes from the second pretest to the posttest in terms of frequencies of individuals endorsing "Don't know" and "BA/BS degrees," with the former increasing by 8 participants and the latter decreasing by 8 participants. Thus, as with the case of occupational goals, there is a shift toward becoming more undecided in terms of educational goal as a result of participation in the CIP intervention.

On a four-point helpfulness scale where 1 = not helpful, 2 = somewhat helpful, 3 = helpful, and 4 very helpful, the participants expressed that the vast majority of activities were helpful to very helpful in formulating their educational and occupational goals. With respect to the entire CDMT experience in terms of satisfaction, the participants indicated that they were satisfied with the facilitation of educational goals and occupational goals.

Conclusion

The implementation of a CIP intervention structured by the CDMT appeared to provide a stimulating experience for many of the participants regarding educational and occupational opportunities. The majority of the participants enjoyed the activities and expressed satisfaction regarding their impact on their educational and occupational goals. It appeared that this was an effective career intervention that could be improved with additional emphasis on preparing for field trips and in processing the experience afterward. The participant's responses to this career intervention were highly encouraging.

CHAPTER V

DISCUSSION

A cognitive information processing (CIP) intervention structured according to the Career Decision Making Tool (CDMT) to implement a problem solving and career decision-making skills intervention was implemented in a community center for at-risk youth during the summer months. The intervention was organized according to the 5 phases of the CASVE Cycle and included career exploration activities within the community center as well as field trips to a community college and a large regional hospital. The study focused on the development of self knowledge and occupational knowledge as they contributed to the development of educational and occupational goals. The conclusions were that collectively, there were no differences among pretest1, pretest2 and posttest with respect to both occupational and educational decision states. However, there appeared to be significant individual differences between pretest 2 and posttest in that there were shifts from listing a first choice of occupation along with occupational alternatives to listing only occupational alternatives, and from endorsing a BA/BS degree as an educational aspiration to being undecided about educational goals. Finally, the participants rated almost all of the activities as helpful or very helpful and the entire intervention as satisfactory in helping individuals pursue educational and occupational goals.

One notable observation is that the CIP intervention, as indicated by pretest1 and posttest scores, appears to have had two effects. (a) no effect collectively with reported occupational and educational decision state, or (b) toward becoming more undecided with respect to occupational and educational goals with respect to subcategories of individuals. As stated previously, the effects of this intervention could be bi-directional as it related to decidedness. The intervention may have increased the level of decidedness for some students who were very undecided. Conversely, other for participants who may have been prematurely foreclosed, the increases in the level of indecision may be attributed to movement toward a state of tentativeness due to an increase in self knowledge, occupational knowledge and educational knowledge. These participants are unable to specify a first choice of career at the present time, but they may not have a need to make a choice at the present time. Therefore, they are categorized as undecided-deferred

choice, which may be an appropriate career choice strategy given the developmental stages of the participants (Holland & Holland, 1977; Krumboltz, 1992).

This movement toward indecision may be attributed to accretion, tuning and/or restructuring (Rummelhart & Norman, 1978; Rummelhart & Norman, 1980; Rummelhart, 1980; Vosniadou & Brewer, 1987). More specifically, as the findings relate to occupational knowledge, schema specialization may have occurred and as the findings related to educational knowledge, schema generalization may be evident (Rummelhart & Ortony, 1977). Most simply, these results may be interpreted as the educational activities at the community college and the occupational activities at the community hospital resulted in helping participants raise important questions regarding their aspirations and possible opportunities thus resulting in shifts of some from decided to undecided. Those who were undecided remained so. This interpretation is supported by the highly positive ratings of presentations regarding degrees and college coursework at the community college, and discussions of duties and educational/training requirements for health and other career occupations at the community hospital.

Literature has shown that children whose families are categorized as low SES are at greater risk than their middle or high SES counterparts for dropping out of school, unemployment and underemployment (Champman & Mullis, 1999; Cummings, et.al., 1989; Rollin, et. al, 1995 & Aber, 1994; Diong & Bishop, 1999; Jarrett, 1995; Lohman & Jarvis, 2000; McLoyd, 1997; Novacek, et. al, 1990; Novaco, 1975 & Rollin, et. al, 1999). The children and families participating in Project K.I.C.K. and in the Boys and Girls Club are classified as low SES and live in poverty (U.S. Department of Education, 1991). For these at-risk adolescents, the movement towards indecision could be a favorable sign that they moved from vague impressions of educational and occupational goals to a more informed state, or from a prematurely foreclosed state to an undecided state with options. In addition, it is proposed that in the undecided state, the participants become open to processing information about self and occupations. These participants are unable to specify a first choice of career at the present time, but they may not have a need to make a choice at the present time. Therefore, they are categorized as undecided-deferred choice, which may be an appropriate career choice strategy given the developmental stages of the participants (Holland & Holland, 1977; Krumboltz, 1992). This speculation

is supported by high ratings of certainty and satisfaction with respect to both occupational and educational goal decision states at the posttest (see Tables 1 and 2).

Super (1996) posits that guiding one through the development of life stages can be accomplished in part by facilitating the maturing of abilities, interests, and coping resources and in part by aiding in reality testing through the life stages. In Super's Growth Stage, ages 4 – 13, one task is to move out of the Fantasy phase and to begin to identify and explore more appropriate career alternatives (Super, Savickas, & Super, 1996). Furthermore, they also become open to possibilities in occupations and become more aware of educational alternatives and their relationship to occupational goals. Another explanation for the movement to indecision can be explained by the participants progressing from the Fantasy phase and begin to identify and explore more appropriate career alternatives.

Gottfredson (1996) theorized that children's career aspirations come to reflect the social inequalities among their elders. If this undecided state promotes an openness to processing information about self and occupations, the social inequalities of the participant's parents may not influence their career aspirations to such a great extent.

