AN EXAMINATION OF A CAREER AND COLLEGE AWARENESS

PROGRAM AND THE EFFECTS ON FIFTH GRADE STUDENTS

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AN EXAMINATION OF A CAREER AND COLLEGE AWARENESS PROGRAM AND THE EFFECTS ON FIFTH GRADE STUDENTS

Katherine S. Carlisle

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AN EXAMINATION OF A CAREER AND COLLEGE AWARENESS

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Katherine S. Carlisle

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Date of Graduation

VITA

Katherine S. Carlisle, daughter of Donald E. Dove, Sr. and Mary M. Dove, was born November 4, 1954, in Columbus, Georgia. She graduated from Troy State University in 1993 with a Bachelor of Science degree in Human Services and graduated from Columbus State University in 1997 with a Master of Science degree in Public Administration. Her career consists of nine years as a child protective services and eligibility caseworker for the Department of Family and Children Services in the state of Georgia and ten years as an administrator in human resources. For the past four plus years she has served as the Executive Director for Enrollment Services at Columbus State University. During her ten years of employment with Columbus State University she has served on numerous academic and administrative committees and has taught “Life and Career Planning”. She is currently on the Board of Directors for the Harris County Chamber of Commerce and on the Planning Commission for the city of Hamilton, Georgia. She has held office in state human resources organizations and has presented at state, regional and national conferences on subjects ranging from the implementation of human resources management systems to the development of a one stop shop in a university enrollment services division.

She is married to Thomas D. Carlisle and has two sons, Chance and Chase, two daughters-in-law, Emily and Joci, and five beautiful grandchildren, Trey, Chandler, Tucker, Cason and Lausyn.

DISSERTATION ABSTRACT

AN EXAMINATION OF A CAREER AND COLLEGE AWARENESS PROGRAM AND THE EFFECTS ON FIFTH GRADE STUDENTS

Katherine S. Carlisle

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Career and educational choices and decisions impact the livelihood and life satisfaction of adults on a daily basis. Students in middle school are required to make critical decisions which will set the stage for their future educational and career choices. This study examined the use of an eight month college and career awareness program designed to influence the ideas and beliefs of fifth grade students about college and careers. In an effort to determine the effectiveness of this type of learning experience, the following questions were investigated: (1) What is the relationship between a college and career awareness program and a participant's attitude toward college? (2) What is the relationship between a college and career awareness program and a participant's awareness

of career values and planning? and (3) What is the relationship between a college and career awareness program and a participant's self-concept?

These research questions were investigated using pre-existing data from a pre- and post-survey administered to 349 fifth grade students. Independent sample statistical analysis was conducted to determine the impact of the intervention. The findings supported the hypothesis which asked if student's attitudes toward college will improve following a college and career awareness program. The pre- and post-test groups mean scores indicated that the participant's attitudes toward college, careers and self-concept were impacted by the intervention program treatment. The data analysis indicated that although much of the participant's opinions of preferred occupations, career values and attitudes towards favorite subjects and school were formulated prior to the treatment, positive changes were indicated. The most significant change at an alpha level of .05 was found in regard to the student's awareness of college. It is recommended that future research include the use of instruments with construct reliability. In addition, further studies should consider differences in socio-economic, gender factors, parental influences and teaching styles.

The program intervention is highly recommended for university and school system partnerships. The experiential learning and activities involving trips to a university campus is considered a strong addition to traditional career awareness program in elementary schools.

ACKNOWLEDGEMENTS

I am eternally indebted to my family, friends and colleagues for their endless support and love during my studies at Auburn and the hours dedicated to this dissertation. I am extremely thankful for the encouragement of Charles Pattillo, my mentor and boss, who had the vision and dream for me to complete a doctorate degree. I am confident that I would not have had the courage to pursue this challenge without his support. I am also grateful for Dr. Joyce Hickson who directed me to Auburn and freely provided her expertise in the Harris County project and in my studies. I am thankful to Dr. Toni Edwards for her kind assistance in the statistical analysis and to Dr. James Witte, Dr. Maria Witte and Dr. Margaret Ross for making me believe that I could achieve this goal.

This dissertation is dedicated to my husband who spent many lonely nights waiting for me to arrive home from Auburn and to my best friend Anita Saxon who gave me permission to put our friendship on hold. Most of all, I thank my sons, daughters-in-law and grandchildren who never made me feel guilty for spending my weekends studying. I am truly excited that at the age of fifty, I will celebrate this accomplishment with my dear sister, Pat, who is also completing her doctorate. My hope and prayer is that I will be able to use this experience and education to serve my church, community and Lord.

Style manual or journal used: Publication Manual of the American Psychological Association, 5th edition

Computer software used: Windows 2000, Microsoft Word 2000, and the Statistical Package for the Social Sciences (SPSS), version 11.

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I. INTRODUCTION

Individuals with college degrees often experience a high degree of success in the job market and according to census reports (USG, 2003) earn more than those without degrees. A University System of Georgia (USG) news release reported the following:

> A college degree is worth an average of $14,000 a year more than a high-school graduate could expect to make. Over the course of a working career, the average graduate of a public college or university in Georgia can expect to earn nearly $1 million more than a high-school-educated neighbor (p. 1).

A myriad of factors are associated with college success and college graduation rates. Factors such as parental education level, socio-economic status, ethnic background, high school curriculum and a student's ability to attend college full-time are related to college success and graduation rates (Ashby, 2003). In addition, college retention research has shown that a student's ability to make appropriate career decisions and choices greatly impacts his/her commitment to remain in college and graduate (Herr, 2000; Hornak & Gillingham, 1980; Luzzo, 1993; Luzzo, 1995). Because of the growing reduction in college graduation rates, the United States General Accounting Office has appealed to institutions of higher learning for increased accountability in retention and graduation rates (Ashby, 2003). Low retention and graduation rates have a serious negative impact on government funding as seen in the high rate of default on student

loans which amounted to $35 billion in fiscal year 2001 (Ashby, 2003). Educators and government officials are seeking ways to increase college and career awareness in K-12. For example, two highly funded, major government sponsored early college and career awareness programs are Upward Bound and Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP). These programs serve students starting in the seventh grade and follow their progress through high school (Riley, 1998). Although these programs are recognized for improving student's grade point average (GPA), and school attendance, they are under close government scrutiny due to the lack of research to support their success (Goldberg, 2005). Since these programs have only been in existence since 1998, data are not available to correlate program completion and college enrollment.

In an effort to improve the nation's academic achievement and increasing educational attainment, the U.S. Department of Education established America's Career Resource Network (ACRN). This program is directed by Congress in Section 118 of the Carl D. Perkins Vocational and Technical Education Act of 1998 (ACRN, Mission, 2005). The mission of the ACRN is to ensure a skilled and high-quality workforce for the future. The ACRN provides comprehensive and up-to-date information on how state resources and activities align with Section 118, *No Child Left Behind* and U.S. Department of Education Goals and Initiatives (ACRN Resources and Activities, 2005). Due to the demands of a high performance workplace, which require workers to engage in lifelong learning to continually improve their academic, occupational and career

management skills the framework for these programs have expanded (ACRN, What is NCDG, 2005, ¶ 1).

The guidelines include:

- update and revised framework of competencies and indicators to align with the goals of *No Child Left Behind* (NCLB);
- expand the target audiences to include K–12 students and their parents, teachers, counselors and administrators, postsecondary students and other adults, and the business community;
- broaden the scope and application by providing the target audiences with easily accessible career development information, learning activities and strategies that lead to informed career-decision making and lifelong learning; and
- create a robust, career development web site to deliver the National Career Development Guidelines (NCDG) information, learning activities and strategies.

These guidelines form a foundation for career programs which will lead students of all ages through a sequential process of career development and will enable them to succeed in the future workplace (Lankard, 1999). At the elementary level, it was suggested that activities focus on self-awareness, attitude development, decision making, and knowledge of the broad characteristic and expectations of work (Lankard, 1999). Federally funded programs directed by the Department of Education, such as Gear Up encourage grantees to serve cohorts of students beginning no later than the seventh grade through the

development of parent and community partnerships to improve academic achievement, and an understanding of college (U.S. Department of Education, 2005).

The concept of younger children benefiting from career exploration appears well grounded in current research. Phipps (1995) writes that most of the researchers who have studied career development during the preadolescent years all agree that "children as young as five- to seven-years can express occupational dreams" (p. 19), and that an understanding of the significance of a child's life experience will "assist counselors of young children to better prepare them for their eventual entry into the job market" (p. 19). On the other hand, some individuals believe that investing in high school students rather than younger children may be a poor decision and note that many students continue to have unrealistic expectations following graduation. Educators are beginning to "think that career education must begin early" ("Careers," 1997, p. 10), and that school-to-work programs which target high school students may be too late. Accordingly, high school students have inflated expectations and little concrete knowledge about the jobs they said they were interested in. The concept of work and the impact on adolescence may be influenced by our society, family and the drive for school systems to reach academic goals and achieve test scores rather than by applying learning to careers. In most literature work has been removed in favor of wanting children to play and enjoy their childhood. In summary, the literature supports the idea that children can and should learn about careers at an early age.

Statement of the Problem

Within public school systems students in the eighth grade are required to make a critical academic decision which subsequently determines their placement into a college or a vocational track during high school. These early decisions made with limited career awareness, values of work and knowledge of higher education impacts future career and college success. Negative outcomes of these decisions are evidenced by the nearly half of college-bound students who request assistance in making career decisions; their lack of college persistence and inability to full-fill career dreams (Hornak & Gillingham, 1980). Career development is a life-long process and challenges must be addressed in elementary and middle school (Kerka, 2000). Because of the long-term impact on student's future academic and career success and the importance of an early career awareness program, research is needed to determine the success of interventions. This study provides an analysis of pre-existing data from an intervention called *Taking the Step toward College Prep.* This intervention program was designed to introduce fifth grade students and their parents to careers and college awareness. It entails a career curriculum developed by fifth grade teachers and is supplemented with experiential activities involving students and parents and a university campus. Data from a survey developed by the university was used to analyze the impact of the intervention on fifth graders. Results will be used to consider the program success, the impact of the intervention on fifth graders, and recommendations for future programs.

Purpose of Research

The purpose of this research was to examine the impact of a program designed to improve the awareness of college and careers in fifth grade students. Results were used to determine the relationship of the intervention to the student's self-concept and awareness of careers and college. A key area for observation is the nature and idea of introducing concepts of higher education in conjunction with a career awareness curriculum. Results of the statistical analysis provide an indication of the effectiveness of a career and college awareness program for fifth grade students and the impact on their self-concept. The results will present a basis and recommendations for future programs.

Hypothesis

Student's attitudes toward college will improve following participation in a college and career awareness program.

Research Questions

The following research questions were considered:

1. What is the relationship between a college and career awareness program and a participant's attitude toward college?
2. What is the relationship between a college and career awareness program and a participant's awareness of career values and planning?
3. What is the relationship between a college and career awareness program and a participant's self-concept?

Permission to conduct the research was granted by the Auburn University Institutional Review Board for Research Involving Human Subjects (see Appendix A).

Participants

The participants in the study were enrolled in the fifth grade and in four elementary schools within a school system. The students participated in a program called, *Taking the Step toward College Prep,* which was designed and administered through a university and school system partnership. A census sample of the school system's fifth grade students participating in the program was used to develop the data. The data used in this study were pre-existing given to the university involved in the partnership by the school system. The school system did not require permission forms from the parents and students. However, the participants and their parents received a letter from the school superintendent and university president informing them of the program and the school's intentions to involve the fifth grade students in the program (see Appendix B).

Instruments

For the purpose of this study, pre-existing data from the survey, *A Look at My Future* (see Appendix D) was used for analysis of the intervention. The school system and the university involved in the intervention and testing granted permission for the researcher to use the data for the purpose of conducting this study (see Appendix C). The school system provided 673 surveys, 349 were pre-test surveys and 324 were post-test surveys which were administered to the twelve fifth grade classes in the county's four

elementary schools. This sample included all fifth grade students enrolled in the county schools.

The survey instrument, *A Look at My Future*, was constructed following the development of the program called, *Taking the Step toward College Prep.* The program was designed to increase career and college awareness in fifth grade students and was created by a team of fifth grade elementary school teachers, K–12 counselors, university faculty and staff and other education professionals (Appendix D).

Assumptions of the Study

The following assumptions were made:

1. The students involved in this study represent the attitudes of students in similar school systems.
2. The teachers involved in the classroom administration were equally committed to the program and had the same level or understanding of the program concepts.
3. The survey instrument accurately measured choice and the participants understood the questions.
4. The participant's responses were truthful.

Limitations of the Study

Potential intervening variables in this intervention program included the diversity in teaching styles and the teacher's commitment and understanding of the program. The

intervention involved four elementary schools and a team of nine teachers. The concepts and curriculum developed for this intervention required hand-on activities, creativity in teaching styles, the use of outside speakers and games. The success of this type of learning is dependent upon the individual teacher's ability to guide students through the activities and incorporate the concepts within the curriculum. Although all of the teachers received an instructor's manual and assistance from the lead teacher, differences in teaching styles may have had an impact on the program outcome.

The influence of gender and family on the participant's ideas of career and college is considered a possible intervening variable (Blustein, Walbridge, Friedlander & Palladino, 1991; Chope, 2002; Doss, 1975; McMahon & Patton, 1997). McMahon and Patton (1997) argued that gender role socialization on the development of the child has a powerful influence over a child's perception of education and career choices. Gender-stereotypical thinking is characteristic among boys and girls as they identify jobs that they perceive to be as male or female. According to a study by McMahon and Patton (1997), "the main difference in the influence of 'family' was that some boys, in particular those in the preschool and infant school age groups, expressed the desire to do the same job as their father. The same desire was not expressed by girls. Trice and Knapp's (1992) study involving 97 fifth grade students indicated a correlation of the relationship of children's career aspirations and the parents' occupation. In the study, children tended to know "more about their mother's jobs than their father's job" (p. 356). In a similar study of eight and 11 year olds in rural and urban settings, Trice (1991) found that "children

express relatively stable career plans, and that these plans are strongly related to the careers of their parents and other people in their community…" (p. 139).

Trice and McClellan (1993) argued that "the career development process is the well-established observation that children inherit the careers of their parents" (p. 36). They found a connection between a parent's career, particular the father, "in terms of occupational cluster and socioeconomic status" and a correlation between a child's opinion of his/her parent's job satisfaction and the parent's report of satisfaction (p. 36). They contend that "children grasp career-related ideas early and that they improve with age" (p. 36). Children and adolescents are taught from birth that career opportunities are associated with gender and research findings show that these preferences are formed at an early age (McMahon & Patton, 1997). Furthermore, once these ideas, known as gender role socialization, are assimilated very little can be done to change the perception of how gender and careers are joined. Phipps' (1995) study of eight to 11 year olds indicated that gender socialization significantly influenced the type or amount of education children perceived as important. The results of this study found that more boys than girls named jobs that required a high school education, whereas more girls expressed preferences for female stereotyped jobs that required university qualifications. McMahon and Patton's (1997) study of 55 students in five school-age groups ranging from 3–4 years, 5–7 years, 8–12 years, 13–15 years, and 16–18 years, showed a significant influence related to gender-stereotypical thinking about career options. Boys identified with careers requiring a high school education, specifically trades and sports related jobs, while girls mentioned jobs in art and design, medical and health services, teaching and cultural activities, and

publishing and journalism industry areas. The respondents, regardless of age clearly identified jobs or careers that were either for males or females.

Another limitation is the socio-economic status of the school district and county. The county involved in the project is considered to be an affluent area, with only one of the four elementary schools eligible for federal assistance. Participants in other low socio-economic groups may have responded differently based on their value system and understanding of careers and college.

Definition of Terms

Career awareness: Career awareness in the context of the elementary school setting involves the exploration of occupational knowledge, positive work attitudes, basic skills, social involvement, and interests, and aspirations of children.

College awareness: The understanding gained through an intervention as related to college and preparation for higher education. Students have an awareness of college life, the admissions process, scholarships, and the relationship of academics to college and future choices.

Self-concept: The child's preferences, attitudes and beliefs about his/her abilities, interests, and values as related to personality.

Significance of the Study

This intervention program is unique in that it includes both a comprehensive career awareness program and the inclusion of a university experience as well as a

curriculum for fifth grade students detailing important aspects about college requirements. There is little research that identifies how an early awareness program impacts college and career choices. This study identifies the child's ability to understand college requirements and the impact on his/her attitudes towards college. Based on developmental theories (Fadale, 1975; Ginzberg, 1952; Gottfredson, 1981; Holland, 1962; Phipps, 1995; Super, 1980; Trice & Hughes, 1995; Trice & McClellan, 1993), it is assumed that these early learning experiences will impact adult decisions.

Another important need for this research is reflected in national data which indicated the educational attainment of the general population in 1994 as 54% of adults over 25 years of age had the equivalent of a high school diploma or less, while 24% had some college experience or an associate's degree, 15% had a bachelor's degree, and over 7% held an advanced degree (Education Resources Institute, 1997). Consequently, the individuals considered in this study will be considered first-generation college students. These students are reported to have more obstacles to college completion in than students who have parents with a college degree. The intervention program administered and evaluated in this research is an attempt to provide critical awareness components which should be made available to elementary school students.