A second observation is the apparent instability of adolescent career decision state with respect to certainty and satisfaction with choice. While the collective means of occupational and educational levels of indecision with respect to choice, and ratings of certainty and satisfaction were not statistically different across the pretests and posttest (see Tables 1 and 2), these were nevertheless, somewhat weekly and unpredictably correlated events. Correlations between pretests 1 and 2 and between pretest2 and the posttest with respect to certainty and satisfaction are presented in Table 7 below. Occupational certainty ratings were uncorrelated across observations while educational certainty was. Satisfaction ratings between pretest 1 and 2 were uncorrelated, while they were correlated between pretest2 and the posttest. An explanation could be that participants are more familiar with the field of education than with the world of work resulting in higher stability of ratings with the former than the latter. Thus, there appears to have been variation within individuals regarding certainty and satisfaction as they progressed from pretest 1 to pretest 2 to posttest.

Table 11. Correlations among certainty and satisfaction with occupational and educational choices (n = 46)

Dimension	Pretest1 – Pretest2	Pretest2 – Posttest
Occupational Certainty	.237	.195
Occupational Satisfaction	.206	.352*
Educational Certainty	.423**	.425**
Educational Satisfaction	.185	.363*

*p < .05

**p < .01

A third observation is that the administering of the instruments at Pretest1 served as an intervention in its own right. It is proposed that the act of responding to the items fostered deliberate contemplation about educational and occupational goals, thus resulting in the low correlations between the two pretests, which were meant to establish baseline reliability estimates of the measures. In the first administration, the participants may have given ratings with little prior thought, but in the second, they may have been more focused, deliberate, and reflective. In the posttest, they also gave responses based on more information about themselves, about education, and about work, thus resulting in higher correlations between the second pretest and the posttest. These three observations have implications for practice.

Instabilities of educational and occupational decision state. Some participant's ratings increased, while others decreased in relations to certainty and satisfaction across time and as they encounter various components of the CIP intervention. The ephemeral nature of the decision states could be attributed to: (a) the level of processing and thought regarding the decision state across administration; (b) new schema development, knowledge of self, educational options, and occupations; and (c) amount of motivation, thoughts and effort regarding the completion of the instruments.

Limitations

Internal validity. Regarding limitations of the study, it is recognized that there was not a control group and that a quasi experimental design was employed with participants serving as their own controls. Thus, changes across time could ostensibly be

attributed to maturation. Another limitation is that complete data were gathered from 46 of 78 participants raising concerns about mortality. Impressions from direct observations by the researchers were that many of the non-respondents may have been older participants who had competing activities to attend or that they elected not to fully complete the instruments. Since the participants voluntarily agreed to participate in the study, they may differ fundamentally from peers who did not volunteer to participate. Further, having complete data from only 46 participants raises concerns regarding whether there was sufficient power to rigorously test the hypotheses, thus risking Type II errors. Additionally, the psychometric quality of the instruments is open to question. The OAQ was a four-point ordinal scale and educational goal was represented by a 7 – point ordinal scale, while the measures of certainty and satisfaction were single item 5-point scales. The extent to which these may not be regarded as finely tuned, sensitive measures is open to scrutiny.

Furthermore, the CDMT presents a standard sequence of activities that lead students through a 5-phase decision cycle, the CASVE Cycle (Communication, Analysis, Synthesis, Valuing, and Execution). The Communication phase alludes to identifying a gap between the existing state of affairs and a desired state and becoming in touch with internal external factors that bear on the career decision at hand; the Analysis phase concerns examining the extent to which individuals possess self knowledge and occupational knowledge required to identify viable career options; individuals formulate career options and narrow them down to a select three to five options in the Synthesis phase; and the Valuing phase entails the consideration of each option with respect to its impact on significant others, cultural group, and society along with an examination of the meaning derived from each option. The outcome of the Valuing phase is the identification of a first choice. In the Execution phase, individuals formulate a plan of action to implement the first choice. Upon the implementation and completion of the plan, decision makers return to the Communication phase to evaluate whether the initial gap between the real and ideal state has been closed. This intervention led the participants through the Synthesis phase, but did not include the valuing or execution phase. Allowing the participants to identify a first choice of career and formulate a plan of action to implement the first choice may have led to different results.

The characteristics of the facilitator and co-facilitators, such as, ethnicity, level of experience working with at-risk youth and personality, may have affected the participant's responses to the intervention.

Practical limitations include scheduling and resources. It is believed that, if the intervention was identified on the master daily schedule of the club, participation could have increased, thus reducing mortality. Competing activities, like field trips to the skating rink, swimming, or to the movies competed with intervention attendance. Scheduling the intervention during times when mostly "indoor" activities are offered could limit activities that may be preferential to the intervention. Increased resources in the way of, supplies, food and field trip opportunities could also ensure participation and influence learning.

External validity. The extent to which the findings of this study can be generalized to other populations of at-risk adolescents is subject to caution. We believe the results of this study can be generalized to similar Boys and Girls clubs in medium-sized cities with sufficient human and non-human resources. However, generalization to rural or urban settings should be considered with caution as well as providing the interventions with personnel familiar with the CDMT and some familiarity with career development. The field trips to educational institutions and a regional hospital or their equivalents would be important aspects to replicate to reproduce similar outcomes. Finally, the abovementioned threats to internal validity have implications for the external validity as well.

Implications for practice. With respect to implications for practice, the participants indicated they enjoyed the activities, especially learning about education options and career options within a hospital environment. However, it is believed that the effects of the CIP intervention would have been more pronounced if the preparation for the field trips would have been stronger, possibly by preparing participants in terms of "what to look for" rather than simply "looking at" phenomena. Secondly, a debriefing after each field trip would provide an opportunity to reflect on their experience and reinforce self knowledge in terms of liking occupational duties, and their ability to master them, as well as reinforce the acquisition of occupational knowledge in terms of what duties people employed in certain occupations perform and how did they meet requirements for education and training. For example, following the field trip to the

regional hospital, a debriefing that focused on the association between education and training and career opportunities could have been emphasized, thus producing a deeper understanding of the connection between the two. Nevertheless, while the CDMT provided structure for the intervention, the use of field trips where participants directly experienced educational and work environments were crucial components for these at-risk adolescents. Further, one summative culminating event could review the entire intervention with respect to the career problem solving and decision-making using the Pyramid and CASVE cycle. Finally, incentives regarding participation may be enhanced. The promise of a pizza party afterward may be augmented by immediate rewards during the intervention, such as earning points toward a ticket to a sports or entertainment event.

In conclusion, for the purposes of this study, acceptance of the null hypothesis is not interpreted as a negative outcome. The implementation of a CIP intervention structured by the CDMT appeared to provide an “awakening” experience for many of the participants regarding educational and occupational opportunities. As most of the participants enjoyed the activities and expressed satisfaction regarding the impact of the activities on their educational and occupational goals, this particular career intervention is considered successful. The intervention could be improved with additional emphasis on preparing for field trips and in processing the experience afterward. We are left highly encouraged by the participant responses to this career intervention.

APPENDIX # A

FOCUSING ON MY FUTURE WORKSHOP SURVEY, PRETEST

Focusing on My Future Workshop Survey, Pretest

This survey has 13 questions designed to identify your career/job goals and your educational goals. Please circle the most appropriate answer(s), or fill in the blanks.

NAME: _____

DATE: _____

1. Today, what occupations or jobs are you now considering?

1. _____

2. _____

3. _____

4. _____

5. _____

2. Among the options listed above, which is your **first choice**?

1. _____

3. If you have already identified a first choice of an occupation/job, how certain are you about your first choice?

A Not Certain

B Mildly Certain

C Certain

D Very Certain

E I have not made a first choice of occupation/job

4. If you have a first choice, what is the *least* amount of education required for this job?

- A G.E.D. (General Equivalency Diploma)
- B High school diploma
- C Technical Training
- D Some College (A.A.)
- E College (B.S. or B.A.)
- F Advanced Degree (M.S., M.A., Ph.D., M.D., L.L.D.)
- G I do not know

5. How satisfied are you with your first choice of an occupation/job?

- A Not At All Satisfied
- B Somewhat Satisfied
- C Satisfied
- D Very Satisfied
- E I have not made a first choice of occupation/job

6. How satisfied do you believe your parent(s)/guardian(s) would be with your first choice of occupation/job?

- A Not At All Satisfied
- B Somewhat Satisfied
- C Satisfied
- D Very Satisfied
- E Not Sure
- E I have not made a first choice of occupation/job

7. How satisfied do you believe your friends would be with your first choice of occupation/job?

- A Not At All Satisfied
- B Somewhat Satisfied
- C Satisfied
- D Very Satisfied

- E Not Sure
- F I have not made a first choice of occupation/job

8. Today, what education level(s) do you hope to complete? Circle all of the education levels that you are thinking about completing.

- A G.E.D. (General Equivalency Diploma)
- B High school diploma
- C Technical Training
- D Some College (A.A.)
- E College (B.S. or B.A.)
- F Advanced Degree (M.S., M.A., Ph.D., M.D., L.L.D.)
- G I do not know

9. Among the education levels listed above, which is your **first choice**?

1. _____

10. If you have already identified a first choice of education level, how certain are you about your first choice?

- A Not Certain
- B Mildly Certain
- C Certain
- D Very Certain
- E I have not made a first choice of education level

11. How satisfied are you with your first choice of education level?

- A Not at all satisfied
- B Somewhat satisfied
- C Satisfied
- D Very Satisfied
- E I have not made a first choice of education level

12. How satisfied do you believe your parent(s)/guardian(s) would be with your first choice of education level?

- A Not At All Satisfied
- B Somewhat Satisfied
- C Satisfied
- D Very Satisfied
- E Not Sure
- F I have not made a first choice of education level

13. How satisfied do you believe your friends would be with your first choice of education level?

- A Not At All Satisfied
- B Somewhat Satisfied
- C Satisfied
- D Very Satisfied
- E Not Sure
- F I have not made a first choice of education level

APPENDIX # B

FOCUSING ON MY FUTURE WORKSHOP SURVEY, POSTTEST

Focusing on My Future Workshop Survey, Posttest

This survey has 17 questions designed to identify your career/job goals and your educational goals. Please circle the most appropriate answer(s), or fill in the blanks.

NAME: _____ DATE: _____

1. Today, what occupations or jobs are you now considering?

1. _____

2. _____

3. _____

4. _____

5. _____

2. Among the options listed above, which is your **first choice**?

1. _____

3. If you have already identified a first choice of an occupation/job, how certain are you about your choice?

A Not Certain

B Mildly Certain

C Certain

D Very Certain

E I have not made a first choice of occupation/job

4. If you have a first choice, what is the *least* amount of education required for this job?
- A G.E.D. (General Equivalency Diploma)
 - B High school diploma
 - C Technical Training
 - D Some College (A.A.)
 - E College (B.S. or B.A.)
 - F Advanced Degree (M.S., M.A., Ph.D., M.D., L.L.D.)
 - G I do not know
5. How satisfied are you with your first choice of an occupation/job?
- A Not At All Satisfied
 - B Somewhat Satisfied
 - C Satisfied
 - D Very Satisfied
 - E I have not made a first choice of occupation/job
6. How satisfied do you believe your parent(s)/guardian(s) would be with your first choice of occupation/job?
- A Not At All Satisfied
 - B Somewhat Satisfied
 - C Satisfied
 - D Very Satisfied
 - E Not Sure
 - F I have not made a first choice of occupation/job
7. How satisfied do you believe your friends would be with your first choice of occupation/job?
- A Not At All Satisfied
 - B Somewhat Satisfied
 - C Satisfied
 - D Very Satisfied
 - E Not Sure

F I have not made a first choice of occupation/job

8. Did your career goal(s) change during this workshop?

Yes

No

9. If your career goal(s) changed, please write your “old” and “new” career goal(s) below:

Old Career Goal(s)	New Career Goal(s)
1.	1.
2.	2.
3.	3.
4.	4.

10. Today, what education level do you hope to complete? Circle the education level that you are thinking about completing?

A G.E.D. (General Equivalency Diploma)

B High school diploma

C Technical Training

D Some College (A.A.)

E College (B.S. or B.A.)

F Advanced Degree (M.S., M.A., Ph.D., M.D., L.L.D.)