Organization of the Study

Chapter I introduced the problem to be studied. This chapter addressed the statement of the problem, purpose of the research, research questions, participants, instruments, assumptions of the study, limitations of the study, definition of the terms,

and the significance of the study. Chapter II provides a review of related literature. This chapter reviews developmental theories and studies in relation to a child's ability to understand a college and career awareness program and the impact of self-concept as related to career choice and decision making. Similar interventions and studies are reviewed and considered to support the components of this type of treatment. Chapter III presents the procedures of the study. This chapter addresses the design of the research, research questions, sample, instrumentation and data analysis. Chapter IV is a presentation of the findings of the study and the data results. Demographic data of the participants will be addressed as well as a documentation of the analytical and statistical procedures. Finally, Chapter V presents a summary of findings and research questions, the conclusion, and implications and recommendations for practice and further research.

II. REVIEW OF LITERTURE

This chapter is a review of literature related to the hypothesis that student's attitudes toward college will improve following participation in a college and career awareness program. The intent of the literature review is to provide reasoning and rationale for the study and to identify similar research.

Purpose of the Research

The purpose of this research was to examine a program designed to improve the awareness of college and careers in fifth grade students. Results were used to determine the relationship of the intervention to the student's self-concept and awareness of careers and college. A key area for observation is the nature and idea of introducing concepts of higher education in conjunction with a career awareness curriculum. Results of the statistical analysis provide an indication of the effectiveness of a career and college awareness program for fifth grade students and the impact on their self-concept. The results will present a basis and recommendations for future programs.

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1. What is the relationship between a college and career awareness program and a participant's attitude toward college?

2. What is the relationship between a college and career awareness program and a participant's awareness of career values and planning?

3. What is the relationship between a college and career awareness program and the impact on the participant's self-concept?

A focus is placed on career development theories and whether children have the cognitive ability to understand and relate to the concepts of the treatment. The developmental stages as related to the age of the children in the study are considered. Since the purpose of the intervention examined in this research is an attempt to influence adult decisions, literature is summarized to suggest the influence of childhood experience on adult decisions and the impact of these experiences on college and career choice. The final section is a review of similar interventions and research as related to interventions to impact a child's self-concept, and ideas of career and college.

Career Development Theories

Individual happiness, success, socioeconomic standing and quality of life center around pinnacle decisions related to career choice and vocation. According to Trice and Hughes (1995), the "origins of career aspirations are elusive" (p. 307) and most career development research focuses on adult development while ignoring the first 12 years of

life. In light of an intervention to impact a child's awareness of careers and college, a review of career development theories is necessary to ascertain the ability of a child to conceptualize decisions which are finalized in adulthood. Studies (Ginzberg, 1952; Gottfredson, 1981; Havighust, 1980; Holland, 1962; Roe, 1957; Super, 1956) indicated that the development of a child's personality, interests, self-concept, and parenting have a strong impact on career decisions, success, and life congruence. A correlation between childhood development, and the subsequent impact and potential for a long-term influence on adulthood decisions are reviewed in an effort to support the impact of an early college and career awareness program on children. A major focus is placed on the development of the self-concept and the relationship with career awareness and learning.

Studies (Fadale, 1974; Phipps, 1995) have shown that the developmental needs of 11–14 year olds are compatible with concepts of future goals, interests, an awareness of work and an ability to develop positive attitudes towards work. However, Johnson (2000) found in a study of 194 sixth graders and 179 ninth graders that most have a "shallow understanding of how school relates to work, had limited awareness of the knowledge and skills needed for work and little sense of how to develop them and had little or no awareness of the type of work involved in their career aspiration" (p. 272). In contrast, Fadale (1974) argued that the "role of the elementary school within the career development process is usually viewed as one of exploration and acquaintance" (p. 3). Within this stage, Fadale (1974) points out several aspects of career development which include "occupational knowledge, positive work attitudes, basic skills, social involvement, interests, interrelationship of self and education, role identification, decision

making skills and attitudinal development evolving from experiences, education, association, understanding of self and human behavior" (p. 3). Fadale's (1975) research indicated that a "degree of career awareness does exist with elementary school children" (p. 85) and she contends that "building an awareness of information, congruently with an awareness of the self, provides a comprehensive foundation from which the process of decision making emerges at appropriate developmental levels" (p. 80).

According to Fadale (1974) career development theory should be integrated with child development theories of socialization and cognitive growth. Erikson's psycho-sociological theory of life stages approximates "the socialization development basic to career awareness and the elementary school child is roughly ages 7–11" (p. 5). During this period, which Erikson identifies as the industry vs. inferiority stage, the child is seeking an opportunity to be productive, and subsequently begins to develop an identity. The child is in a mode of self discovery, self accomplishment and self-discipline. Therefore, a child's ability to be a successful doer helps to establish healthy attitudes toward work and work habits, which according to Erikson can be traced to latter attitudes toward work and degree of success of doing (p. 21). A sense of inferiority comes into play as the child struggles between efforts to produce and the fact that they are still a child (Diessner & Tiegs, 2001). From a cognitive development perspective, Piaget describes the period for children the age of 11 to adolescence as the concrete operations phase (Crain, 2005). During this phase the child has the mental capacity to relate and order experiences as a whole. According to Fadale (1974), these experiences are of a

concrete nature and not a "verbally expressed hypothesis" (p. 6). Therefore, she recommends hands on activities and experiential activities to enhance learning.

Both Super and Holland's theories emphasize the interdependence between personality and vocational development (Fadale, 1974). Super considered the self-concept a function of a primary construct and extended the notion that individuals choose jobs or occupations that "permits the expression of self-concept as it has emerged from one's developmental history" (Gray & Herr, 1998, p. 134). Super's approach covered three perspectives; "a) the development of the self-concept; b) the life stages and developmental tasks that make up a career; and c) the breadth and richness of a career" (Salomone, 1996, p. 170).

Super (1956) contended that individuals are "born with certain neural and endocrine tendencies or potentials" (p. 249), which he calls personal resources. Once an individual interacts with the environment, he forms cultural resources which Super (1956) describes as the beginning of vocational development. When developmental tasks are performed, the individual's needs and aptitude interact with the environment, which constitutes social expectation and the final process of socialization (Super, 1956). Super calls this a synthesizing process during which time an individual "attempts to meet his needs, satisfy his values, find outlets for his interests and use his aptitudes" (p. 251).

However, in relation to career decisions frustrations are brought about when a person's aptitude may come into conflict with the values of others or of society. A person with an artistic aptitude may encounter opposition to certain expressions of his/her talent, but ultimately finds praise and satisfaction when creativity is expressed in more accepted

ways, such as graphic design. Super (1956) described this interaction as the development of the self-concept.

During synthesizing, learning takes place resulting in "an integrated person, whose personal resources are harmoniously allied, attuned to the cultural resources of his environment, and adequate for the developmental task with which he must cope" (p. 252). Super contended that any conflict in the learning process will create a "poorly integrated person who is ill-equipped to fit into his environment and to meet the requirements of society" (p. 252). Another important impact during the synthesizing process occurs during role taking and role play which begins as children "play at being father and mother, teacher and children and other key figures in their environment" (p. 252). This considered an important aspect of role identification. As the child is rewarded and praised for behavior and interests, he develops strong interests and values which contributes to the identification of self.

Super (1956) admitted that this may cause conflict depending on the social and economic values within the child's environment. According to Super (1980), "a career is defined as the combination and sequence of roles played by a person during the course of a lifetime" (p. 282). He described these nine major life roles in a chronological order as: (1) child, (2) pupil or student, (3) leisurite, (4) citizen, (5) worker, (6) spouse, (7) homemaker, (8) parent, and (9) pensioner. Super (1980) proposed that the roles played during the lifetime are played in four theaters: (1) the home, (2) the community, (3) the school (including college and university), and (4) the workplace. Super's (1990) life stage structure theory incorporates five periods across the life stage. The growth stage is birth

to age 14, the exploration stage is ages 14 to 25, the establishment stage is ages 25 to 45), the maintenance stage is ages 45 to 60 and the decline stage is age 60 and beyond. In an effort to conceptualize the interaction of roles and careers, Super (1990), proposed a model called the Life-Career Rainbow (Figure 1).

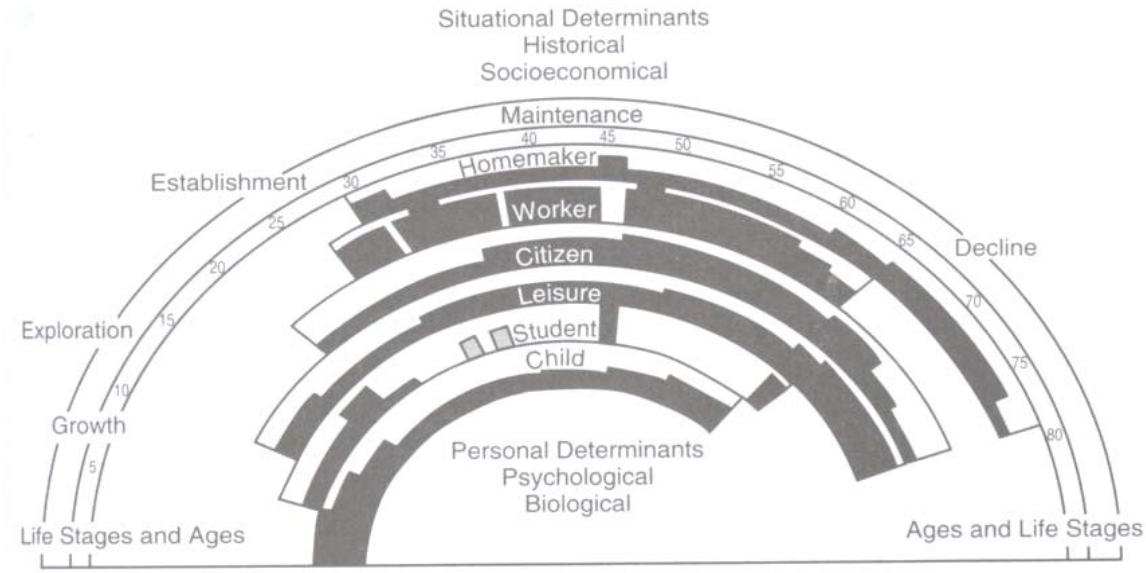

Figure 1. Life-Career Rainbow

The interaction of personal determinants and how factors such as psychological, sociological, and economic factors shape careers are also considered (Salomone, 1996 p.169). Super (1980) stated that "success or difficulty in one of these roles is likely to affect the other roles and leads to success or difficulty in them as well" (p. 132). In essence "Super saw the development of increased self-awareness, awareness of the value of many kinds of work in their world, feeling of competency, and satisfaction from their own work as critical to children's sound career development" (Hoffman & McDaniels, 1991, p. 164).

Super is remembered for his "compelling insight that maturation and adaptation constitute critical processes in occupational choice and subsequent vocational success and satisfaction" (Savickas, 1995). Aspects of his theory have provided the basis for major assessment instruments such as the Career Maturity Inventory, the Career Development Inventory, the Adult Concerns Inventory, the Salience Inventory, and others (Gray & Herr, 1998).

Gray and Herr (1998) contended that Holland's approach to career development theory is "currently the preeminent and most empirically based personality approach" (p. 127). According to Weinrach (1996), it "represents the influence of stable personality characteristic on career development" (p. 6). Holland's (1962) theory assumes that at the time a person chooses a vocation "he is the product of his heredity and a variety of environmental forces including peers, parents and other significant adults, social class, American culture, and the physical environment" (p. 1). Holland (1962) contended that "the congruence of person and job environment leads to job satisfaction, stability of career path, and achievement" (p. 397) and those persons are drawn to occupational groups "whose members have personal orientations similar to his own" (Holland, 1962, p. 2).

Throughout his research, Holland found strong evidence to support the idea of continuity in vocational aspiration or intentions of people of different ages (Holland, 1996; Holland, Gottfredson & Baker, 1990). He referred to numerous studies obtained from a nationwide representative sample of high school students, which indicated that a high school student's vocational aspiration "predicts the category of actual employment

11 years later" (p. 398). Holland (1996) concluded that "taken together, the aspiration studies imply that people carry around a set of loosely integrated intentions that they act upon from time to time" (p. 398). Holland argued that aspirations and interests enjoy several advantages:

- They are easily observed and can be assessed from age 5 to 95.
- Aspiration and interest data can be organized to yield efficient predictions of subsequent choices, and choices are in turn related to actual occupational entry.
- Information about categorized aspirations and interests is easily communicated among clients, clinicians, and researchers.
- Aspirations – and interests to a lesser degree – are amenable to change and are responsive to experience. At the same time, stability appears to be the norm (p. 400).

Holland (1996) proposed six personality types which incorporated the effects of a person's life history and form the basis for his idea that persons search for vocations which are congruent with their physical or social environment and their personal orientation. Holland's six personality categories are realistic, intellectual, social, conventional, enterprising and artistic. A brief summary of the categories are as follows (Holland, 1962, p. 1):

> Realistic: The model type is masculine, physically strong, unsociable, aggressive; verbal and interpersonal skills; prefers concrete to abstract problems, … The

occupational categories related to this type are laborers, machine operators, aviators, farmers, truck drivers, and carpenters.

Intellectual: The model type is task oriented, introspective, asocial; prefers to think through rather than act out problems; needs to understand; enjoys ambiguous work tasks; has unconventional values and attitudes; is anal as opposed to oral. Physicists, anthropologist, chemists, mathematicians, and biologists resemble this type.

Social: The model type is sociable, responsible, feminine, humanistic, religious, needs attention; has strong verbal and interpersonal skills; avoids intellectual problem solving, physical activity, and highly ordered activities…; is orally dependent. Social workers, teachers, interviewers, vocational counselors, and therapists resemble this type.

Conventional: The model type prefers structured verbal and numerical activities and subordinate roles; is conforming (extraceptive); avoids ambiguous situations and problems involving interpersonal relationships and physical skills; is effective at well-structured tasks; identifies with power; values material possessions and status. Bank tellers, secretaries, bookkeepers, and file clerks resemble this type.

Enterprising: The model type has verbal skills for selling, dominating, leading: conceives of himself as a strong, masculine leader; avoids well-defined language or work situations requiring long periods of intellectual effort; is extraceptive…is orally aggressive. Salesmen, politicians, managers, promoters, and business executives resemble this type.

> Artistic: The model type is asocial; avoids problems which are highly structured or require gross physical skills …; has a need for individualistic expression; has less ego strength; is more feminine …; prefers dealing with environmental problems through self-expression in artistic media. Musicians, artists, poets, sculptors, and writers resemble this type.

Holland's typology also proposes a matching ideal environment to correspond to the personality types. Realistic types "flourish or do well in a realistic environment, because it provides opportunities, activities, tasks, and roles that are congruent with the realistic type's competencies, interests, and self-beliefs" (Holland, 1996, p. 397). Holland has developed several empirical tools for evaluating these personality types. One is *The Self-Directed Search* (Holland, 1994) which is used extensively in career counseling, and the other is the *Dictionary of Holland Occupational Codes (*Gottfredson & Holland, 1989) which is a comprehensive characterization of work environments. Another important tool is the *Vocational Preference Inventory* (VPI) (Holland, 1985), which is a "personality inventory measure consisting of 300 occupational titles as items and measures eight variables: physical activity, intellectuality, responsibility, conformity, verbal activity, emotionality, reality orientation and acquiescence" (Zytowski, 1994, p. 480).

According to Trice and Hughes (1995), Ginzberg developed the first general theory of occupational choice that included "childhood and evidence for the support of the role of interests in both the selection and rejection of careers throughout the period of childhood" (p. 307). Ginzberg (1952) and associates provided a general approach to the

theory to occupational choice in which he contended that maturation is basic in the vocational decision-making process and it is not a decision made in any single moment in time. Ginzberg (1952) proposed that a purely psychoanalytical or environmentalist approach to a theory of occupational choice was not sufficient. The basic elements in the theory are: "occupational choice is a process; the process is largely irreversible; and compromise is an essential aspect of every choice" (p. 492) and these processes are considered to begin at birth and remain open until death. His key focus begins with the age of eleven which "appeared to be the first time a young person recognizes that he will eventually have to do something about choosing his future work" (p. 492). Ginzberg (1952) provided three periods related to occupational decision-making. The first period is called fantasy choice (before the age of 11), the second is tentative choices (between 11 and 17), and the third is realistic choices (between 17 and young adulthood). The fantasy choice period is the time in which the child believes he "can become whatever he wants to become" (p. 492). During this time, a child's concept is based on impulse and is influenced by the father's occupation and parental suggestions (Trice & Hughes, 1995). During the tentative period choices tend to be based on the child's interests, "with little attention to their abilities or other realistic constraints of choice" (Trice & Hughes, 1995, p. 307). Ginzberg (1952) described subjective choices in the tentative period which are based on four stages. The first is the interest stage because nearly all "tentative choices are based almost exclusively on interests" (p. 493). In the second and third stage, the adolescent considers his capacities and later his values. During the final stage, he is in transition looking forward to college or a job. The realistic period is divided into three

stages which are exploration, crystallization and specification. During the exploration stage the individual takes a final look at alternatives before making the final choice which is the crystallization stage and setting boundaries in the specification stage. The table below provides a visual diagram of the periods and stages (Table 1).