G I do not know

11. Among the education levels listed above, which is your **first choice**?

1. _____

12. If you have already identified a first choice of education level, how certain are you about your first choice?

A Not Certain

B Mildly Certain

- C Certain
- D Very Certain
- E I have not made a first choice of education level

13. How satisfied are you with your first choice(s) of education level?

- A Not at all satisfied
- B Somewhat satisfied
- C Satisfied
- D Very Satisfied
- E I have not made a first choice of education level

14. How satisfied do you believe your parent(s)/guardian(s) would be with your first choice of education level?

- A Not At All Satisfied
- B Somewhat Satisfied
- C Satisfied
- D Very Satisfied
- E Not Sure
- F I have not made a first choice of education level

15. How satisfied do you believe your friends would be with your first choice of education level?

- A Not At All Satisfied
- B Somewhat Satisfied
- C Satisfied
- D Very Satisfied
- E Not Sure
- F I have not made a first choice of education level

16. Did your educational goal(s) change during this workshop?

- Yes
- No

17. If your educational goal(s) changed, please write your “old” and “new” educational goal(s) below:

Old Educational Goal(s)	New Educational Goal(s)
1.	1.
2.	2.
3.	3.
4.	4.

APPENDIX # C

FOCUSING ON MY FUTURE WORKSHOP SATISFACTION SURVEY

Focusing on My Future Workshop Satisfaction Survey

This survey has 22 questions designed to let you share your liking of the Focusing on My Future Workshop and suggestions for improvement.

NAME: _____ DATE: _____

Instructions: Please choose the level of helpfulness for each activity below and fill in the blanks:

Day 1: Knowing Myself

1. Meeting the Guides (Maria, Robert and Marcus)

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

2. Activity: Positive and Negative Feelings

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

3. Activity: Significant Others

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

4. Activity: Interests

- A Not helpful
- B A little helpful
- C Helpful

D Very helpful

5. Activity: Abilities

A Not helpful

B A little helpful

C Helpful

D Very helpful

6. Activity: Values

A Not helpful

B A little helpful

C Helpful

D Very helpful

Day 2: Knowing Occupations and Educational Pathways

7. Defining Work Terms

A Not helpful

B A little helpful

C Helpful

D Very helpful

8. Educational Options: Pathway to Careers

A Not helpful

B A little helpful

C Helpful

D Very helpful

9. Activity: The 16 Career Clusters

A Not helpful

B A little helpful

C Helpful

D Very helpful

Day 3: Trip to TCC

10. Touring the Campus

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

11. Information about degrees

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

12. Information about classes

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

13. Information about financial aid

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

Day 4: Trip to Tallahassee Memorial Regional Medical Center

14. Hospital Tour

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

15. Information about all of the different jobs

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

16. Information about job duties

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

General Satisfaction of the Focusing on My Future Workshop

17. Acting out the different examples given by the models (Marie, Robert and Marcus)

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

18. Games (e.g., The Guessing Game, Scavenger Hunt)

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

19. Was the workshop helpful in thinking about your educational goals?

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

20. Was the workshop helpful in thinking about your occupational goals?

- A Not helpful
- B A little helpful
- C Helpful
- D Very helpful

21. I plan to follow-up with a school guidance counselor.

- A Definitely
- B Probably
- C Maybe
- D No

22. How could this workshop be improved?

Thank You!

APPENDIX # D
DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

This questionnaire has 7 questions about your background. Please circle the most appropriate answer(s), or fill in the blanks.

Name: _____ **Grade:** _____ **Date:** _____

Age: _____ **Race:** _____ **Male/Female:** _____ **Date of Birth:** _____

1. Who is the adult person/people you live with? Circle all that apply.

- | | |
|-----------------------|----------------------------|
| A. Mother | F. Uncle |
| B. Father | G. Aunt |
| C. Grandmother | H. Godparent |
| D. Grandfather | I. Older Brother or Sister |
| E. Other, List: _____ | |

2. What is the highest grade completed by the adult person/people you live with?

Person:	Highest Grade Completed:

3. What is the job/occupation of the adult person/people you live with?

Person:	Job or Occupation:

4. How often does your family eat meals together?

- A. Almost never
- B. Twice a month
- C. Once a week
- D. Twice a week
- E. Three times a week
- F. Every night
- G. Other, List _____

5. How many people live in your home?

6. Who in your family would you talk to **first** about your educational goals?

7. Who in your family would you talk to **first** about your job/occupational goals?

APPENDIX # E
CDMT INTEREST ACTIVITY

CDMT Interests Activity

Activity: Interests

Name: _____ Date: _____

Purpose:

- To identify personal interests through conducting an interest activity.

Instructions:

- In the table on the following page, circle any activities that are of interest to you.
- Count the number of circled activities in each column (identified by category such as R-Realistic) and write the totals in the spaces provided.
- If there are not 2 main areas, ask yourself if the non-chosen activities are “interesting” or “very interesting.”
- Keep going until the top 2 areas of interest have been identified.
- Compare your code to the definitions on the following page.

Name: _____ Date: _____

Realistic (R)	Investigative (I)	Artistic (A)	Social (S)	Enterprising (E)	Conventional (C)
Fix mechanical things	Work on a scientific project	Sketch, draw or paint	Work as a volunteer for a charity	Operate my own business	Operate office machines
Take a Woodworking class	Study the stars through a telescope	Play in a band or orchestra	Help others with their personal problems	Serve as an officer of a group	Compute business figures
Take an Auto Mechanics class	Solve a mathematical problem	Create photographs	Work as a speech therapist	Supervise the work of others	Take an Accounting class
Work outdoors	Investigate a crime scene	Take an Art class	Work as a nurse	Lead a group to accomplish a goal	Take a Commercial Math class
Operate motorized machines or equipment	Read scientific books or magazines	Act in a play	Teach children	Read business magazines or articles	Work in an office
Build things	Do a lot of thinking	Design fashions	Teach or train others	Meet important people	Write a business letter
Work alone	Use a microscope	Design interiors	Lead a group discussion	Give a talk or speech	Use a computer
Tend/Train animals	Do complicated calculations	Read fiction, plays or poetry	Play a team sport	Sell things	Keep accurate records
Pitch a tent	Understand	Attend	Help others	Promote or	Be responsible for

	physics laws and theories	concerts or the theater or an art exhibit	resolve a dispute	spread an idea	details
Solve mechanical puzzles	Interpret formulas	Work on crafts	Participate in a meeting	Win a leadership or sales award	Type or use word processing software
Plant a garden	Learn about a new subject area	Work according to your own rules	Are good with words and talking to people	Take on a lot of responsibility	Work with numbers
Read a blueprint	Use computers	Use your imagination to do something original	Work with young people	Participate in a political campaign	Be very well organized
Play a sport	Perform lab experiments	Write stories and poetry	Plan and supervise an activity	Convince people to do things your way	Set up a system for doing something and stick to it

R _____ **I** _____ **A** _____ **S** _____ **E** _____ **C** _____

Interests Code Explanations

Name: _____ Date: _____

- The two columns with the most items circled indicate your code.

R _____	I _____	A _____	S _____	E _____	C _____
Realistic	Investigative	Artistic	Social	Enterprising	Conventional

R = Realistic

Mechanical and athletic abilities; likes working outdoors with tools and objects; prefers dealing with things rather than people.

I = Investigative

Math and science abilities; likes working alone and solving complex problems; likes dealing with ideas rather than people or things.

A = Artistic

Artistic ability and imagination; enjoys creating original work; likes dealing with ideas rather than things.

S = Social

Social skills; interested in social relationships and helping others solve problems; likes dealing with people rather than things.

E = Enterprising

Leadership and speaking abilities; likes to be influential; interested in politics and business; like to deal with people and ideas, not things.

C = Conventional

**Clerical and math ability; prefer working indoors and organizing things;
like to deal with words and numbers rather than people or ideas.**

APPENDIX # F
CDMT ABILITIES ACTIVITY

CDMT Abilities Activity

Name: _____

Date: _____

Purpose

To identify your abilities.

Instructions

- ◆ Think of the abilities listed below in terms of how you compare yourself to someone in your age group (friends/classmates).
- ◆ Circle the answer that best describes your abilities when compared to your friends and classmates.

COMMUNICATION (includes speech, writing, persuasion, reading and comprehension)	Below Average	Average	Above Average
MATH (includes adding, subtracting)	Below Average	Average	Above Average
SPATIAL (includes biology, chemistry, geology, and astronomy)	Below Average	Average	Above Average
SCIENCE (includes biology, chemistry, geology, and astronomy)	Below Average	Average	Above Average
LEADERSHIP (is an ability to take on responsibility in a group, to motivate others, and to provide direction in group activities)	Below Average	Average	Above Average
ART (includes painting, drawing, sculpture, acting, and music)	Below Average	Average	Above Average
PHYSICAL PERFORMANCE (includes athletics, dance, and a	Below Average	Average	Above

variety of activities that require coordination)			Average
MECHANICAL (is an ability to understand and fix various machines and appliances)	Below Average	Average	Above Average

APPENDIX # G
CDMT VALUES ACTIVITY

CDMT Values Activity

Name: _____ Date: _____

Purpose

To identify your top two career needs and wants.

Instructions

- ◆ Think of the 10 career needs and wants below in terms of their importance to you.
- ◆ Circle the answer that best describes its' relevance to you.
- ◆ Look at your choices in the “Very Important” column, go through them and choose no more than two that you view as the most important.
- ◆ Write these two career needs and wants below.

1. _____ 2. _____

MONEY — A need for extras beyond what you live on	Less important	Important	Very important
RESPECT — The prestige that some occupations provide (Example: a doctor)	Less important	Important	Very important
FREEDOM — Being able to work independently with little supervision	Less important	Important	Very important
STABILITY — Occupations that have little turn-over or that offer job security	Less important	Important	Very important
VARIETY — Occupations that			

expose you to diverse experiences and locations	Less important	Important	Very important
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LEISURE — Occupations that provide you with ample time for family and hobbies	Less important	Important	Very important
LEADERSHIP — Occupations with responsibility for others and for planning	Less important	Important	Very important
SERVICE — Occupations that help people and society in a very direct way	Less important	Important	Very important
INTEREST — Working in a field that you find stimulating	Less important	Important	Very important
CHALLENGE — A field that repeatedly tests your skills and abilities	Less important	Important	Very important

APPENDIX # H

CDMT CAREER CLUSTERS ACTIVITY

CDMT Career Clusters Activity

Name: _____ Grade: _____ Date: _____

Age: _____ Race: _____ Male/Female: _____ Date of Birth: _____

The matrix below (Career Clusters), includes 16 Career Clusters. Each Career Cluster is a grouping of occupations/jobs and broad industries, based on some shared and common characteristics.

1. According to your interests, choose your top 2-4 career choices, *Next*:
2. **Place a check mark in the box to distinguish your preferred pathway to your chosen career fields. Finally:**

There are five pathways:

- ii. Direct Entry – From high school to the workforce
- iii. Technical Training – Requires technical training
- iv. Two- year colleges – A.A. degree
- v. Four-year colleges – B.S. or B.A. degree
- vi. Advance Degree - (M.S., M.A., Ph.D., M.D., L.L.D.)
- vii. I Don't Know

Agriculture, Food, & Natural Resources	Rank Number: ____		
The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources. (e.g. Landscaper, Animal Breeder, Food Scientist, Farm Manager, Biochemist, Butcher, Agricultural Inspector, Dietician, Tree Surgeon, Pet Shop Operator, Fish and Game Officer, Vet)	Direct Entry	Technical	2-Year
	4-Year	Advanced Degree	Don't Know

Architecture & Construction		Rank Number: ____	
<p>Careers in designing, planning, managing, building and maintaining the built environment.</p> <p>(e.g., Architect, Interior Designer, Landscape Designer, Carpenter, Electrician, Crane Operator, Plumber, Septic Tank Servicing, Surveyor, Civil Engineer, Building Code Official, Urban Planner, Cost Estimator, Draftsman)</p>	Direct Entry	Technical	Professional