Table 1

Career Maturity through Young Adulthood

Approximate Ages				
Preschool	5–9	10–14	15–18	19+
Formulation of Self-Concept _____		Translation into Postsecondary Plan		
Developing Preferences _____		Choice _____		Transition
Fantasy_____	Tentative _____			Realistic
			Exploration	Crystallization

Gray & Herr (1998, p. 130)

Within this framework, Ginzberg (Gray & Herr, 1998) noted that factors such as socioeconomic class, gender, aptitude, and other issues may have an impact on the timing, patterns and crystallization of choice. Every occupational choice involves a compromise in which individuals attempt to associate a career with their personal interests and capacities while considering his values and goals. However, Ginzberg (1952) suggests that "it is not enough for parents to say to their youngster: 'You make any choice you want. All I want is for you to be happy.' The child needs a high degree of

freedom, but he also needs assistance in delimiting the unknown. No adolescent ever makes an occupational choice alone." (p. 494).

Another major career development theorist is Roe (Trice & Hughes, 1995). Roe (1957) suggested a "hypothesis about the relationships between early experience and attitudes, abilities, interests and other personality factors which affect the ultimate vocational selection of the individual" (p. 212) which is similar to Super, Holland and Ginzberg. However, unique to Roe is her idea that "the quality of early family experiences leads to the formation of basic personality, which, in turn, determines occupational choice" (Trice & Hughes, 1995, p. 308). Roe's (1952) hypothesis on the relation of early experience to vocational choice was based on eight hypotheses which are described below:

1. The hereditary basis for intelligence, special abilities, interests, attitudes, and other personality variables seem usually to be nonspecific. There may be genetic basis for some factors or intelligence or aptitudes, but on this there is not clear evidence. Sex, as genetically determined, also involves some differentiation of abilities. It is nevertheless, probable that in most instances genetic elements limit the degree of development rather than directly determine the type of expression.
2. The pattern of development of special abilities is primarily determined by the directions in which psychic energy comes to be expended involuntarily. The statement applies also to interests, attitudes, and other personality variables. Please not the word involuntarily. It is intended to

emphasize the fact that the things to which the individual gives automatic attention are keys to his total behavior. The point will not be expanded here, but the relevance of these hypotheses to the relations between personality and perception are clear.

3. These directions are determined in the first place by the patterning of early satisfaction and frustrations. This is the developing pattern of need primacies or relative strengths. In the earliest years these are essentially unconscious, and they probably always retain a large unconscious element. (p. 212)

Roe (1952) described the pattern of needs in this hypothesis through her interpretation of Maslow's theory of basic needs and her assumption that persons tend to select work that reflects gratification of the level of needs (Table 2).

Table 2

Basic Needs (Maslow)

1. Physiological needs
2. Safety
3. Love and belonging
4. Esteem
5. Self-actualization
6. Transcendence

Maslow (1968)

Since these needs must be met in a hierarchical order, Roe (1952) held that the first five most-likely affect the child's behavior by the time a child is five months old. Roe's (1952) fourth and fifth hypotheses were:

> 4. The eventual pattern of psychic energies, in terms of attention directedness, is the major determinant of the field or fields to which a person will apply her/him. This is relevant not only to vocation, of course, but to the total life pattern of the individual. It determines what sort of special abilities and interests will be predominant.
> 5. The intensity of these (primarily) unconscious needs, as well as their organization, is the major determinant of the degree of motivation as expressed in accomplishment. This implies that all accomplishment is based on unconscious as well as conscious needs, but it does not imply that these needs are necessarily neurotic. (p. 213)

Roe's (1952) final three hypotheses in the list of eight deal with the pattern and intensities of the basic needs and the affect of early childhood experiences. The following are the three hypotheses concerned with this problem.

> 6. Needs satisfied routinely as they appear do not develop into unconscious motivators. Intensity of the need is not a variable since it is stated that the need is 'satisfied'. The fact that the satisfaction is gained routinely is important, and it implies the need to distinguish sharply between simple, direct, matter-of-fact need gratification and gratification with fuss and funfair.

7. Needs for which even minimum satisfaction is rarely achieved will, if higher order, become in effect expunged, or will, if lower order, prevent the appearance of higher order needs, and will become dominant and restricting motivators. Lower order needs, of course, require some degree of satisfaction of the maintenance of life. The hypothesis would mean, that child whose expressions of natural curiosity were thoroughly blocked, would cease to be curious. On the other hand, with less effective blocking, hypothesis 8 would apply.

8. Needs, the satisfaction of which is delayed but eventually accomplished, will become unconscious motivators, depending largely upon the degree of satisfaction felt. This will depend, among other things upon the strength of the basic need in the given individual, the length of time elapsing between arousal and satisfaction, and the values ascribed to the satisfaction of this need in the immediate environment. (p. 213).

A second dimension of Roe's (1952) work deals with child-rearing practices and how they eventually push adults toward people and things. Roe (1952) asserted that the child's position in the family and types of parenting styles such as over-protective, over demanding, avoidant, or neglectful, are manifested in adult interest patterns and subsequently relate to certain occupational families. The eight vocational fields included service, business contact, organization, technology, outdoor, science, general culture, and arts and entertainment and were classified by the degree to which they gratify the needs involving people and things. The notion is extended that the major variable affecting

choice of a group is interest and that interest focus derives from early childhood experiences in the family. The second dimension includes six different levels of responsibility, training, or education including professional and managerial I and II, semiprofessional, small business, skilled, semiskilled, and unskilled. The categories are shown in Table 3.

Table 3

Categories in Roe's Classification of Occupations

Groups	Levels
I. Service	1. Professional and managerial
II. Business Contract	2. Professional and managerial
III. Organizations	3. Semiprofessional, small business
IV. Technology	4. Skilled
V. Outdoor	5. Semiskilled
VI. Science	6. Unskilled
VII. General Cultural	
VIII. Arts and Entertainment	

Roe (1957, p. 217)

According to Gray and Herr (1998), the assumption of Roe's theory is that the "occupational level attained is a function of genetic endowment as reflected in

intelligence, education attained, and capability for responsibility; the field chosen is a function of ones' interest or no interest in people or things " (p. 127). Roe (1952) contends that the parent-child interactions and childhood experiences will impact the development of "basic attitudes, interest and capacities which will be given expression in the general pattern of the adult's life, in his personal relations, in his emotional reactions, in his activities, and in his vocational choice" (p. 217).

Gottfredson (1985) concluded that most "people prefer, seek and are most satisfied in occupations that are consistent with their views of themselves" (p. 160) Gottfredson (1981) described the elimination of occupations based on the age-specific themes of size and power, sex roles and social valuation as the main role of childhood in the career decision process. Gottfredson (1981) proposes that self-concept and occupational preference develop within a four stage process which begins at the age of three. During this stage children have a better understanding of themselves and the world of work and restrict occupational preferences and choices which are often is seen as relatively permanent. In addition, children begin to see the distinctions between themselves and adults and start to recognize size and power differences between themselves and adults. From the ages of 6 to 8 years of age they categorize and eliminate jobs based on sex appropriateness. In the third stage, children between the ages of 9 and 12 begin to see that there are intellectual and social class differences between themselves and others. Gottfredson (1985) describes this as a critical stage, in which children eliminate occupations which they believe are too difficult, unattainable or have low prestige (p. 309). In the final stage, beginning after the age of 14, occupations are

eliminated based on interests, values and competencies. Gottfredson (1985) argues that the self-concept, in relation to how a person sees themselves in society, is a primary force in occupational choice. She concludes this is evidenced by the many highly capable youngsters of low socioeconomic status who fail to seek the educational and occupational levels actually available to them because their social surroundings do not place a value on high-level jobs.

Havighurst (1972) proposed all individuals from infancy to old age progress through a series of development stages and each stage comprises a series of developmental tasks. According to Havighurst (1972) these tasks occur at certain times during the life of an individual and successful achievement of the task will result in happiness, while failure will lead to difficulty in later tasks. Havinghurst (1972) formulated developmental tasks for children, age 6 to 12 years old and for adolescents, age 12 to 18 years old. Within the stage from 6 to 12 years old, Havinghurst describes the developmental tasks as a time of building wholesome attitudes towards self, learning appropriate social skills and gender roles as well as independence, ideas of morality, values and conscience. The task encompassing this period involve the identification with a worker, often a parent, from the age of 5 until age 10 and acquiring the basic habits of industry from age 10 until 15. From 12 to 18 years of the age the individual moves to more mature relationships, social roles, emotional independence, and finally, a commitment to marriage and career. According to Trice & Hughes (1995), it is during this later stage that a child learns to organize time and puts forth an effort to accomplish goals. Havinghurst encouraged educators to allocate time and energy to working with

parents and to help create a home and community environment which supports the child's learning experience and provides socially desirable guidance (Manning, 2002).

Havighurst (1980) applied the concept of development tasks to the adult years. He said that the "tasks the individual must learn – the developmental tasks of life are those things that constitute healthy and satisfactory growth in our society" (p. 331). Accordingly, a developmental task arises in a certain period of life and if the individual successfully achieved the task, he/she will experience happiness, while failure to succeed in the task will result in unhappiness. Havighurst (1980) describes the developmental tasks as originating from forces inside and outside of the individual. These internal forces are primary biological, and are most clearly seen in the early years of human growth. He says that "other task arise primarily from the culture pressure of society, such as learning to read for a child, and learning to participate as a socially responsible citizen in society for a young adult" (p. 331). Finally, a source of developmental tasks comes from the personal values and aspirations of the individual, which are part of the personality. From Havighurst's perspective, "the personality, or self, emerges from the interaction of organic and environmental forces, as the self develops, it becomes increasingly a force in its own right in the subsequent growth of the individual" (p. 331). Thus, Havighurst contends that the developmental task arise "from physical maturation, from pressure of the surrounding society on the individual, and from the desires, aspirations, and values of the emerging personality" (p. 331).

Havighurst (1972) argues that "the path of learning is not one long slow uphill climb with something to learn every new day, but consists of steep places, where the

learning effort is severe, interspersed with plateaus where one can speed along almost without effort" (p. 2). He describes developmental tasks in this journey as a task "which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual disapproval by the society and difficulty with later tasks" (Havighurst, 1972, p. 2). Accordingly, the origin of the developmental tasks is related to the growth of the individual and the acquisition of new physical and psychological resources. Havighurst's (1972) developmental tasks from infancy to early childhood involves first the biological steps of learning to walk, taking solid foods and learning to talk and then the psychological influence of parents and others. Next the child must learn to control the elimination of body wastes. Havighurst (1972) argues that the "toilet training is the first moral training that the child receives. The stamp of this first moral training probably persists in the child's later character"(p. 13). Through observation the child is made aware of sex differences and begins to develop sexual behavior, which according to Havighurst (1972) will "probably have an abiding effect upon his sexuality throughout his life" (p. 14). During this time cognitive development is initiated and impacted by the socioeconomic background of the individual. The child's cognitive growth is influences by their environment, and the parent's education and social status. During middle childhood, the period from about six to about twelve years of age is characterized by three outward pushes. "There is the thrust of the child out of the home and into the peer group, the physical thrust into the world of games and work requiring neuromuscular skills, and the mental thrust into the world of adult concepts, logic,

symbolism, and communication" (Havighurst, 1972, p. 19). In this period the child begins to experiment with physical abilities and is rewarded or punished for his/her success or failure in each task. As physical growth continues, the child learns to care for his/her body and develops a wholesome attitude toward self. Havighurt (1972) contends that "success in this task leads to a well-balanced personality, with a reasonable degree of physical neatness and orderliness, and a set of attitudes about sex which permit sex to become a source of pleasure in later life…" (p. 21). In addition, the child is learning to get along with age-mates and an appropriate masculine or feminine social role. This is the process of learning a social personality or acquiring a social stimulus value and is influenced by the child's school teacher and peers, while sex roles are vigorously taught by the family. The child is also developing fundamental skills in reading, writing and calculations which according to Havighurst (1972) will "enable a person to get through life at the working-class and perhaps the lower-middle class level" (p. 25). The final developmental task during this period entails the development of concept for everyday living, conscience, morality, a scale of values, attitudes toward social groups and institutions and independence. Havighurst encouraged educators to allocate time and energy to working with parents and in an effort to create a home and community environment which supports the child's learning experience with socially desirable guidance (Manning, 2000). However, Havighurst (1972) argued that other agents such as self, family, peer group, television and other media, school, religious group and economy all play a part in the developmental task of middle childhood and adolescence. During the period from twelve to eighteen changes are primarily physical and emotional, but

according to Havighurst (1972) it is "very much affected by the society in which the youth is growing up (p. 43). This period is influenced by the power of group approval and success in accomplishing the tasks depends on a good social adjustment throughout life. Achieving a masculine or feminine social role, ; accepting one's physique and using the body effectively and achieving emotional independence of parents and others are al goals of this stage. In addition preparing for marriage, family life and an economic career are aspects of this period. The psychological basis for these tasks is part of the adolescence's desire to grow up and the symbols of growing up "such as choosing one's own clothing, making a long trip on an airplane alone, choosing one's own close friend; but the most convincing evidence is ability to earn a man's wage" (Havighurst, 1972, p. 62). According to Havighurst (1972) "it seems that the educational system has a major responsibility in connection with choice and preparation for an occupation" (p. 67). He encouraged schools and colleges to be directed toward:

1. helping students to choose an occupation in line with their abilities and interests;
2. helping students to choose an occupation in the light of its value to society; and
3. helping students to get general educational values out of occupational preparation. (p. 67)

He felt that the general principle of education for economic career should be tied closely to formal education in high school and college. Havighurst (1980) described 10 year olds as "a relatively homogeneous group in terms of physical growth and social development.

It is relatively easy to work with them as a group in the fifth grade; but, at this point, they move into an age period of great diversity. Individual differences become dominant" (p. 332).

Gender differences, according to McMahon and Patton (1997), also play a significant role in the career development of children and adolescents. They make the case that " the effect of gender role socialization is far reaching; a significant consequence is that young people may only perceive a narrow gender-based range of future options, particularly in relation to education and career opportunities" (p. 368). Results from the McMahon and Patton (1997) study with fifty-five students from preschool to age eighteen "clearly establish that career development was occurring differently and that there were differences between girls and boys, and between school age groups" (p. 370). They found that boys were more focused in terms of their career ambitions than girls and their comments reflected more gender-sterotypical thinking. At the same time, girls did not mention jobs in the:

> manufacturing or computing, mathematics, and information technology industry area, whereas boys did; boys more than girls mentioned jobs in the security and armed services, agriculture and fishereies, engineering and mining, and building and land services industry areas and girls more than boys mentioned jobs in the art and design, medical and health services, teaching and cultural activities, and publishing and journalism industry areas. (p. 370)

Other gender influences were noted in relation to the influences of school, media, family and peers. Boys from all age groups made the most comments related to "English,

math, other subjects, and career programs, and activities" (p. 370) and generally found school more helpful in relation to future careers than girls. An influence through media, including television, radio, print media, and advertising was found by both boys and girls. In regard to the work environment, girls showed more interests in the place of work, while boys were more concerned with work tasks and work conditions. The participants' ideas of future included topics regarding family considerations, material possessions and working conditions. Although family and career considerations were mentioned by both boys and girls, boys were more concerned with their future lifestyle and the impact of employment stress, shift work and working full tine in the army. Money was mentioned as an important influence on both boys and girls at every age level. However, girls were more concerned with living comfortably, while boys were focused on "money being a major influence on their career decisions" (p. 370). McMahon and Patton (1997) conclude that "a wide range of career development influences are operating in the career thinking of young children and adolescents "p. 375). They argue that these finding points to the appropriateness of career guidance from preschool through grade twelve. In addition, they recommend that career guidance programs cater differently to the needs of boys and girls. It is suggested that schools should develop strategies to breakdown gender sterotypes in careers and that girls should be exposed to women role models who have successfully combined work and family.

Piaget's (1970) cognitive developmental theory provides support for the intellectual development of children and their ability to understand and to make sense out

of the concepts centered in college and career awareness. A summary of Piaget's general periods of development as presented in Crain (2005) are listed below:

> Period I. Sensorimotor intelligence (birth to 2 years). Babies organize their physical action schemes, such as sucking, grasping, and hitting, for dealing with the immediate world.
>
> Period II. Preoperational Thought (2 to 7 years). Children learn to think – to use symbols and internal images – but their thinking is unsystematic and illogical. It is very different from that of adults.
>
> Period III. Concrete Operations (7 to 11 years). Children develop the capacity to think systematically, but only when they can refer to concrete objects and activities.
>
> Period IV. Formal Operations (11 to adulthood). Young people develop the capacity to think systematically on a purely abstract and hypothetical plane.

Piaget (1970) called the way an organism interacts with its environment as cognitive structure and the process of responding to the environment as assimilation. Assimilation refers to "a kind of matching between the cognitive structures and the physical environment" (Hergenhahn, 1998, p. 275). Consequently, as the "cognitive structures change it becomes possible for the child to assimilate different aspects of the physical environment" (p. 275). Once these cognitive structures are modified, intellectual growth begins which is called accommodation. Piaget (1970) related these processes to a individual's ability to understand measurement and conservation. In other words, children have periods of growth and understanding in which they can understand the size of

containers and how much liquid can flow from a large beacon to a smaller one. Once in the concrete operations stage (about 7 to 11 years), children have developed the ability to conserve. However, their thought processes are directed to real events and they can perform rather complex operations on problems. Piaget (1947) contended that children at the level concrete operations were able to consider two aspects of problem solving simultaneously and this forms the basis of their social and scientific thinking.