Arts, A/V Technology, & Communication		Rank Number: ____	
<p>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</p> <p>(e.g., Art Director, Cartoonist, Animator, Graphic Designer, Fashion Designer, Writer, Sound Engineer, Desktop Publisher, Photographer, Editor, Actor, Dancer, Set Designer, Film Editor, Music Teacher)</p>	Direct Entry	Technical	Professional

Business, Management, & Administration		Rank Number: ____	
<p>These careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy.</p> <p>(e.g., Legal Secretary, File Clerk, Data Entry, Medical Secretary, Management Analyst, Meeting and Convention Planner, Paralegal, Office Manager, Market Researcher, Copywriter, Human Resources Manager, Business Analyst, Corporate Trainer)</p>	Direct Entry	Technical	Professional

Education & Training		Rank Number: ____	
Planning, managing and providing education and training services, and related learning support services (e.g., Elementary Teacher, Instructional Designer, Librarian, Social Worker, School Principal, Psychologist, College Dean, Professor, Secondary Teacher, Fitness Trainer, Nanny, Counselor)	Direct Entry	Technical	Professional

Finance (Primary Codes: C E)		Rank Number: ____	
Planning, services for financial and investment planning, banking, insurance, and business financial management (e.g., Accountant, Tax Preparer, Financial Planner, Financial Analyst, Billing Clerk, Auditor, Economist, Brokerage Clerk, Broker, Investment Advisor, Loan Officer, Bank Teller, Insurance Claims Agent, Actuary)	Direct Entry	Technical	Professional

Governmental & Public Administration		Rank Number: ____	
Executing governmental functions to include Governance; National Security; Foreign Service; Planning; Revenue and Taxation; Regulation; and Management and Administration at the local, state, and federal levels. (e.g., Policy Analyst, Clerk, Immigration Officer, Lobbyist, President, Mayor, Senator, Administrative Assistant, Census Clerk, Congressional Aide, Government Auditor, Tax Examiner, Planner)	Direct Entry	Technical	Professional

Health Science		Rank Number: ____	
Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development. (e.g., Chiropractor, Home Health Aide, Dental Technician, Health Educator, Nurse, Doctor, Dentist, Mortician, Acupuncturist, Audiologist, Athletic Trainer, Massage)	Direct Entry	Technical	Professional

Hospitality & Tourism		Rank Number: ____	
Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other foodservices, lodging, attractions, recreation events and travel related services. (e.g., Chef, Bell Hop, Tour Guide, Hotel Desk Clerk, Convention Planner, Baker, Brewer, Restaurant Operator, Caterer, Bartender, Pastry Chef, Concierge, Hotel Manager or Owner, Night Auditor, Reservation Clerk, Valet Parker, Food and Beverage Director)	Direct Entry	Technical	Professional

Human Services		Rank Number: ____	
Preparing individuals for employment in career pathways that relate to families and human needs. (e.g., Preschool Teacher, Social Worker, Nanny, Clergy, Marriage & Family Therapist, Personal Trainer, Sociologist, Mental Health Counselor, Hairdresser, Funeral Director, Nail Technician, Massage Therapist)	Direct Entry	Technical	Professional

Information Technology		Rank Number: ____	
<p>Building Linkages in Information Technology and IT Occupations Framework: For Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services.</p> <p>(e.g., Computer Programmer, Network Administrator, Database Administrator, Web Master, IT Security Consultant, Systems Analyst, Hardware Engineer, Technical Writer, Help Desk Support Technician, Call Center Support Rep, Desktop Publisher, Software Tester, E-Business Specialist, Computer Animator, Multi-Media Artist)</p>	Direct Entry	Technical	Professional

Law, Public Safety, & Security		Rank Number: ____	
<p>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</p> <p>(e.g., Lawyer, Fire Fighter, Paralegal, Corrections Officer, Police Officer, Probation Officer, EMT, Dispatcher, Security Guard, Federal Marshall, Judge, Bomb Technician, Private Investigator, Rescue Worker)</p>	Direct Entry	Technical	Professional

Manufacturing		Rank Number: ____	
<p>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</p>	Direct Entry	Technical	Professional

(e.g., Tool & Die Operator, Drycleaner, Cabinetmaker, Welder, Metal Worker, Engineer, Labor Relations Manager, Boilermaker, Laser Systems Technician, Meter Installer/Repairer, Biomedical Equipment Technician, Pattern and Model Makers, Medical Appliance Maker)			
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Marketing, Sales, & Service			
Rank Number: ____			
Planning, managing, and performing marketing activities to reach organizational objectives.	Direct Entry	Technical	Professional
(e.g., Cashier, Sales Representative, Purchasing Agent, Rental Clerk, Merchandise Displayer or Window Trimmer, Small Business Entrepreneur, Real Estate Broker/Sales Agent or Appraiser, Floral Designer, Model, Stock Clerk, Warehouse Manager, Wholesale Distribution Manager, Marketing Manager)			

Science, Technology, Engineering & Mathematics			
Rank Number: ____			
Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.	Direct Entry	Technical	Professional
(e.g., Laboratory Technician, Geologist, Aerospace Engineer, Electrical Engineer, Industrial Engineer, Mechanical Drafter, Broadcast Technician, Statistician, Technical Writer, Civil Engineer, Scientist, Physicist, Architectural Drafter, Chemist, Mathematician, Hydrologist, Zoologist, Astronomer, Archeologist, Anthropologist, Space Engineer, Microbiologist)			

Transportation, Distribution, & Logistics	Rank Number: ____		
<p>Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.</p> <p>(e.g., Airline Pilot, Taxi Driver, School Bus Driver, Chauffeur, Logistics Engineer, Air Traffic Controller, Ship or Boat Captain, Truck Driver, Storage and Distribution Manager, Packer, Boat Builder, Aerospace Technician, Automotive Body Repairer)</p>	Direct Entry	Technical	Professional

APPENDIX # I
IRB APPROVAL



Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8633 FAX (850) 644-4392

REAPPROVAL MEMORANDUM

Date: 3/1/2007

To:
Roberta Rubin
MC:4459

Dept.: **POLICY STUDIES IN EDUCATION**

From: **Thomas L. Jacobson, Chair**

A handwritten signature in black ink, appearing to read "Thomas L. Jacobson".