Erikson (1982) maps out his eight stages of life which represent the encounter of the child and his social world. The stages are gradual and describe the maturing ego as the child interacts with caretakers and eventually their culture. The first stage (birth to age one) begins in infancy and is called *basic trust versus mistrust*. In this stage the infant begins to develop a sense of trust in their caretakers which is demonstrated in their behavior. The child reacts to the caretaker's kindness and sense of confidence. If the interaction is positive the infant will Erikson (1982) believed that they would develop the core ego of hope and begin to take up new challenges. In the second stage from age one to age three, called *autonomy versus shame and doubt* the child begins to exercise choice and control. During this stage victory over toilet training is central to the child's feeling of autonomy or shame. The child's ability to gain a sense of interdependence is dependent upon the level of shame placed on the child by the parent. The third stage, from age three to six, is *initiative versus guilt* and is a period of forward motion in which the child is goal directed, competitive and imaginative. During this stage the child is involved in exploration and an encounter with authority. Parenting, discipline and control plays in an important role and impacts the child sense of purpose. The *industry versus*

inferiority stage, from age six to 11, involves ego growth and is a time for the development of cognitive and social skills. The child begins to attend school, learning to do meaningful work as they learn more cerebral skills. The stage is particularly important in the development of self esteem, accomplishment and acceptance.

The next three stages entail adolescence, young adulthood and old age. During adolescence, the *identity versus role confusion* stage, individuals struggle with social conflicts and demands in an attempt to find themselves and their position in the larger social order. This is considered a lifelong process which reaches a crisis during adolescence. Erikson (1958) argues the importance of decisions and commitments as the adolescence reworks prior identifications in an effort to form a new identity. He contends that this task is a period of "central perspective and direction, some working unity, out of the effective remnants of childhood and the hopes of anticipated adulthood" (Erikson, 1958, p. 14).

The role of intimacy takes center stage in adulthood, the *intimacy versus isolation* stage, and is a period of self-centered growth in which the young adulthood learns to love and care for others. In the seventh stage, *generativity versus self-absorption*, according to Erikson (1982) adults begin to produce things and ideas through work and the creation of children. Through this time they learn to sacrifice their own needs and develop the ability to care for the next generation. The final stage is old age and is a period of decline, called *ego integrity versus despair*. The adult faces an inner struggle as he/she copes with physical and social loses and their potential for growth. Erikson's stages provide insight into the importance of the life stages and the successful

passage through each period. A connectivity with career development is apparent in each stage as children develop self-confidence, find their place in society and discover a vocation which is congruent with their inner drives and self.

The approach of these theorists provides a strong correlation between developmental phases; a child's ability to understand and develop career aspirations, the development of the self-concept, and the long-term effects of early childhood experiences. Each theory ties the influence of personality, which is developed from birth, as impacted by genetics, to the eventual choice and satisfaction of vocation. Consideration is given to the influence of family, socio-economic status and other events which impacts values, ideas, and the development of self-concept. These events, combined with identification through role-play, experiential learning and positive experiences lead to the premise for adult decisions.

The Influence of Childhood Experiences as Related to Career Choice

Life-span development psychology "affirms that there are continuities in individuals from conception to birth" (Trice & McClellan, 1993, p. 36). A primary premise for this concept is the impact of personality on career choice and job satisfaction, and the evidence that personality is formed prior to adulthood. Trice and McClellan (1993) conducted two retrospective studies in an attempt to determine "whether childhood aspirations matter in adult career attainment" (p. 37). Interviews with 620 individuals (298 women and 322 men) were conducted and the following questions were considered (p. 37):

1. What is your current occupation?
2. How old were you when you decided on your current profession?
3. What event made you decide on your current profession?
4. Was there a particular person who influenced your decision?
5. What was your first paying job?
6. How old were you when you first had that job?
7. What was the first job you remember wanting to have?
8. How old were you?
9. What were your parent's jobs when you were growing up?
10. On a scale of 1 to 10, how satisfied are you with your current job?

Results of the Trice and McClellan (1993) study provide strong indications of the influence of childhood on adult career choices. The data showed that 23% of the participants indicated that their decisions were made during childhood and 50% "indicated that they could remember a specific event or a person" (p. 38) which influenced their career choice. Parents, friends, teachers, persons in the community, counselors, and employers were identified as critical factors in these events with 41% of the childhood aspiration matching the father's occupational clusters (Trice & McClellan, 1993). Fifty-nine percent of the participants reported first aspirations prior to the age of 13 and 41% were working in the same occupational cluster as the early aspirations (Trice & McClellan, 1993). Job satisfaction and first paying job did not appear to have an impact. It is noted that the outcome of the study may have been influenced by the tendency of the participants to connect to their childhood memories with their current

occupation. However, the strength of the evidence is significant in establishing a role for early aspirations in career theory.

Trice and McClellan (1993) provide four arguments to reject the idea that the career notions of elementary students are ephemeral. The first reason according to Trice and McClellan (1993) is the "well-established observation that children 'inherit' the careers of their parents" (p. 36). The second is the "whole force of life-span developmental psychology, which affirms that there are continuities in individuals from conception to death" (p. 36). According to Trice and McClellan (1993) a third reason for believing that childhood matters is that "the characterization of childhood notions of careers as transitory and without structure does not hold up to empirical scrutiny" (p. 37). Trice (1992) and Trice and King (1991) found that kindergarten children expressed the same career aspiration over a school year. Furthermore, in long-term studies (Trice, 1992, Trice & King, 1991) children who changed their career choice when exposed to career programs often reverted to their original choice. The fourth reason given by Trice and McClellan (1993) is supported by the theory of Gottfredson (1981) in which Gottfredson proposed a series of age graded themes, including size and power, sex-appropriateness, and status, which serve as the basis of eliminating occupational clusters.

Holland (1962) argued that persons making vocational choices search for environments "which are congruent with his personal orientations" (p. 1). He considers these vocational choices as a function of personality. Furthermore, Holland (1962) contends that "every person, other things being equal, is impelled toward those groups (occupational classes) whose members have personal orientations similar to his own" (p.

2). Gottfredson and Holland (1990) found that "favorable vocational outcomes are assumed to go with congruence between a person's interests and competencies and the job's requirements and rewards" (p.389) and subsequently leads to job satisfaction. According to Gottfredson (1981) it is uncommon for people not to find occupation that are compatible with at least some element of their self-concepts. She describes the self concept as the way one views oneself and says that "people may or may not be consciously aware of their self-concepts and they may or may not be able to articulate them, but they act on their beliefs about themselves. Self-concept is actually the totality of different ways of seeing oneself" (p. 546–547). Gottfredson (1981) believed that the self-concept incorporated all of a person's views about sex stereotypes, social class perceptions, and internal psychological awareness. This becomes their self-understanding and is directly related to occupational aspirations and vocational behaviors.

The Impact and Nature of Career Indecision

Despite early intervention programs college students show frustration and an inability to make career decisions as evidenced by research which indicates that "nearly half of college bound students continue to request assistance in making career decisions" (Hornak, & Gillingham, 1980, p. 252). In the context of university students, career indecision is defined as a student's inability to select a university major or occupation (Gordon, & Meyer, 2002, p. 41). Career indecision adversely impacts a student's ability to achieve academic goals, their graduation from college, and life satisfaction. In a study of 249 undergraduates, Lounsbury, Tatum, Chambers, Owens and Gibson (1999) found

that career decidedness is significantly related to life "satisfaction, agreeableness and conscientiousness" and is "negatively related to neuroticism" (p. 646). Grant (2000) concludes that "readiness for making career related decisions in adolescence is influenced by factors such as: planning for the future; career exploration; information about careers, jobs, and the world of work; the knowledge of and ability to use decision making skills; and knowledge related to specific areas of interest" (p. 252). Career indecision may also influence a student's perceptions of self-efficacy and ability to make independent decisions (Guay, Senecal, Gauthier & Fernet, 2003). In a study of 84 prospective university students, Gordon and Meyer (2002) found a significant difference between individuals "whose interests are more defined and those whose interests are less defined on scales of self-information, decision-making, and integration of self-information and career information" (p. 45). Following a longitudinal study of career related decisions and seven gifted females, Grant (2000) found that selecting an appropriate choice of major is necessary for students to realize their career aspirations. The study indicated that "career guidance interventions may have facilitated the career decision making efforts of these gifted females and deficits in career development may be a major barrier to career attainment for gifted females" (p. 251). Long, Sowa, and Spencer (1995) found "that career-decided college seniors had clear educational goals and an awareness of the world of work and self that enabled career choices, while undecided college students reported unclear educational goals and had less awareness of the world of work and self" (p. 47). The study found "significant differences between the decided and undecided seniors on

the measures of academic autonomy, having a sense of purpose, vocational identity, and occupational information" (p. 50).

Another acute impact on college enrollment and graduation rates is associated with first generation college students. These students typically lack the self-confidence to believe that they can attend college and have limited family support and guidance, which is critical to making appropriate decisions regarding course work in high school and subsequent choices regarding college requirements. According to Myers (1998) the lack of parental influence may cause students to "unknowingly make early curriculum and other life choices that bar them from pursuing a college education" (p. 1). According to the Education Resources Institute, Inc. (1997), "those whose parents' highest level of education is a high school diploma or less, face many barriers to college access, including limited knowledge of postsecondary admissions and financial aid processes, lack of support from family and friends, and poor academic preparation for college" (Myers, 1998, p. 8). Census data taken in 1995–1996 from the U.S. Department of Education on first generation college students shows that "36% aspire to a bachelor's degree or higher, 45% take the SAT or ACT, and only 26% apply to a four-year institution" (p. 8). "By comparison, 78% of students from whom at least one parent has a bachelor's degree aspire to a bachelor's degree or higher, 82% take the SAT or ACT, and 71% apply to a four-year institution (p. 8). Only 44% of first-generation students attain a degree within five years, while 56% of the students whose parents have bachelor's degrees graduate earlier. In addition, Ginzberg (1952) argued that parental influence is critical and that children cannot make occupational choices without guidance and direction. He stated that

"the child needs a high degree of freedom, but also needs assistance in delimiting the unknown" (p. 494).

Levinson, Ohler, Caswell and Kiewra (1998) found a strong relationship between career maturity and an individual's ability to make appropriate career choices. According to Lounsbury, et al. (1999), "career development is viewed as a lifelong process that includes stages, the process of career maturity, and the development of one's self-concept as it relates to career" (p. 646). Housley and Hickson (1978) found self-concept variables to be indicators of career maturity attitudes. They concluded that "a career mature individual is one who possesses an integrated concept of himself, but who is open to career stimuli and alternative career strategies" (p. 11). In career development, which parallels personal development, individuals are viewed as socialized organizers of experience who then choose occupations which are consistent with their self concepts (Herr & Cramer, 1996). Super (1980), a major career development theorist, argued that "career related decisions result from an ongoing learning process that includes the interaction of multiple influences across the life span and that engagement in the world of work leads to personal satisfaction" (p. 282). Accordingly, career maturity and career adaptability convey the notion that there are certain behaviors which describe an individual's readiness for career decision making and the mastery of the developmental tasks. Super and Overstreet (1960) outlined five dimensions to career maturity. The first is orientation to vocational choice, which is young person's ability to choose an occupation and make appropriate decisions. The second criterion of career maturity depends on the amount of reliable information and the individual's ability to plan

logically and chronologically for the future. Another is the individual's commitment to their choice over-time, and as a crystallization of traits evolve, mature career development will coincide with the individuals relevant decision-making skills. The final dimension is a synthesizing of the vocational preference with the individual's appropriate interests for the chosen career field, and the availability of financial resource for training.

Crites (1972), author of the *Career Maturity Inventory*, contends that "rather than a once-in-a- lifetime event, career decision-making is now seen as part of the process of developing career maturity" (p. 1). Healy, O'Shea and Crook (1985) proposed that "people with mature career attitudes presumably will have more successful careers because their expectations are more realistic and useful for advancing careers…" (p. 239). Furthermore, Crites (1972) argued that theory and research on career maturity can be influenced by career education which exposes "young people to the experiences they need to enhance and facilitate their career maturity" (p. 7). In summary, career awareness and maturity begins at an early age, and is impacted by numerous social and psychological factors, which provides the foundation for later career decision making and satisfaction in work. Housley and Hickson (1978) surmised that "career choice procedures include on-going multiple decision making and the process of selecting a career is a life-time cycle, beginning with role taking in the child and ending with the onset of aging and the process of retirement from one's occupation" (p. 17).

Chope (2002) identified the family as a major influence on career and life planning. He surmised "that rigid family rules and traditions about money, prestige, service and success can prevent any of us from taking risks and trying new experiences"

(p. 2). He acknowledged that "family values like religion or running the family's business may be among the most important variables to be considered when young people make decisions about career choice" (p. 2). Career indecision, according to Chope (2002) can be directly linked to family attitudes and values. This is often the "result of individuals not receiving much support for the choices that they made in earlier development. Young people who were neglected, reprimanded, physically or emotional abused, or scoffed at had terrible difficulties when they had to make important life decisions" (p. 2). Consequently, Chope (2002) recommends two protocols for counselors to use in gathering information about the impact of the family on career decision making. One is for counselors to probe about the kind of unsolicited involvement that the family offered and the other is to involve family members in the decision process. He believed that a supportive family could help to impart new information and other ideas that individuals may be oblivious to. He argued that those individuals "who have developed a sense of connectedness and partnerships through family networking are in a better position to develop stronger social connections and potential employment networks" (p. 8).

Phipps (1995) studied the "career dreams and knowledge of 8– to 11-year-old children and attempted to extend previous research by exploring how these dreams and knowledge vary by a set of student demographic variables including ethnicity, socioeconomic status, gender, and grade, ability, and achievement levels" (p. 20). The participants in the study were 80 eight to 11 year old students The data were gathered through 15 minute interviews in which the children were asked to questions regarding the occupations they envisioned for themselves and what they thought they would have to do

to achieve these preferred occupations and what obstacles they may face. Socio-economic status was identified by the children's participation in the school's free lunch program. Gender occupation preference results indicated that females preferred social occupations while male preferred more realistic careers. "Nearly 60% of the males expressed job choices requiring a high school education or less, while only 13% of females stated they would choose such careers" (Phipps, 1995, p. 23). On the other hand, 74% of the females wanted a career requiring at least a baccalaureate degree such as teacher or nurse. The study did not indicate a significant relationship "between the types of careers to which children aspire and their ethnicity, ethnicity was significantly related to the educational level required for career choices" (p. 27). African-American students imagined themselves in high-level professions and were more likely to want to help others or to earn a good living than White students in contrast to White students who were more motivated by their current interests or perceived skills. Finally, children's interests and the required educational level were not significantly influenced by their socioeconomic status. However, children in higher socioeconomic status were more frequently motivated by their interests or by altruism than the lower socioeconomic group who were more likely to be motivated by role models than economics. Phipps (1995) admits that the this study was limited due to size and suggest that further studies should be conducted to better serve teachers, counselor and career development professional who are working with young children.

In this review of literature, two central themes are presented to identify the impact of childhood on adult career decisions. One is the role of personality and self-concept and

the other is the impact of career maturity on career decisions. The development of the personality begins at birth and is influenced by environmental and social interactions which impact an individual's self-concept. It is this awareness of self from birth until death that drives the decision making process as related to career choice. These personality traits are strongly correlated with types of occupations which seem to match or fit with personal interests and preferences.

Similar Studies and Interventions Related to K–12 Intervention Programs

The concept of career awareness programs in elementary schools is fairly new; however, some studies were found and their findings are discussed. Although selected research mentioned the importance of college, studies closely related to the components of this intervention which included a partnership with a university and major focus on college awareness were not found. A similar intervention in this dissertation was conducted by Gillies, McMahon, and Carroll (1998) in Brisbane, Australia. They found evidence which suggested that children who are exposed to career education programs are able to make more links between their daily experiences and work. The study included 55 children in two sixth grade classes ranging from age 10 years, 6 months to 12 years 11 months, with a mean age of 11 years, 1 month. The children participated in ten weeks of career education classes conducted by their classroom teachers. In the study the teachers did not have previous training in career education and were given curriculum based on the national career education curriculum framework. Lessons emphasized learning about self in relation to work and learning about the world of work. The

activities sought to promote the children's interpersonal communication skills, information processing, time management, decision making and career planning skill. The participants in the study demonstrated an ability to connect school and social activities to work from classroom-based learning. Additionally, children in the study showed an association between involvement in sports, clubs and leisure activities to jobs which will help with future career decision making. The study also indicated that the children "had a better understanding of the different information sources they could use to find out about jobs than their peers who did not participate in the career education program (Gillies, et al., p. 284). However, "it did not affect the children's gender stereotypical perceptions of different jobs" (p. 285). The children consistently chose traditional male and female jobs "even though the program emphasized that jobs traditionally occupied by men or women were now being performed by both males and females" (p .285). This supports Gottfredson's (1981) theory that the influence of gender on children's occupational aspirations is permanently defined at an early age. Overall, the Gillies, McMahon and Carroll (1998) study showed a positive effect on the children's "job knowledge, including an understanding of the personal attributes required for job success" (p. 286). It was evident that all participants made connections between their experiences in their present lived world, themselves, and the world of work and that these experiences could be leveraged in career education programs (Gillies, McMahon & Carroll, 1998).

Fadale's (1974) research, centered in the development of the Career Awareness Inventory, found that "children in the upper levels of elementary school do evidence

career awareness with the areas of identification and relationship of workers, job function, occupational prestige and importance" (p. 14). However, students were not able to express "future aspirations, job training and occupational advantages and disadvantages" (p. 15). Children with parents in the upper occupational levels tended to display "a higher degree of career awareness especially relative to identification and relationship of worker, occupational prestige and job advantage" (p. 16). Fadale (1974) considered this as an indication of the influence of parents and others outside of the classroom. Fadale (1974) found specific implications of the importance of a college education as the participants designated "college" as necessary training for work. Doss (1996) also found in a study of 156 fourth grade students that 84 % expressed a desire to attend college.

Johnson (2000) interviewed 194 sixth-graders and 179 ninth graders to examine their awareness of the relationship between school and work, skills and knowledge needed and the learning opportunities available. The results showed that the students held a poor understanding of the relationship of their school work to their future. Fewer than "one in five of these students on average were able to demonstrate even a moderate level of awareness regarding the utility of the courses considered their favorite" (p. 273). However, 58% of the 88% of respondents indicated "that a college degree or some form of post-baccalaureate or professional education is necessary for career success" (p. 268) and "over three-quarters of these students indicated they intend to earn a bachelors, masters, doctoral or professional degree" (p. 269). Johnson (2000) concluded that schools need to do "more to build overall learning pathways for students, both in and outside of

the classroom" (p. 274). This study is closely related to the intervention used in this study and supports the concepts and elements used.

Lusk (1982) compared two groups of sixth grade students consisting of approximately 100 students each. The control group did not participate in a career education program while the experimental group participated in a district-wide career education program at the beginning of the school year. The study was designed to answer the problem of "whether exposure to a career education program influences attitudes, self-concepts, and overall knowledge of career awareness" (p. 52). The findings did not indicate a change in attitudes toward school; however of the students participating in a career education program, the influence on self-concept was positive. In addition, the experimental group showed a "higher level of career awareness than those students who were not exposed to such a program" (p. 78).

Following a community needs assessment to determine weak areas in existing school curricula and to provide direction for instructional program enrichment, Peters (1973) concluded that:

1. Students needed assistance in making realistic career choices. Their awareness of the nature and scope of occupational careers must be developed.

2. Acquaintance with a diversity of occupations to be supplemented with the development and enrichment of basic skills, e.g., communications, decision-making and reasoning. (p. 4)

A program was developed to acquaint students with a broad spectrum of both present and future career employment opportunities to affect student's career decision-making and in-school and on-the-job training opportunities. Activities included awareness lessons, career counseling, career seminars, field trips, and guest speakers. Training seminars and placement programs were conducted for grades 10–12. Peters (1973) found that the career education program (intervening treatment activities) had and impact on student career awareness; however, "analysis did not indicate that the intervening treatment activities had a significant effect on student career attitude development" (p. 19).

MaKay (1980) examined the relationship among self-concept, social adjustment, academic achievement, career awareness, and teacher perception of career education was conducted with fourth grade students. The intervention included curriculum infusion, guidance oriented strategies, and career education activities, involving students, teachers, administrators, support personnel, parents, university personnel, and community, business and industry leaders. Summary findings of the study showed "total group changes across the school year occurred in career knowledge and career attitude" (p. 127) and there was "no significant difference in self-concept and social adjustment pre to post for the total group" (p. 127). Although this study mentions the involvement of university personnel, the inclusion of college awareness activities were not described.

Solvay (1988) conducted a study of 72 fifth grade children in three elementary schools to determine the impact of a career awareness intervention on the student's attitudes about vocations and career choices. Solvay was concerned with the student's

ability to identify levels of training necessary for specific types of work, work roles, functions of work, prestige and status associated with certain jobs, relationship of job clusters and job characteristics such as travel, location, and relationships. The outcomes of the study showed an improvement in the student's career awareness following the intervention.

Throughout the studies involving career awareness programs, children appeared to have an increase in knowledge about careers. However, very little evidence indicated an impact of self-concept or attitudes. This is consistent with the developmental theorist observations that self-concept is developed early in life and remains consistent over time.

College Awareness Programs

Early college awareness programs are considered vital for providing students a firm foundation and early understanding to succeed in school and continue their education. In 1965 congress established programs to help low-income, disadvantaged students as early as grade six to "overcome class, social and cultural barriers to higher education" ("Early college", 2004). A government sponsored program targeting 1.4 million middle and high school students is called GEAR UP (Gaining Early Awareness and Readiness for undergraduate programs) and was signed into law by President Clinton as part of the Higher Education Act of 1998 (Riley, 1998). The program provides counseling, awareness, tutoring and other activities to promote future college attendance (Devarics, 2002). However, "while the number of college preparation programs continues

to rise, there is an apparent lack of research confirming program effectiveness" (Fogel, 2002).

The Gaining Early Awareness and Readiness for Undergraduate Program (GEAR UP) is a discretionary grant program designed to increase the number of low-income students who are prepared to enter and succeed in postsecondary education (Department of Education, 2005; GEAR UP, Purpose). Five-year grants are given to states and partnerships to provide services at high-poverty middle and high schools. Cohorts begin no later than the seventh grade through high school and funds are also used for college scholarships. GEAR UP is unique in that it engages partnerships and is a supplement to existing efforts which promotes academic preparation and the understanding of necessary costs to attend college, and provide professional development.

Goldberg (2005) commented regarding GEAR UP that no data are available to measure progress towards long-term program goals and argued that

> for in the absence of time travel, it would be impossible to measure the long-term success of a college-preparatory program that started with a cohort of seventh-graders in 1999. As those students are only now reaching college age, no long-term data exist precisely because no long-term data can exist. (p. 7)

The U.S. Department of Education (2005) program performance report for GEAR UP supports these comments in that all of the objectives for assessment of the GEAR UP program are pending based on the need for more data. The performance objectives are as follows:

1. Increase the academic performance and preparation for postsecondary education of participating students.
2. Increase the rate of high school graduation and participation in postsecondary education of participating students.
3. Increase education expectations for participating students and student and family knowledge of postsecondary education options, preparation, and financing. (Georgia Department of Education Executive Summary, August 31, 2003)

However, success stories from the 12 grant recipient states are posted to the Georgia Department of Education (2005) website. The state of California reported a 74% in the number of 11th graders in one high who took the SAT. In another California county the academic performance index scores for math and language rose 47 points from 17 points over a four year period. The state of Massachusetts reported higher attendance rates for students participating in the GEAR UP program for two years. And, in New York, eighth grade students at one middle school showed a gain of 20% on the spring New York State English/Language Arts Assessment. These and other related reports provide a strong indication that the GEAR UP program has a positive impact on academic performance. Data regarding the expected impact of increased enrollment in college should be available this year.

Fogel (2002) examined three programs in Southern California involving 203 high school seniors. The study suggests "that participation in any kind of college preparation program does increase the likelihood of college enrollment" (p. 2). Furthermore, the

study indicated that the intervention affected the "student's cognition, behavior, and achievement" (p. 2). Further empirical research is needed to determine the significance of college awareness programs and K–12 children.

Summary

The review of literature as related to career development and the impact of childhood experiences provide a firm basis for college and career awareness programs and elementary school children. It is apparent that children from the age of 7–11 are capable of understanding and internalizing ideas of occupation, work attitudes, basic skills and identifying interests (Erickson, 1982; Fadale 1974; Piaget, 1970; Roe, 1957). Furthermore, the development of self-concept and personality which begins at birth has a strong impact on career choice and adult decisions (Gottfredson, 1985; Holland, 1962; Manning, 2002; Super, 1956). A child's interest which is influenced by parents, gender, aptitude and socioeconomic status is part of the maturation process, which helps to shape and define interests from birth to death (Ginzberg, 1952). The developmental and career theories considered in this review of literature provide strong evidence that the participants in this study will also be influenced by the treatment and have the ability to understand the content.

The issue of whether this intervention involving children will impact adult decisions is discussed. Studies (Holland, 1962; Roe, 1957; Super, 1980; Trice & McClellan, 1993) which asked adults about the influences of their career choice indicate that early aspirations and childhood experiences, parents, friends and others played an

important role. Personality studies (Gottfredson & Holland, 1990; Holland, Gottfredson, & Baker, 1990) also showed a significant correlation between adult personality factors and occupational choice. This provides further support of the idea that childhood experiences influence adult decisions.

In similar studies (Gillies, McMahon & Carroll, 1998; Fadale, 1974; Johnson, 2000; Lusk, 1982; Peters, 1973; Solvay, 1988) researchers found that career awareness programs do have an impact on occupational knowledge and ideas about college. Mixed results were reported in regards to the impact of interventions on participant's self-concept. In addition, the participant's gender related ideas about occupations was not changed. Studies specifically focused on college awareness were not found by this researcher. However, an empirical study (Fogel, 2002) indicated a need for early college programs.

The following chapter describes the methods used in the research. The purpose of study, setting, intervention design and development, participants, survey instrument, procedures and summary are presented.

III. METHODS

Purpose of the Study

The purpose of this study was to examine a career and college awareness program and fifth grade students. The hypothesis that a student's attitudes toward college will improve following participation in a college and career awareness program is presented. The following research questions were considered:

1. What is the relationship between a college and career awareness program and a participant's attitudes toward college?

2. What is the relationship between a college and career awareness program and a participant's awareness of career values and planning?

3. What is the relationship between a college and career awareness program and a participant's self-concept?

The setting for the study, intervention design, participants, instrument and procedures will be discussed in this chapter.

Setting

According to the U.S. Census Bureau (2000), 78.6 % of the population in Harris County over the age of 25 were high school graduates and only 24.3 % held a bachelor's degree or higher. Therefore, the majority of the school system's parents do not have a

college degree indicating that the majority the children in this study are first generation college students.

The four elementary schools involved in the intervention are part of the Harris county school system in Georgia. According to the Harris County Chamber of Commerce (2005) profile, the county population is 24,548, consisting of the following racial mix: 78.4% white, 19.5% black, 0.5% Asian, 1.6% other and 1.1% Hispanic. The county is made up of 49.4% males and 50.6% female. The county is located in west Georgia and is adjacent to the county of the university involved in the study. The Harris County Chamber (2005) reported the year 2000 per capita income was $27,124 compared to the state income of $27,794 and U.S. income of $29,469. The 1999 median household income in the county was $47,762 compared to the state median household income of $42,433. The U.S. Census Bureau (2000) summary file indicated that 16,231 individuals in the county are age 25 and over. Of this group, 7.3% have less than a 9th grade education, 13.7 % do not have a high school diploma, 29.4% are high school graduates of the equivalent, 5.9% have an associate's degree, 13.8% have a bachelor's degree and 8.3% have a graduate or professional degree. The school system's 2003–2004 enrollment was 4,206 students (Georgia Department of Education, 2005). The enrollment profile of the four elementary schools involved in this study are as follows. The school system has four elementary schools, one junior high school and one high school. Each elementary school has four fifth grade classes. A total of sixteen teachers participated in the program. A lead teacher from each elementary school played a part in developing the curriculum, meeting with system administrators and university staff.

Table 4

Enrollment Profile

School	Grade 05	Total Enrollment
Pine Ridge	85	458
Park Elementary	88	567
Mulberry Creek Elementary	92	532
New Mountain Hill	93	501

Georgia Department of Education, 2005

The university participating in the study is in the adjacent county to the school system in a metropolitan area. According to the University System of Georgia (2005) report the university student enrollment is 7,200 and employs 225 full-time faculty. The university is approximately 30 miles from the county-seat of the school system and is the closest public institution to the county. A member of the University System of Georgia, the university is approved to offer more than 50 undergraduate programs and more than 35 master's or specialist programs, ranging from art to pre-med. The university participants in the program development included members of the enrollment services division, a lead professor from the department of counseling and members of the College of Education.

Intervention Development and Design

The intervention was developed through a school system and university partnership. The mission and objectives of the program called *Taking the Step to College Prep* are included in Appendix E. The goals of the curriculum and college awareness activities were established as follows:

1. To stimulate self-knowledge (interests, abilities, areas to strengthen) in fifth grade pupils
2. To obtain pupil base-line data through the use of pre and post surveys on the career maturity, attitudes toward school, decision-making process, level of knowledge about college and future aspirations of fifth grade pupils
3. To facilitate career exploration
4. To facilitate exploration of life goals and decision-making
5. To devise intervention strategies to improve self-knowledge, career exploration, life goal discovery and decision-making processes
6. To encourage teachers, counselors and educational administration in the school system to focus on preparation for higher education at an early age.

Strategies to facilitate early college awareness and readiness were developed and are as follows:

1. Conduct focus groups and designated meetings with parents.
2. Develop a parent resource guide with information and guidance for parents to help students prepare for college.

3. Engage the community leaders to serve as mentors and the building of community partnerships.
4. Develop teacher and counselor approaches to support the project's goals.
5. Initiate a special focus on African-American males
6. Use special interest school clubs and programs to stimulate career exploration and an understanding of college.

Monthly lesson plans were established to meet the objectives and to facilitate the strategies for college awareness and readiness learning. Each teacher was given an outline of the curriculum, lesson plans and activities as follows:

August

1. The parents of each fifth grade student received a formal letter from the university president and school superintendent informing them of the program (Appendix B).

   The letter informed the parents that their child would participate in a school and university sponsored program to introduce them to concepts of college awareness and career exploration. Parents were invited to participate in the program and encouraged to attend activities included in the program.
2. Each school's designated lead teacher for the project prepared a table for the first Parent Teacher Association (P.T.A.) meeting to inform parents of the project and activities. Parents were encouraged to sign up to participate in the activities.
3. The students completed the survey, *A Look at My Future*.

4. A pep rally was sponsored and organized by the university and the students, their parents, teachers, school counselors, the university president, school system superintendent and board members were invited to attend. The parents were mailed a letter from the school superintendent inviting them to attend the pep rally (Appendix F) Students were given a t-shirt, donated by local businesses, with a graphic design of the university and school system mascot on the front. The pep rally program was held at the university and included a presentation by the university cheerleaders, mascot and dance team. The students were given pom-poms and engaged in a high energy program with cheers proclaiming "I will go to college". Immediately following the pep rally the student's had lunch in the university gym and took a walking tour of the campus.
5. The week following the pep rally the students at each elementary school participated in their first club meeting held at each school and directed by the lead teacher. The teachers discussed the purpose of the program, the upcoming events and passed out folders containing the *Taking the Step toward College Prep* logo for their work.
6. The class was separated into groups of five and given the *What's It All About?* worksheet (Appendix G). Students were asked to complete the *Your Career Journey* (Appendix H) worksheet individually.

September

1. University personnel involved in the program visited each elementary school. The students were divided into two groups at each school for the club meetings. The

university speaker played a game called *College Reality* with the students. This is a game developed by the university with the purpose of helping students understand the cost, academic requirements, and enrollment processes of universities. In addition, the students are introduced to college specific terms such as bachelor degree, scholarship, registrar, bursar and so forth. Students also discuss which degrees are related to specific careers. The students are given play money to demonstrate the cost of college.

2. Following the game, the students were given the worksheet *Show Me the Money* (Appendix I). The teachers were instructed to read and discuss the sheet and have students utilize their mathematical skills to compare incomes/costs involved with less than high school education, high school education and college education.

October

1. The students remained with their individual class for the club time. Each teacher was instructed to reserve the school computer lab to complete an online survey with the students. The students were directed to a web activity at: www.khake.com/page64.html. Click on *Countdown Careers* and then click on *Career Interest Check List* (Appendix J) and *Interest Surveys* (Appendix K). The survey contains 50 child friendly questions. The students printed a hard copy and received a graph which showed their highest interest. The students were instructed to use their personal time over the next month to research specific careers using the *Careers Comparison Organizer* (Appendix L). Students were instructed to bring their results to the next club meeting.

November

1. Students attended their club meeting at each school. They were grouped according to their interest inventory which was completed in October. Once in groups, students discussed jobs in their category of interest. Each group shared with the class the information they learned about their career.
2. Each group designed a poster of the types of jobs relevant to their career. Students used magazine pictures and drew pictures to depict their career.
3. The students completed *Career Pyramid* (Appendix M) explaining careers they like and don't like.

December

1. The students remained in their class for the club meeting. Each teacher read *Going for the Goal* (Appendix N). The discussed goal setting to include long term and short tem goals. The students completed *Planning for the Goal* (Appendix O) and shared their goals with the class.
2. Students were given the story starter activity (Appendix P) which described different careers. They were asked to write a creative story about a career and return it at the next club meeting.

January

1. The classes were divided into two classes at each school for the club meeting. The university personnel facilitated the meeting using the game, *Who Wants to be a College Graduate?* The game is modeled after the game, *Who Wants to be a Millionare?*, and engaged the student in a question and answer period about

college terms, scholarships, need for volunteerism, types of majors, study time, living on campus and costs.

2. The students completed the *Your Circle of Support* (Appendix Q) worksheet and discussed people in their community, possible career options and mentors.

3. The students were given a homework assignment to complete the resume worksheet (Appendix R) and return at the next club meeting. The students were instructed to dress up in their chosen career choice for the next meeting.

February

4. The students were divided into two classes at each school for their club meeting. Guest speakers were invited from the community to participate in a mock interview with the students. The students arrived at the club meeting dressed as person in their selected career choice. Each student was given a copy of the mock interview questions (Appendix S) and participated in a mock interview. The school system personnel director also attended to participate in the interviews and to answer questions.

5. The resume worksheet was turned in and the students were informed that refreshments would be provided for the next club meeting to celebrate the completion of the program.

March

1. Students were divided into two classes at each school for the club meeting. Each student was given a practice college application (Appendix T) and were instructed to answer the questions neatly, accurately, and clearly.

2. Students looked at sample SAT questions (Appendix U) for exposure to the requirements for admittance to college.
3. Students were given a diploma to represent their career choice and were instructed to cut and paste the diploma on construction paper or design their own.
4. The students were given refreshments and celebrated their college awareness graduation.