Re: **Reapproval of Use of Human subjects in Research:**
Project KICK

Your request to continue the research project listed above involving human subjects has been approved by the Human Subjects Committee. If your project has not been completed by 2/13/2008 please request renewed approval.

You are reminded that a change in protocol in this project must be approved by resubmission of the project to the Committee for approval. Also, the principal investigator must report to the Chair promptly, and in writing, any unanticipated problems involving risks to subjects or others.

By copy of this memorandum, the Chairman of your department and/or your major professor are reminded of their responsibility for being informed concerning research projects involving human subjects in their department. They are advised to review the protocols of such investigations as often as necessary to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

Cc:
HSC No. 2007.047-R

APPENDIX # J

PARENT/LEGAL GUARDIAN PERMISSION FORM FOR RESEARCH INVOLVING
CHILDREN

PARENT/LEGAL GUARDIAN PERMISSION FORM FOR RESEARCH INVOLVING
CHILDREN

We would like to invite your child to take part in research that has been approved by the Leon County School Board and Florida State University, and will be under the supervision of Dr. Gary Peterson (Professor at Florida State University and psychologist, license #PSYFLA2505), (850) 644-1781 and Dr. Roberta Rubin (Director of Project K.I.C.K. at Florida State University), (850) 644-3419. This research is an instructional system that helps students: learn how to make decisions about career options and find information necessary for developing an educational plan to help them achieve their chosen career goals. If your child takes part in this research, s/he will be asked to take part in the administration of the Career Decision-Making Tool (CDMT), which will be administered during school hours.

All of the information that we obtain from your child during the research will be kept confidential. We will not tell anyone else, including parents and teachers, what your child tells us. We will store all assessment results in a locked file for one year. Each person will have their own code number so that no one other than us will be able to identify your child. The key to the code of names will be kept in a separate locked file. Your child's name, other identifying information about him/her will not be used in any reports of the research. No individual responses will be reported. Only group findings will be reported.

Your child's participation in this research is voluntary. He/she may refuse to take part. He/she may refuse to answer any questions and may stop taking part in the study at any time. Whether or not your child chooses to take part in this research will have no bearing on his/her standing or grades in their school. There are no known risks to your child from taking part in this research, and no foreseeable direct benefit to him/her either.

Please discuss this research and the information in this permission form with your child. If you or your child has any questions about the research, you may telephone Dr. Gary Peterson, (850) 644-1781 and Dr. Roberta Rubin, (850) 644-3419. If your child agrees to take part in the research, and you agree to let him/her, you should sign this form on the next page. Please keep the other copy of this agreement for your future reference.

Gary Peterson, Ph.D., Educational Psychology and Learning
Systems Department Chair, Professor, and Psychologist

Roberta I. Rubin, Ph.D., Director Project K.I.C.K.

Parent or legal guardian's permission to allow child to participate

I have read this form and discussed it with my child, and I freely and voluntarily and without element of force or coercion, consent to allow child to participate in the data collection for the research project entitled Project Kids in Cooperation with Kids (K.I.C.K.)/Career Decision Making research.

I understand that this consent may be withdrawn at any time without prejudice or penalty to my child or myself. I have been given the right to ask and have answered any inquiry concerning the study. Questions, if any, have been answered to my satisfaction.

I understand that I may contact Dr. Gary Peterson, (850) 644-1781 and Dr. Roberta Rubin, (850) 644-3419, for answers to questions about this research or my rights. Group results will be sent to me upon my request.

I have read and understand this consent form.

Parent/Legal Guardian's Signature

Date

Child's Name (Please Print)

APPENDIX # K

YOUTH ASSENT TO PARTICIPATE IN RESEARCH INVOLVING CHILDREN

YOUTH ASSENT TO PARTICIPATE IN RESEARCH INVOLVING CHILDREN

We are researchers from the Florida State University of South Florida and we are here to include you in a research study we're doing with kids who participate in the Boys and Girls Club summer program. We will also tell your parent about the study and get his or her permission for you to take part, but we need to make sure that you want to do the study too. I am going to tell you some more about the study but it is okay for you to ask me questions at any time.

We would like to invite you to take part in research that has been approved by the Leon County School Board and Florida State University, and will be under the supervision of Dr. Gary Peterson (Professor at Florida State University and psychologist, license #PSYFLA2505), (850) 644-1781 and Dr. Roberta Rubin (Director of Project K.I.C.K. at Florida State University), (850) 644-3419. This research is an instructional system that helps students: learn how to make decisions about career options and find information necessary for developing an educational plan to help them achieve their chosen career goals. If you take part in this research, you will be asked to take part in the administration of the Career Decision-Making Tool (CDMT).

All of the information that we obtain from you during the research will be kept confidential. We will not tell anyone else, including parents and teachers, what you tell us. We will store all of your materials in a locked file for one year. Each person will have their own code number so that no one other than us will be able to identify you. The key to the code of names will be kept in a separate locked file. Your name, other identifying information about you will not be used in any reports of the research. No individual responses will be reported. Only group findings will be reported.

Your participation in this research is voluntary. You may refuse to take part. You may refuse to answer any questions and may stop taking part in the study at any time. Whether or not you choose to take part in this research will have no bearing on your summer camp program. There are no known risks to you from taking part in this research, and no foreseeable direct benefit to you either.

Please discuss this research and the information in this permission form with your parent/guardian. If you or your parent has any questions about the research, you may telephone Dr. Gary Peterson, (850) 644-1781 and Dr. Roberta Rubin, (850) 644-3419. If you agree to take part in the research, you should sign this form on the next page. Please keep the other copy of this agreement to discuss with your parent and for your future reference.

Gary Peterson, Ph.D., Educational Psychology and Learning
Systems Department Chair, Professor, and Psychologist

Roberta I. Rubin, Ph.D., Director Project K.I.C.K.

Assent to Participate in Research Study

I have read this form and discussed it with my parent/guardian, and I freely and voluntarily and without element of force or coercion, consent to participate in the data collection for the research project entitled Project Kids in Cooperation with Kids (K.I.C.K.)/Career Decision Making research.