April

1. Each of the four elementary schools visited the university, for a tour of the campus. The students were greeted by college student tour guides and visited the theatre department where they heard a presentation by drama students and participated in a question and answer the period. The moved from the theatre to the computer science lab and then a science lab where they met with college professors and students. They toured the university apartments and concluded the day with a picnic on the college grounds.
2. Students completed the survey, *A Look at My Future*.

Throughout the school year school, officials, the lead teachers for each elementary school and the university team met to discuss the progress of the intervention and to prepare for the visits to the university.

Participants

The 358 participants in the study were enrolled in the fifth grade within four elementary schools in a school system. Fall 2003, the students participated in a program

called, *Taking the Step toward College Prep*, which was developed and administered through a university and school system partnership to all of the county school system's fifth grade students. A survey called, *A Look at My Future*, was administered in August 2003 to the 358 students participating in the program and to 326 students in May 2004. Responses from the survey indicated that the students ranged in age from 10–12 years old, with the majority of the participants disclosing their age at the time of the survey as age 10 (80%). The participants indicated their gender as males (54%) and females (41%). Responses regarding racial/ethnic group represented Caucasian (70%), African-American (18%), and Hispanic and Native-American (3%, respectively). With all of the school system's students (N = 358) participating in the program, random sampling was not necessary for this study. The participants were involved in the intervention as part of their regularly scheduled school day.

Instrument

For the purpose of this study, pre-existing data from the survey, *A Look at My Future*, was used for analysis of the intervention program. The university involved in the intervention and testing granted permission to use the data for the purpose of conducting the statistical analysis. The school system provided 673 student surveys which consisted of 349 pre-test surveys and 324 post-test surveys. The surveys were administered to the twelve fifth grade classes in the county's four elementary schools.

In order to ensure content related evidence of validity, experts in the field edited and reviewed the scale using an iterative process. The initial draft of the survey was

drafted by the university professor working with the project. Current research and literature based on career awareness and children was used to develop the survey instrument. Questions regarding college awareness were designed to test whether the children understood the new concepts and vocabulary planned in the intervention. Following the draft of the survey the fifth grade teachers, university faculty and staff, K–12 counselors, and other professionals reviewed the survey for age appropriateness, concepts, purpose, and test administration. Specifically, the fifth grade teachers were asked to consider whether the questions and responses in the survey would be easily understood by the children. The teachers agreed that the administration of the survey would be consistent with all other test administration in that simple clarification of questions would be allowed but leading the students or providing insight would not be permitted. Corrections were made to the instrument using the feedback and reviewed a second time by the teachers and other personnel. The same team of professionals reviewed the document for the final draft which was developed in the summer of 2003.

The survey is based on five domains: 1) self concept, 2) career values, 3) career skills, 4) career planning, and 5) college awareness. The survey questions are presented with a Likert-type scale with anchor points: strongly disagree, disagree, agree and strongly agree. The domain of self concept consists of 21 questions related to the actions the participant will need to perform to get a good job, their attitudes toward school and subjects most liked. The domain related to career values consists of 10 questions contrasting good or bad jobs and things they must do to get a job and six questions related to career skill which are important to get a job. Six questions are related to career

planning and reference attitudes toward work, school and decision-making and plans after leaving school. The domain related to college awareness consists of seven questions related to the student's perceptions of higher education. The students were required to circle all the answers that applied to them. These questions related to the student's knowledge of college terms, whether they planned to attend college, and if they perceived barriers to attending college and were used for descriptive analysis in the research. The domains support the goals and objectives of the survey which was to evaluate the program and to determine the impact of the intervention.

Procedures

Pre-existing data collected by the school system and university involved in the development of the program called, *Taking the Step toward College Prep*, was used for this study. The school administrators, fifth grade teachers, counselors and university faculty developed the college and career awareness program and survey used to assess the success of the intervention. Prior to the beginning of the school term, school administrators notified the student's parents that their child would be participating in a partnership program with the university and the school system. The program consisted of two visits to the university, participation in college and career awareness club meetings and a career and college awareness curriculum.

During the second week of the school term the participants completed the survey called, *A Look at My Future*. The survey was administered by the fifth grade teachers following a session with the university faculty, school counselors and school system

officials to establish test instructions and procedures. The instrument was reviewed and the teachers were instructed to administer the survey in the same manner as other school testing. The teachers were advised to answer general questions regarding clarification of words, but were to refrain from offering suggestions or influencing the participant's responses. Following the administration of the survey, each school returned the instruments to the school system administration office for delivery to the university. The participant's names or any other identifying information were not requested on the survey and all identifying information was removed or inked out. Following the eight month intervention, each fifth grade teacher administered the survey instrument, *A Look at My Future*, to the participants in the same format as the pre-test. The survey instruments were then delivered to the school system office and then to the university. For the purpose of this study, the university granted written permission for this researcher to conduct further analysis on the pre-existing data.

Summary

The methods chapter described the purpose of the study which was to consider whether a career and college awareness program would impact participant's attitudes toward college, their awareness of career values and planning, or their self-concept. The setting for the study was described which included the county, school system and university demographics. A detailed outline of the intervention development and designed was presented which provided a month by month outline of the school activities, worksheets and discussions. Next, the demographics of the participants in the

study were considered and the procedures for the development of the survey instrument were summarized. Finally, the procedures for the data collection and survey administration were considered.

The next chapter provides a detailed analysis of the survey results. The introduction outlines the research questions and analysis of the survey is presented. The findings, as related to each research question are provided along with tables to support the data analysis. A summary of the effects of the treatment on the survey answers is also included.

IV. RESULTS

Introduction

Following an intervention program with fifth grade students, pre-existing data was analyzed to determine the impact of the intervention. Data was used from 673 surveys, which consisted of 349 pre-test and 324 post-test instruments. The purpose this study was to consider the following hypothesis and research questions:

Hypothesis: Student's attitudes toward college will improve following participation in a college and career awareness program.

Research Questions

1. What is the relationship between a college and career awareness program and a participant's attitude toward college?

2. What is the relationship between a college and career awareness program and a participant's awareness of career values and planning?

3. What is the relationship between a college and career awareness program and a participant's self-concept?

Data were gathered to address the outcome of an intervention designed to impact the self-concept, career awareness, and college awareness in fifth grade students. A statistical analysis of the survey instrument was conducted to establish construct validity and reliability of the scale. Quantitative analyses of items included measures of central

tendency and variability. Exploratory statistical analyses paired sample t-tests were used to determine the statistical significance of the responses between pre- and post-test results. A study of the pre- and post-test group means was used to analyze each item and compare the group change following the treatment.

The analysis of the pre-existing data provided by the university involved in the intervention was used to address the hypothesis of whether a student's attitudes toward college will improve following participation in a college and career awareness program. Exploratory analysis of the data included a comparison of mean scores between the pre and post-test and t-test statistical analysis at the .05 level of significance.

Analysis of the Survey

The survey instrument, entitled *Look at My Future*, consists of 22 questions. Nine questions are related to the student's self concept, career awareness, and college awareness with a total of 63 Likert-style responses of "strongly-disagree," "disagree," "agree," "strongly-agree." The survey questions were as follows: items 1, 5, and 6 relate to self-concept, items 2, 3, 4 and 7 relate to career awareness and items 8, 9, 16, 17 and 18 relate to college awareness. Items 10–14 ask questions about the student's parents and are not considered in this analysis. Five additional items (15, 16, 17, 18, 19), offered a choice of responses related to the student's attitudes towards college. Questions 20-22 are related to the student's home environment and are also omitted in this analysis. The items are orthogonal and although they are getting at how much understanding the students have of college and career related issues, they are not measuring a construct in a sense

that the answer on one item would necessarily influence the answer on another item. Because the items are not correlated, descriptive and inferential statistical analysis of each item is considered for significance.

Findings

Research question number one asked: What is the relationship between a college and career awareness program and a participant's attitude toward college? The domain of college awareness is comprised of items 8, 9, 16, 17, and 18. These items addressed issues such as understanding the requirements for higher education (item 8) and whether or not the student will attend an institution of higher learning (item 9). Choices regarding reasons they may not go to college was listed in items 16 and 17, and information on where they find out about college and scholarships was listed in items 18 and 19.

Item 8 asked the participants to indicate if they "strongly agree," "agree," "disagree," or "strongly disagree" if they understand what a bachelor's degree is, what a college preparatory course is, and college entrance requirements and scholarship requirements. According to the findings in Tables 5 and 6, the perceptions of the participants in the pre- and post-test groups improved statistically significantly based on the program intervention on all four questions. Group mean scores for understanding what constitutes a bachelor's degree increased from a pre-test average of 2.31 (SD = 1.03) to a post-test average of 3.02 (*SD* = .092). The paired sample t-test scores for these questions were t (657) = -9.27. p = .000. Understanding the requirements of a college preparatory course increased slightly from a pre-test score of 2.47 (SD = 1.028) to 2.92

(SD = .970) in the group post-test results. Data in Table 6 indicate the change from pre-test to post-test for understanding the requirements for getting into college as (t (660) = -4.405, $p < .000$) and requirements for a scholarship (t (661) = -2.981, $p < .003$). The effect size for all of the questions were small with the exception of understanding what a bachelor's degree, $\eta^2 = .0116$.

Table 5

Dimension: College Awareness (College Terms)

Item #	Pre or Post	N	Mean	Std. Deviation
8a I understand what a bachelor's degree is	pre	335	2.31	1.038
	post	324	3.02	.926
8b I understand what a college preparatory course is	pre	338	2.47	1.028
	post	322	2.92	.970
8c the requirements for getting into college	pre	339	3.26	.882
	post	323	3.53	.675
8d. the requirements for a scholarship	pre	340	3.21	.932
	post	323	3.41	.784

Table 6

Independent Samples Test: Dimension: College Awareness (College Terms)

Item #	t	df	Sig.(2-tailed)	Mean Difference	Partial Eta Squared
8a. I understand: what a bachelor's degree is	-9.272	657	.000	-.711	.116
8b. what a college preparatory course is	-5.802	658	.000	-.452	.049
8c. the requirements for getting into college	-4.405	660	.000	-.270	.029
8d. the requirements for getting a scholarship	-2.981	661	.003	-.200	.013

When given a pick list of potential issues that would affect their chances of attending college, generally the students considered low grades, low SAT/ACT scores, learning subjects not covered in high school, or fear of meeting new people (item 16 and 17) would not interfere with their college enrollment as reflected in the pre- and post-test. However, Tables 7 and 8 show that following the intervention program treatment the participants significantly expressed that the cost, (t (657) = -2.278, p =.007) would be a reason not to attend college. In contrast, the pre-test mean scores .07 (SD = .257) decreased in the post-test to .03 (SD = .176), indicating an increased confidence in their ability to complete college prep courses (t (665) = 2.276, p =.023). Following the intervention program treatment an increased anxiety was evident in the participants'

attitudes towards difficult subjects (t (660) = -3.679, p < .000), time spent studying (t (660) = -2.415, p = .016), being away from home (t (660) = -2.563, p < .011) and being on their own (t (660) = -2.481, p = .013). Effect size was small for all questions in Table 8.

Table 7

Dimension: College Awareness (Why I May Not Go to College)

Item #	Pre or Post	N	Mean	Std. Deviation
16a. I may not go to college because: the cost	pre	352	.26	.437
	post	315	.35	.478
16d. Not enough college prep courses	pre	352	.07	.257
	post	315	.03	.176
17a. Which of these do you not like about college life: difficult subjects	pre	352	.28	.452
	post	310	.42	.494
17b. having to spend lots of time studying	pre	352	.30	.723
	post	310	.42	.494
17d. being away from home	pre	352	.43	.495
	post	310	.53	.537
17e. being on my own	pre	352	.21	.408
	post	310	.29	.456

Table 8

Independent Samples Test: Dimension: College Awareness (Why I May Not Go to College)

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Error Eta-Squared
16a. I may not go to college: the cost	-2.278	665	.007	-.097	.011
16d. Not enough college prep courses	-2.276	665	.023	-.039	.008
17a Which of these do you not like about college life: difficult subjects	-3.679	660	.000	-.135	.020
17b. having to spend lots of time studying	-2.415	660	.016	-.118	.009
17d. being away from home	-2.563	660	.011	-.103	.010
17e. being on my own	-2.481	660	.013	-.083	.009

Tables 9 and 10 indicate a statistically significant improvement in understanding places to go find out about college (item 18). The participants viewed letters from college, t (660) = -5.917, $p < .000$; TV ads, t (660) = -2.425, $p = .016$; the internet, t (660) = -5.970, $p < .000$; magazine ads, t (660) = -2.086, $p < .037$; newspaper ads, t (660) =-2.888, $p < .004$; billboards, t (660) = -2.688, $p < .007$; bus shelters and bus advertisements, t (665) = -5.407, $p < .036$ as ways to learn about college. The students'

impression that they would not find information on the radio, in movie theaters or the mall did not change with low mean scores. The effect size for all of the questions listed in Table 10 was considered small.

Table 9

Dimension: College Awareness (College messages)

Item #	Pre or Post	N	Mean	Std. Deviation
18a. Which of the following places would you be likely to see or hear a message about attending college? Letters from college	pre	352	.54	.499
	post	310	.76	.429
18b. TV ads	pre	352	.30	.461
	post	310	.39	.489
18d.Internet	pre	352	.36	.481
	post	310	.59	.493
18e. Magazine ads	pre	352	.16	.369
	post	310	.23	.419
18f. Newspaper ads	pre	352	.27	.445
	post	310	.37	.485
18g. Billboards	pre	352	.25	.432
	post	310	.34	.475
18j. Bus shelters/bus advertisements	pre	352	.09	.288
	post	315	.14	.350

Table 10

Independent Samples Test: *Dimension: College Awareness (College Messages*)

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Eta Squared
18a. Which of the following places would you be likely to see or hear a message about attending college: Letters from College	-5.917	660	.000	-2.15	.050
18b. TV ads	-2.245	660	.016	-.090	.009
18d. Internet	-5.970	660	.000	-.226	.051
18e. Magazine ads	-2.086	660	.037	-.064	.007
18f. Newspaper ads	-2.888	660	.004	-.104	.012
18g. Billboards	-2.688	660	.007	-.095	.011
18j. Bus shelters/ Bus Advertisement	-5.407	665	.036	-.052	.007

Overall the treatment appeared to increase awareness of where to find information about college. In addition, the intervention program treatment significantly impacted the student's understanding of how to obtain a scholarship. Tables 11 and 12 indicate that they needed to make good grades, t (665) = -5.407, $p < .000$, and participate in clubs or do community service, t (665) = -3.463, $p < .001$. They did not find it

important to consult a school counselor, t (665) = 2.314, p < .021. The effect sizes for all of the questions listed in Table12 were considered to be small.

Table 11

Dimension: College Awareness (Scholarship)

Item #	Pre or Post	N	Mean	Std. Deviation
19b. To get a college scholarship I must: Be poor	pre	352	.81	.393
	post	315	.95	.226
19d. Participate in clubs or do community post service	pre	352	.19	.391
	post	315	.30	.460
19e. Consult with the school counselor	pre	352	.09	.280
	post	315	.04	.199

Table 12

Independent Samples Test: *Dimension: College Awareness (Scholarship*)

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Eta Squared
19b. To get a college scholarship I must: Make good grades	-5.407	665	.000	-.136	.042
19d. Participate in clubs or do community service	-3.463	665	.001	.-.114	.018
19e. Consult with the school counselor	2.314	665	.021	.044	.008

On the whole, the intervention program treatment appeared to accomplish the goal of increasing an awareness of college issues. The students expressed an understanding of college life, the need to study and make good grades, where to find out about colleges and how to obtain a scholarship.

Research Question Number Two

Research question number two asked: What is the relationship between a college and career awareness program and a participant's awareness of career values and planning? The domain of career awareness consists of questions related to career values, skills, and planning. Students were asked two questions related to career values. The first question (item 2) listed occupations and asked the students to indicate whether the occupations were good or bad. The second question (item 3) gives nine value statements referring to whether a job must be interesting, pay well, give security, could be boring if it paid well, must help people, must be easy to do, involve a lot of people in the work surroundings, whether they would need to be good at schoolwork to get a good job and if they preferred going to work rather than high school. Students were asked one question (item 4) related to career skills such as whether they would need to use a computer, listen and communicate well, work in a team, be willing to learn, and to be punctual. Item 7 asked nine questions about who they talked to regarding future plans.

In item 2, students gave all jobs an overall rating of "agree" to "strongly agree" as being good jobs. In the post-test measures, data in Tables 13 and 14 show that the students' attitude toward being a factory worker statistically significantly changed from a

group pre-test average of 2.47 to a post-test average of 2.29, t (656) = 2.461, p = .014, with a small effect size η^2 = .009.

Table 13

Dimension: Career Awareness (Career values)

Item #	Pre or Post	N	Mean	Std. Deviation
2f. Do you think the following occupations are good or bad jobs: Factory worker	pre	340	2.47	.910
	post	318	2.29	.916

Table 14

Independent Samples Test: Dimension: Career Awareness (Career values)

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Eta Square
2f. Do you think the following occupations are good or bad jobs: Factory worker	2.461	656	.014	.175	.009

In item 3, participants strongly disagreed that a job must be easy to do and that they would prefer work rather than high school, but felt strongly that it must be interesting, pay well, give security, and that they would have to be good in schoolwork to

get a good job. As shown Tables 15 and 16 statistically significant differences exist in pre- to post-test means, 3.16 (SD = .818) to 3.30 (SD = .766) for whether a job should be interesting, t (671) = -2.229, p = .026. The data represents a change in pre- and post-test mean scores from 3.16 (SD =.818) to 3.30 (SD = .766), indicating a disagreement that a job can be boring if it pays wells (t (666) = 3.670, p < .000). Similarly, pre- and post- test mean scores changed from 2.07 (SD = .847) to 1.91 (SD = .812) regarding whether a job must be easy to do, t (651) = 2.502, p < .013. In addition, students mean changed from 3.13 (SD = .860) to 2.95 (SD = 876) in response to the item stating that a job must help people, t (665) = 2.731, p = .006. The effect sizes in Table 16 were considered small.

Table 15

Dimension: Career Awareness (Job interests)

Item #	Pre or Post	N	Mean	Std. Deviation
3a. Which statements do you agree or disagree with: A job must be interesting	pre	347	3.16	.818
	post	326	3.30	.766
3d. A job can be boring if it pays well	pre	345	2.32	.960
	post	323	2.05	.935
3e. A job must help people	pre	343	3.13	.860
	post	324	2.95	.876
3f. A job must be easy to do	pre	334	2.07	.847
	post	319	1.91	.812

Table 16

Independent Samples Test: *Dimension: Career Awareness (Job interests)*

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Eta Squared
3a. Which statements do you agree or disagree with? A job must be interesting	-2.229	671	.026	-.136	.007
3d. A job can be boring if it pays well	3.670	666	.000	.269	.020
3e. A job must help people	2.731	665	.006	.184	.011
3f. A job must be easy to do	2.502	651	.013	.163	.020

Issues related to career skills needed to get a job are addressed in item 4. Students indicated that ability to use a computer, listen well, speak and communicate well, willingness to learn, work in a team, and to be punctual are important skills. According to the data in Table 17, following the treatment the students' perception of the need to have computer skills changed from a pre-test mean score of 2.92 (SD = .900) to a post-test mean score of 2.77 (SD = .854) and was statistically significant, t (669) = 2.254, $p < .025$ (see Table 18). The effect size listed in Table 18 was considered small. Between the pre- and post-test the student's perceptions of career skills appeared stable and not impacted by the treatment.

Table 17

Dimension: Career Awareness (Career skills)

Item #	Pre or Post	N	Mean	Std. Deviation
4a. In order to get a job I must: be able to use a computer.	pre	346	2.92	.900
	post	325	2.77	.854

Table 18

Independent Samples Test: Dimension: Career Awareness (Career skills)

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Eta Squared
4a. In order to get a job I must: be able to use a computer	2.254	669	.025	.153	.008

Item 7 asked the students who they would talk to regarding plans once they leave school. Nine questions were asked regarding their communication with parents, friends, teachers, brothers, sisters or relatives, school counselors, principal, coach, minister, and if they do not to talk to anyone. The post-test groups mean scores ranked parents, friends, brothers and sisters as the individuals to whom they most talked, and with the exception of three questions related to school counselors, principals and not talking to anyone, the treatment results did not indicate a statistically significant change. In Table 19, responses to the questions referring to talking to the school counselor,

principal and to no one yielded a reduction in the group mean scores from pre to post-test scores and a statistical significance for all three questions. The pre-test group mean for talking to the school counselor was 2.48 (SD = .923) while the post test mean reduced to 2.32 (SD = .918) and the data in Table 20 reports a t-test and p-value of (t (654) = 2.213, p = .027). Similarly, the pre-test group means for talking to school principal was 2.34 (SD = .940) while the post-test means was 2.19 (SD = .922), with t-test scores and p-values equal to (t (659) = 2.089, p < .037). The students' response to not talking to anyone changed from a pre-test group mean of 1.73 (SD = 1.017) to a post-test group mean of 1.55 (SD = .888). All of the questions listed in Table 20 reflect a small effect size. The change in the post-test group mean score, as related to not talking to anyone indicates that the students' motivation to discuss future plans with others improved.

Table 19

Dimension: Career Awareness (Career planning)

Item #	Pre or Post	N	Mean	Std. Deviation
7e. Influences on attitudes toward work school and decision making I talk to the school counselor about what I would like to do when I leave school	pre	334	2.48	.923
	post	322	2.32	.918
7f. I talk to my school principal about what I would like to do when I leave school	pre	338	2.34	.940
	post	323	2.19	.922

(table continues)

Table 19 (continued)

Item #	Pre or Post	N	Mean	Std. Deviation
7i. I don't talk to anyone about what I would like I would like to do when I leave school	pre	333	1.73	1.017
	post	323	1.55	.888

Table 20

Independent Samples Test: *Dimension: Career awareness (Career planning)*

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Eta Squared
7e: Influences on attitudes toward work, school and decision-making: I talk to the school counselor about what I would like to do when I leave school	2.213	654	.027	.159	.008
7f. I talk to my school principal about what I would like to do when I leave school	2.089	659	.037	.151	.006
7i. I don't talk to anyone about what I would like to do when I leave school	2.476	654	.014	.185	.011

The data analysis suggested that students participating in a college and career awareness program enter the program with predisposed ideas or perceptions about what constitutes good jobs, what they value in a job, necessary skills, and their ability to discuss future plans with significant others. Furthermore, these ideas remained the same with the elements of the treatment which consisted of a career curriculum and club meetings. However, the treatment did impact perceptions of the job factory worker, whether a job should be interesting, that it could be boring and pay well and that computer skills are not necessarily important for all jobs. Results indicated that following the treatment students' ideas of who they talk to about future plans did not change in relation to the school counselor and principal, while their belief that they have no one to talk did change.

Research Question Number Three

Research question number three asked: What is the relationship between a college and career awareness program and a participant's self-concept? The domain of self-concept comprised items 1, 5 and 6. These items addressed issues such as what is needed in order to get a good job (item1), reasons for attending school (item 5) and enjoyment of various subjects (item 6). Item 1 listed 11 responses to the question of what a student would need to do to get a good job. Overall, students reported that they "agree" to "strongly agree" that one must be smart, work hard at school, participate in exams and tests, be good a school work, keep yourself healthy, go to college, be capable, and be confident in order to get a good job. The only statistically significant response was related to the idea of attending technical school. The group pre-test mean score of 2.86

(SD = .911) shown in Table 21 changed in the group post-test to a mean score of 2.65 (SD = .0846), the t-test score was t (667) = 3.101 with a $p < .002$, $\eta^2 = .014$ see Table 22).

Table 21

Dimension: Self-concept (What is needed to get a good job)

Item #	Pre or Post	N	Mean	Std. Deviation
1h. Do you think you will have to be or do any of the following to get a good job? Go to technical school.	pre post	344 325	2.86 2.65	.911 .846

Table 22

Independent Samples Test: Dimension: Self-concept (What is needed to get a good job)

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Eta Squared
1h. Do you think you will have to be or do any of the following to get a good job? Go to technical school	3.101	667	.002	.211	.014

The participants' average responses to their attitudes toward school were "agree" and strongly agree" with the exception of their response to liking to come to school rather

than staying at home which had a mean score of 2.25 (between "disagree" and "agree"). Students indicated positive attitudes toward liking to come to school to see their friends, learning more about various subjects, liking their teachers and being prepared for college and a job. However, group mean scores statistically significantly changed in questions regarding wanting to come to school to learn more about various subjects and liking their teachers.

As shown in Tables 23 and 24, although the responses remained high in the "agree" and "strongly agree" range for learning about various subjects, the participants' pre-test average of 3.55 (SD = .650) dropped in the post-test group mean to 3.43 (SD = .789). The t-test results were t (668) = 2.205 and a p = .028. Similar findings related to coming to school because I like my teacher were found as seen in the pre-test data for this question which yielded an average of 3.37 (SD =.727) and a post-test average of 3.15 (SD = .797). This change is consistent with the final item (6) which addressed subjects liked. Eight subjects were listed including: art, music, math, P.E., English, social science, computer and reading. Across the subjects, students indicated that they "agreed", "strongly agreed" to liking all of the subjects. However, following the treatment the students expressed a significant change in their attitude towards math, t (667) = 2.477, p = .014; science, t (666) = 2.093, p = .037; computers, t (662) = 2.519. p < .012; and reading, t (664) = 2.680, p < .008 as shown in Tables 23 and 24. Table 24 indicates that the effect size for all of the questions were small.

Table 23

Dimension: Self-concept (Attitudes toward school and subjects liked)

Item #	Pre or Post	N	Mean	Std. Deviation
5c. Attitudes toward school: I like coming to school in order to learn more about various subjects	pre	345	3.55	.650
	post	325	3.43	.789
5d. I like coming to school because I like my teachers	pre	341	3.37	.727
	post	326	3.15	.797
6c. Subjects liked: Math	pre	344	3.41	.778
	post	325	3.25	.928
6f. Science	pre	344	3.41	.803
	post	324	3.28	.864
6h. Computers	pre	342	3.41	.808
	post	322	3.24	.934
6i. Reading	pre	343	3.26	.885
	post	323	3.07	.928

Table 24

Independent Samples Test: *Dimension: Self-concept (Subjects liked*)

Item #	t	df	Sig. (2-tailed)	Mean Difference	Partial Eta Square
5c. Attitudes toward school: I like coming to school in order to learn more about various subjects	2.205	668	.028	.211	.007
5d. I like coming to school because I like my teachers	3.712	665	.000	.219	.020
6c. Subjects liked: Math	2.477	667	.014	.164	.009
6f. Science	2.093	666	.037	.135	.007
6h. Computers	2.519	662	.012	.170	.009
6i. Reading	2.680	664	.008	.188	.010

The intervention program appeared to have little impact on the participant's self-concept and perception of jobs liked and subjects liked. Consistent with the domain of college awareness, their ideas of attending a technical school changed, indicating more of a focus on college. Post-test results revealed less satisfaction with learning new subjects and liking their teachers, which could be associated with end of school year frustrations and stressors. Taken as a whole, the participant's self-concept appears to be well established at this age and is not influenced by a college and career awareness curriculum.

Summary and Effects of Treatment on Survey Answers

A survey instrument called a *A Look at My Future* was administered to 349 fifth grade students in four elementary schools by their classroom teachers. The students were subsequently engaged in an eight month program called *Taking the Steps toward College Prep*." The intervention program was launched in the Fall with a visit to the local university where the students participated in a pep-rally designed to create excitement about going to college. Following the university visit, the students were subjected to a career and college awareness curriculum and had six monthly club meetings to discuss aspects of career planning and requirements for college. In the Spring the students returned to the university for a campus tour which included a visit to the university dorms and meetings with college students. The week following the campus tour, the school teachers administered the survey to 324 students. The reduction in students participating in the program intervention reduced during the school year due to students moving from the school system or they were absent on the day of the test. The pre- and post-test survey instruments were collected and provided to the university by the school system for review and analyses. The university granted permission for this researcher to conduct the analyses.

The data from the surveys were entered into the SPSS computer program considering the three domains of college awareness, career awareness and self-concept. Questions were grouped by domain and descriptive analysis and paired sample t-tests were conducted. The pre- and post-test group means for each question were studied along with paired sample t-tests results. The statistical significant findings support the

hypothesis which asked if students' attitudes toward college will improve following a college and career awareness program. The pre- and post-test groups mean scores indicate the participants' attitudes toward college, careers, and self-concept was impacted by the intervention program treatment. The data analyses indicated that although many of the participants' opinions related to occupations liked, career values, and attitudes towards subjects liked and school were formulated prior to the treatment, changes did take place. The intervention program treatment appeared to have the most profound effect on the participants' ideas about college. Although they expressed a strong pre-test desire to attend college, the results were statistically significant in response to the materials and experiential learning in regards to college awareness.

Eta square (η^2) was considered small, 01, medium, .06 and large, .14. Although most of the questions reflected a small effect size, the large size of (N = 349) indicates power to support the hypothesis. In addition, items with significant statistical differences were reported and any improvement on students understanding is better than no improvement.

In conclusion, the program intervention treatment does improve student's attitudes toward college. The findings of the survey support the hypothesis that student's attitudes toward college will improve following a college and career awareness intervention program.

The final chapter is a summary of the impact of the intervention program treatment with conclusions and recommendation for future programs and research.

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this research was to examine a program designed to improve the awareness of college and careers in fifth grade students. The hypothesis and research questions shown below were considered.

Hypothesis

Student's attitudes toward college will improve following participation in a college and career awareness program.

Research Questions

1. What is the relationship between a college and career awareness program and a participant's attitude toward college?

2. What is the relationship between a college and career awareness program and a participant's awareness of career values and planning?

3. What is the relationship between a college and career awareness program and a participant's self-concept?

This study examined pre-existing data from an intervention program designed for fifth grade students to impact their awareness of careers, college, and their self-concept. The students represented 12 fifth grade classes in a county school system and the program was developed through a university and school system partnership. This study included a review of literature related to the need for this type of intervention and the

impact of career and college decisions on adults. In addition, similar studies were reviewed as related to this type of intervention program treatment. The treatment and methods are described and an analysis of the data is presented following the review of the literature. This chapter will consider a summary of the research study and the findings, with concluding statements and recommendations for future research and program modifications.

Summary

The purpose of this study was to consider pre- and post-survey data related to a university and school system intervention program treatment intended to influence the ideas of fifth grade students toward college and career. The relationship of the college and career awareness program and the students' self-concept and beliefs about his/her future was considered. The program format and curriculum involved an eight month program designed by university personnel, a team of fifth grade teachers, counselors and school administrators. To gather benchmark data and assess the success of the program, the university and school team of professionals developed a survey instrument to evaluate the program outcomes. The sample included the county's fifth grade students enrolled in four elementary schools who were subjected to the comprehensive program which consisted of college and career subject matter and experiential learning techniques. The school system administered the evaluation instrument at the beginning and at the end of the program to the fifth grade students. The collected data were secured by the school

system and transferred to the university for further research and analysis. The university granted permission for the data to be used in this study.

The study presents the hypothesis that students' attitudes toward college will improve following participation in a college and career awareness program. An analysis of the data to consider the research questions regarding the relationship of a college and career awareness program and 1) a participant's attitudes toward college, 2) the participant's awareness of career values and planning and 3) the participant's self-concept was conducted using output from the SPSS computer program. Results from the pre- and post-test means and t-tests from the treatment group were used to determine the statistical significance of the values.

The pre-test treatment group consisted of 349 fifth grade students and the post-test treatment group contained 324 students. The students ranged in age from 10–12 years old with an average age of 10 and were classified as 54% males and 41% females, with a majority of the group (70%) listed as Caucasian, 17% African-American and 3% Hispanic and Native-American. The students were enrolled in four elementary schools within a rural school district and divided into 12 classes. All of the students participating in the treatment were exposed to a college and career curriculum and experiential activities including college visits and club meetings. The school system notified the parents prior to the treatment that the students would participate in the program and that a survey would be conducted for analysis.

The evaluative instrument in the study was a survey developed by the university personnel involved in the treatment and a team of fifth grade teachers, school counselors

and administrators employed by the school system. Information and research on career planning and questions related specifically to college awareness were used in the instrument construction. The questions were intended to provide an investigative tool for the purpose of analyzing the success of the treatment. The instrument called a *Look at My Future* consisted of three domains with Likert-scale questions related to college and career awareness and the student's self-concept as related to college and career planning. In addition, a pick list of questions was asked related to the students' knowledge of college requirements and scholarships. The instrument was administered by the elementary school teachers prior to the students' first visit to the university campus in August and immediately following their final visit in May of the same school year.

The treatment developed by the team of university and school personnel was called *Taking the Steps toward College Prep* and entailed an eight month curriculum, six club meetings and two visits to the university in the adjoining county. A major focus of the curriculum and club meetings centered on college life and requirements, and terminology. An emphasis was placed on the types of careers, careers requiring college, and career planning. The college visits were intense involving a pep-rally in August with performances by the university cheerleaders, dance team, and mascot. The spring campus visit engaged the students in a tour of various departments, meetings with university students and a visit to the campus dormitories. The curriculum entailed monthly lesson plans and worksheets related to career, goal planning, resumes, and events related to college. Invited guests from the university attended two of the six club meetings and community leaders attended the other four to discuss their occupations and careers.

The findings of the survey used to reject or accept the hypothesis were reported in Chapter IV. The hypothesis that student's attitudes toward college will improve following participation in a college and career awareness program was supported by the findings. A summary of the findings and research questions are summarized.

Research Question Number One

Research question number one asked: What is the relationship between a college and career awareness program and a participant's attitude toward college?

The intervention program treatment attempted to influence the students' awareness of college life, the admissions process, scholarships, and the relationship of academics to college and future choices. According to the data analysis, the participants entered the school year with an extremely positive attitude toward college and felt it would help them get a good job. Although the students were not strongly opposed to technical school, they did not rank it as their number one choice and in questions related to self-concept, they did not see attending technical school as something they would need to do to get a job.

The pre-test group also expressed a high level of confidence in understanding the requirements for college and scholarships. In contrast they did not seem as sure about what a bachelor's degree and college prep courses were, but expressed an improved understanding of both terms following the treatment. The treatment appeared to have a strong impact on the participants' anxiety over the cost of college, difficult subjects, the amount of time needed to study, being away from home and living on their own. Although they did not see low grades as a deterrent to attending college, the post-test group showed an improved understanding of the need to make good grades to get a

scholarship. The treatment was not successful in helping the students see the school counselor as a resource for career and college planning. However, the students demonstrated a significant improvement in their knowledge of where to find information about college and things they must do to get a college scholarship. In addition, the participants had positive attitudes toward careers requiring college degrees such as engineer, architect, teacher and doctor. In relation to their attitude toward school, students strongly agreed that they saw school attendance as helping to prepare them for college.