I understand that this consent may be withdrawn at any time without prejudice or penalty to my myself. I have been given the right to ask and have answered any inquiry concerning the study. Questions, if any, have been answered to my satisfaction.

I understand that I may contact Dr. Gary Peterson, (850) 644-1781 and Dr. Roberta Rubin, (850) 644-3419, for answers to questions about this research or my rights. Group results will be sent to me upon my request.

I have read and understand this assent form.

Participant Signature Name of Participant Date

Researcher Signature Name of Researcher Date

APPENDIX # L
INSTRUMENTS

Career Decision-Making Tool

The Career Decision-Making Tool is a Web-based Support Tool for Learning the Career Decision-Making Process model is an instructional system based on the CIP that assists in providing structured learning experiences to help students learn how to make career decisions, to locate appropriate career information and to develop an educational plan to help them achieve their chosen career goals. The CDMT presents a standard sequence of activities that lead students through the CASVE cycle.

Career Decision-Making Tool Facilitator's Manual

The CDMT Facilitator's Manual (U.S. Department of Labor, 2009), also available on the web, leads a counselor or instructor through the different curricular units based upon the five phases of the CASVE cycle.

Focusing on My Future Workshop Satisfaction Survey

This survey was designed to measure the participant's satisfaction with the activities, field trips and overall satisfaction with the workshop.

CDMT Interests Activity

The Interests Activity is embedded within Section 2: Understanding: Understanding Myself and My Options, of the CDMT and requires the participants to identify interests, which result in a two letter RAISC code.

CDMT Abilities Activity

The Abilities Activity is embedded within Section 2: Understanding: Understanding Myself and My Options, of the CDMT and requires the participants to rate their abilities as below average, average, or above average when compared to their peers. Therefore, the participants identify their areas of skill.

CDMT Values Activity

The Values Activity is embedded within Section 2: Understanding: Understanding Myself and My Options, of the CDMT and requires the participants to rate 10 values as less important, important or very important. This activity provides a ranking of the participant's values.

CDMT Career Clusters Activity

The Career Clusters Activity is embedded within Section 2: Understanding of the CDMT and lists sixteen (16) Career Clusters. Each Career Cluster is a grouping of occupations and broad industries, based on some shared and common characteristics.

This activity requires the participants to rank their top two (2) to four (4) choices of career clusters based upon their interests and identify their preferred pathway from a list of three (3) pathways (Direct Entry – From high school to the workforce; Technical – two- and four-year colleges; and Professional – graduate school) to their top career cluster fields.

Focusing on my Future Workshop Survey

This survey has the following assessments imbedded within it:

Occupational Alternatives Questionnaire (OAQ). Career decision state was measured by the OAQ. The OAQ consists of two questions: 1) “Today, what occupations or jobs are you now considering” and 2) “Among the options listed above, which is your first choice?.” The OAQ is scored as follows: 1 = a first choice is listed with no alternatives; 2 = a first choice is listed with alternatives; 3 = no first choice is listed, just alternatives; and 4 = neither a first choice nor alternatives are listed. Thus, the higher the OAQ score, the greater the degree of indecision.

Satisfaction (with career choice). Satisfaction with career choice was measured by a single-item. This question was: “How satisfied are you with your first choice of occupation/job?”

Certainty (with career choice). Certainty with one’s career choice was measured by a single-item. This question was: “If you have already identified a first choice of an occupation/job, how certain are you about your first choice?”

Satisfaction (with choice of education level). Satisfaction with choice of education level was measured by a single-item. This question was: “How satisfied are you with your first choice of education level?”

Certainty (with choice of education level). Certainty with one’s career choice was measured by a single-item. This question was: “If you have already identified a first choice of education level, how certain are you about your first choice?”

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BIOGRAPHICAL SKETCH

Tracy L. Shelby, M.S., Ed.S. is currently a Psychology Resident. She earned her Doctorate at the Florida State University in the Combined Doctoral Program in Counseling Psychology and School Psychology in 2010. She earned an M.S. and an Ed.S., Mental Health Counseling Specialization: Specialist/Master's Degree in Counseling and Human Services from the Florida State University in 2001 and a Bachelors Degree with a Major in Psychology and a Minor in Child Development from the Florida State University in 1999.

She is the Mental Health and Substance Abuse Coordinator for the Office of Health Services and is responsible for assisting with policy research and development and providing technical assistance on the delivery of mental health and substance abuse services in DJJ facilities and programs. Dr. Shelby's primary job duties include:

- Provide supportive assistance to the Regional Senior Psychologists;
- Provide clinical guidance and supportive assistance to state and private mental health care providers who provide our youth with mental health, substance abuse and developmental disability services;
- Assist with monitoring of the department-wide mental health, substance abuse and developmental disability services delivery system;
- Assist with on-site inspections of facilities to identify mental health and substance abuse services needs;
- Serves as liaison with public and private agencies that interface with the Department's mental health and substance abuse services;
- Provide clinical assistance to mental health and substance abuse pilot programs within the Department, and;
- Data evaluation and analysis.

Prior to her current position with the Department of Juvenile Justice, Dr. Shelby completed her Pre-Doctoral Internship with the Department of Justice's Bureau of Prisons at the Federal Correctional Institution – Tallahassee, FL. She served as the Mental Health Practitioner for the Leon Regional Juvenile Detention center. She provided prevention and intervention services to at-risk youth for five years, while she also provided counseling services to adolescents and their families in a private practice setting. She has worked as a Graduate Teaching Assistant, a Graduate Research

Assistant, Executive Director of an international non-profit organization, and provided support services to young adults with physical and developmental disabilities in the Disability Support Services Office at the Tallahassee Community College. She has 14 years of experience working with children, adolescents and young adults.

Dr. Shelby authored or co-authored 6 research papers relating to issues such as coping in children and adolescents, the effect of parental involvement in interventions for children and adolescents, parental satisfaction of a community based intervention program, an intervention curriculum and a home visit curriculum for an intervention program which provided services to at-risk youth and their families, and the effect of hypnotherapy on aggressive adolescents. She is a member of five professional and honor societies.