Results indicated an improved awareness of college life as presented by the students' anxiety to live away from home, the amount of study required, and cost. The participants indicated a confidence that they understand college requirements and the need for college prep classes, good grades, SAT scores and they see college as a means to achieve career goals. An improved understanding of what is needed to apply for and earn scholarships is also presented. On the basis of the data analysis, the question of whether a college and career program would influence a participant's attitudes toward college is supported.

Research Question Number Two

Research question number two asked: What is the relationship between a college and career awareness program and a participant's awareness of career values and planning? The scope of career awareness in this study was defined as the exploration of occupational knowledge, positive work attitudes, basic skills, social involvement, and interests, and aspirations of children. The findings from the post-test group indicated that the treatment did not greatly impact the participants' ideas about his/her career values,

career skills, or the types of occupations they considered as good or bad. Both pre- and post-test group means showed that the students demonstrated a strong opinion that a job must be interesting, pay well and give security and they firmly disagreed that they would rather work than go to high school. The students' perceptions of whether a job could be boring if it pays well and that it must help people changed indicating more clarity of occupational types. The pre- and post-test groups demonstrated a healthy and strong knowledge of job skills and the importance of communication, working in a team, willingness to learn and punctuality. When asked a series of questions regarding who they would talk to about their future plans, students highest rankings were parents, brothers, sisters, relatives and friends. The treatment did not influence the student's to see their school counselor or principal as someone to talk to regarding what they would do when they leave school. However, the post-test group expressed a more positive perception of not talking to anyone.

Although some impact is noted in the relation to career awareness and the treatment, other than clarification of whether a job can be boring and help people, it does not appear to significantly change the participants' opinions or impressions of his/her career values, planning, or skills.

Research Question Number Three

Research question number three asked: What is the relationship between a college and career awareness program and a participant's self-concept? The definition of a student's self-concept in relation to this study is the child's preference, attitudes and beliefs about his/her abilities, interests and values as related to personality. Findings in

the pre- and post-test groups regarding the student's beliefs about what they will need to do to get a good job are positive and present a good self-image. They believe that they must be smart, work hard, be good at schoolwork, and be strong and healthy. Although they feel strongly that they will attend college, their ideas in the post-test group results regarding technical school declined. Overall students appear to have positive attitudes toward school and reported liking to see their friends, to learn about various subjects, liking their teachers and feeling they were being prepared for college and a job. However, they did not favor school over staying at home.

A negative change in the students' attitudes towards liking to come to school to learn various subjects and his/her teachers was seen in the group post-test results. Although there was some decline in the t-test scores for math, science, computers and reading, the mean scores remained above 3.0 for the students' attitudes towards all of the listed subjects which included art, music, physical education, English, science, social science, computers and readings. Other than slightly negative feelings toward learning various subjects, liking their teacher and certain subjects, the student's attitudes and beliefs from the pre to post-test did not change. The students' self-concept as defined and questioned in this survey was not significantly impacted by the treatment.

Conclusion

Based on the data analysis of the pre-test and post-test surveys, there were indications that the intervention treatment program was successful in increasing students' awareness of higher education issues. The students' overwhelming belief as identified in

the pre-test results that they would attend college. These findings are similar to a study conducted by Doss (1996) involving 156 fourth graders in which 84% of that group expressed a desire to attend college. Fadale (1974) found similar results in her studies of children and career development. It is apparent that these students have a high level of confidence regarding their future and that prior education and learning have influenced their desire to attend college. This is particularly noteworthy as the census data indicates that only 15% of adults have a bachelor's degree (Education Resources Institute, 1997). An unintended outcome of the treatment was the participant's significant change in their perception of technical school. The treatment seems to have pointed students toward college, while denouncing technical school as a viable alternative. This attitude is also evident in the students' opinion of occupations such as factory worker and hair dresser. It is interesting to note that although the student's will not enroll in college for at least seven more years, they appear to have the ability to conceptualize their future dreams and goals with higher education in mind.

A significant outcome of the intervention treatment was the students' improved understanding of requirements to enter college, how to get scholarships, and how to get information about college. The program raised the awareness of college and career issues; however, it may have also increased anxiety about going away to college as seen in the significantly higher ratings in the post-test group concerning cost, difficult subjects, heavy study load, and being away from home. This anxiety indicated that the students not only learned college concepts but internalized and related fears to the reality of college life. The students' apparent concern for cost may have increased their interests in college

scholarship requirements. These concepts were presented to the students through experiential learning activities involving university personnel and interactive games. Fadale (1974) stressed the importance of an experiential curriculum in teaching the concepts and principles of programs designed for elementary school career education. Consequently, this aspect of the intervention program treatment may have enhanced the effectiveness of this learning experience.

The students in the post-test group reported that they do not utilize school counselors, principals or coaches in their career and college planning. It should be noted that this treatment involved the school counselor in a development role and their classroom involvement was not included as part of the treatment. Consequently, a major emphasis was not placed on the need to talk to counselors regarding future goals. However, the fact that the students rated their parents, siblings, and friends is consistent with research which concludes that role play and the influence of significant others in decision-making and the development of self-concept is very important (Blustein, Walbridge, Friedlander, & Palladino, 1991; Doss, 1996; Gottfredson, 1985).

The realization that these students will be required to make major educational decisions regarding college placement in the eighth grade forms the central basis for this type of intervention. It is encouraging that this treatment helped students to understand the need to take college prep courses.

Phipps (1995) found that "children in the 8 to 11 year age group are clearly able to state what they want to be when they grow up and why" (p. 23). This statement is supported in the results of this study. This intervention program treatment, which

involved several months of curriculum and exercises related to occupations, did not have a significant impact on the students' impression of occupations. A similar outcome is presented in the student's responses to subjects liked and things they would need to do to get a good job. Overall, the student's likes and dislikes and perceptions of career skills and values appear to be well established prior to entering the fifth grade. The stability of the student's responses is congruent with research regarding the development of the self-concept (Gray & Herr 1998; Lusk, 1982; McKay, 1980; Salmone, 1996; Super, 1956). Accordingly, the ideas of being smart, working hard, wanting a job to be interesting, and liking certain subjects begin at an early age and continue throughout adulthood.

Fadale (1974) stated that "career-oriented programs in the elementary school appear to lend themselves to reorganization, rather than over-all change" (p. 17). The analysis of the intervention program treatment, *Taking the Step toward College Prep,* seemed to support this statement. Although significant change is presented as related to college concepts, the impact of the study may have resulted more in a reorganization of ideas in relation to future aspiration than a change in beliefs about career aspirations and self-concept.

Recommendations

The focus of this intervention program treatment was to impact the career and college awareness in fifth grade students. The goal of the treatment is a long-term impact which will improve the students' ability to make academic choices in the eighth grade and subsequently in college. A major reason for this type of intervention is the increasing

problem of declining retention rates in universities brought on by numerous factors, one of which is an individual's inability to make appropriate choices regarding majors and careers (Ashby, 2003; Grant, 2000; Guay, Senecal, Guathier, & Fernet, 2003; Hornak & Gillingham, 1980). There is no empirical evidence that this treatment will indeed influence these types of decisions. Furthermore, there seems to be some conflict in the evidence that indicates that an individual's self-concept and ideas regarding their occupational and subject likes and dislikes is fairly established prior to the fifth grade. If this is true, the question may be asked, "why do so many college students have difficulty choosing a major?"

Trice and McClellan (1993) have suggested three modifications in elementary school career programs. One is an increased focus on individuals during career programs. It is suggested that guest speakers "go beyond typical descriptions of their jobs to tell what is good and bad about the jobs, how the jobs are obtained, and which school subjects and activities would be helpful" (p. 41).

The second suggestion for modification includes an annual survey conducted by school counselors to evaluate individual career aspirations and to identify children with difficulties. The questionnaire includes five questions, which are considered appropriate for children in the third grade and beyond. The questions are:

1. What do you want to be when you grow up?
2. Why would this be a good job for you?
3. Can you tell two different things you would do if you had this job?
4. How do you go about getting this job?

5. If you couldn't have this job, what would be your second choice? (Trice & McCellan, 1993, p. 41.)

It is recommended that teachers use the responses to help motivate students. Students who aspire to be veterinarians, nurses or physicians should be encouraged to understand the relationship of the sciences and school nurses should be enlisted to conduct classroom experiments. Finally, Trice and McClellan (1993) discouraged the use of didactic materials and promote more hands-on activities such as visiting a workplace and making students aware of occupations they come in contact with such as maintenance and grounds workers, bus drivers, secretaries, accountants, social workers and librarians.

It is clearly evident in the intervention program treatment that the students' perception of the role of the school counselor needs to be defined and improved. Ryan (1971) suggested a variety of approaches and techniques which can be used by teachers and counselors to improve communication. He advises counselors to support school activities; to encourage teachers to stimulate classroom discussions through probing and clarification and to help the teacher present career development information and discussions on the world of work. Career development can be strengthened though activities such as puppet dialogue, simulation games, photograph analysis, role-playing dialogue, dream interpretation and open-ended situations (Ryan, 1971). Through these activities, the school counselor's role will be more defined and engaged with student learning and identification of the counselor.

A major concern with this study was the lack of construct reliability within the survey instrument. It is recommended that future analysis design provide a means for construct validity for the purpose of correlation and prediction of the impact of the treatment on the domains of college and career awareness and self-esteem. In addition, the survey did not draw a clear connection between the students' ability to understand the differences between occupations requiring college, technical school, and no formal training. It would be helpful for future studies to provide more credence to the students' ability to relate this type of information.

It is possible that these results may have been different for students in a lower-socioeconomic group or a deprived school system (Phipps, 1995; Trice, 1991). Future studies may want to consider this impact and compare responses to students in more disadvantaged areas. In addition, according to Malone and Shope (1978), Trice (1991), Trice and Knapp (1992), and Trice and McClellen (1993), children's identity with occupations and aspiration to attend college are influenced by parents. The parental involvement and influence on this treatment was not considered and may have played an important role.

The students' change in attitude toward technical school is troublesome. Future interventions may want to include occupations and concepts requiring technical school. Although the student's express a goal to attend college, it should be brought out that technical school is a good and acceptable way to achieve career goals.

The National Career Development Guidelines (American Career Resources Network, 2005) lists key areas for career development guidelines in elementary school.

These areas are self-knowledge, educational and occupational exploration, and career planning. Within these perimeters some of the guiding principles encourage an understanding of the benefits of educational achievement, to have awareness of personality, knowledge of how work relates to society, and understanding of life roles and the skills to interact with others. In light of this intervention and research, it appears that the critical element of a college awareness component should be added to the list of guidelines. It is apparent that students' benefit from the experiential learning gained from a partnership with a university and that these ideas stimulated thought and concern in the minds of these young students.

This type of intervention program is highly recommended for university and school districts. It is well designed to involve parents and community partnership. The concepts and principles of the program intervention are designed to improve relationships with these external audiences and the elementary schools. Teachers can also benefit as learning and individual student participation should improve as students interact with community leaders, university personnel and incorporate activities which will impact their future decisions. This intervention program is particularly unique and recommended for universities as it provides an opportunity to develop a support system with school districts, parents and future college students.

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APPENDICES

APPENDIX A

AUBURN UNIVERSITY INSTITUTIONAL REVIEW BOARD (IRB) LETTER

Auburn University

Auburn University, Alabama 36849

Office of Human Subjects Research
307 Samford Hall

Telephone: 334-844-5966
Fax: 334-844-4391
hsubjec@auburn.edu

July 19, 2004

MEMORANDUM TO: Katherine Carlisle
EFLT

PROTOCOL TITLE: "The Impact of a Career and College Awareness Program on the Attitudes and Beliefs of Fifth Grade Elementary School Children"

IRB FILE: 04-109 EX 0407
APPROVAL DATE: July 18, 2004
EXPIRATION DATE: July 17, 2005

The referenced protocol was approved "Exempt" from further review under 45 CFR 46.101 (b)(4) by IRB procedure on July 18, 2004. You should retain this letter in your files, along with a copy of the revised protocol and other pertinent information concerning your study. If you should anticipate a change in any of the procedures authorized in protocol#04-109 EX 0407, you must request and receive IRB approval prior to implementation of any revision. Please reference the above IRB File in any correspondence regarding this project.

If you will be unable to file a Final Report on your project before July 17, 2005, you must submit a request for an extension of approval to the IRB no later than June 30, 2005. If your IRB authorization expires and/or you have not received written notice that a request for an extension has been approved prior to July 17, 2005 you must suspend the project immediately and contact the Office of Human Subjects Research for assistance.

A Final Report will be required to close your IRB project file.

If you have any questions concerning this Board action, please contact the Office of Human Subjects Research at 844-5966.

Sincerely,

E. N. (Chip) Burson, Executive Director
Office of Human Subjects Research

cc: Dr. William Spencer
Dr. James E. Witte

APPENDIX B

LETTER FROM THE SCHOOL SYSTEM TO STUDENTS

Harris County Board Of Education

P.O. Box 388
Hamilton, Georgia 31811-0388
(706) 628-4206
Fax (706) 628-5609

SUPERINTENDENT
Dr. Susan C. Andrews

Dear

Do you believe that your child will go to college and earn a bachelor's degree or a technical degree? As the superintendent of Harris County schools and the president of Columbus State University, we believe this can happen and want to help you ensure that Susan will have the opportunity to fulfill his/her educational potential. CSU and your child's school have entered into a very unique partnership and have selected her to participate in a college preparatory program called "Taking the Step Toward College Prep."

During the fifth grade year, both you and your child will be asked to participate in college-related activities which prepare Susan for a future college degree. The Harris County / CSU partnership will support you and your child for five years, providing continuous information and guidance relevant to the college prep process.

This opportunity is very limited and has been exclusively designed for your child's school. It is an honor for her to be in this program and your support is encouraged. Although it may seem early to start thinking about college, students need to start preparing now to help ensure their success later in life. Your involvement as a parent in this program will help determine your child's future.

We have planned a year's worth of exciting events including club meetings and field trips for your child. This program will begin with a pep rally at CSU in August. You will be invited to join Susan there to kick off this new and exciting program. Please watch for more details from your child's elementary school.

Again, we congratulate you on your child's selection for this program. The staff of the Harris County School System and CSU worked diligently to put together this effort that we think you will find both fun and informative. Thank you for supporting your child on his/her road to success.

Sincerely,

Frank D Brown

Dr. Susan Andrews
Superintendent,
Harris County Schools

Dr. Frank Brown
President, CSU

APPENDIX C

SURVEY: A LOOK AT MY FUTURE

A Look At My Future
Survey

Name: _____

Name of School_____

1. AGE (circle one)
   1. 10
   2. 11
   3. 12
   4. 13 and over

2. SEX (circle one)
   1. Female
   2. Male

3. RACE / ETHNICITY (circle one)

1. African-American
2. Caucasian
3. Hispanic
4. Native-American
5. Asian or Pacific Islander
6. Other (specify):

_____

l. Do you think you will have to be or do any of the following to get a good job?

(Please circle a numl

	Strongly Agree	Agree	Disagree	Strongly Disagree
Clever	4	3	2	1
Work hard at school	4	3	2	1
Take lots of exams/tests	4	3	2	1
Be good at schoolwork	4	3	2	1
Be good at sports	4	3	2	1
Be strong and healthy	4	3	2	1
Go to university	4	3	2	1
Go to technical school	4	3	2	1
Look nice	4	3	2	1
Be confident	4	3	2	1
Be capable	4	3	2	1

2. Do you think the following occupations are good or bad jobs?

(Please circle a num

	Strongly Agree	Agree	Disagree	Strongly Disagree
I think being an engineer is a good job	4	3	2	1
I think being an architect is a good job	4	3	2	1
I think being a teacher is a good job	4	3	2	1
I think being a doctor is a good job	4	3	2	1

I think being a hair dresser is a good job	4	3	2	1
I think being a factory worker is a good job	4	3	2	1
I think being self-employed is a good job	4	3	2	1

3. Which statements do you agree or disagree with?

(Please circle a num

	Strongly Agree	Agree	Disagree	Strongly Disagree
A job must be interesting	4	3	2	1
A job must pay well	4	3	2	1
A job must give me security	4	3	2	1
A job can be boring if it pays well	4	3	2	1
A job must help people	4	3	2	1
A job must be easy to do	4	3	2	1
A job must involve a lot of people in the work surroundings	4	3	2	1
You have to be good at schoolwork to get a good job	4	3	2	1
I would prefer going to work rather than having to go to high school	4	3	2	1

4. In order to get a job:

(Please circle a num

	Strongly Agree	Agree	Disagree	Strongly Disagree
I must be able to use the computer	4	3	2	1
I must be able to listen well to others	4	3	2	1
I must be able to speak and communicate well with others	4	3	2	1
I must be able to work in a team	4	3	2	1
I must be willing to learn	4	3	2	1
I must be able to be punctual	4	3	2	1

5. Attitudes Toward School:

(Please circle a num

	Strongly Agree	Agree	Disagree	Strongly Disagree
I like coming to school because I get to see my friends.	4	3	2	1
I like coming to school because I don't want to stay at home.	4	3	2	1
I like coming to school in order to learn more about various subjects	4	3	2	1
I like coming to school because I like my teachers	4	3	2	1
I like coming to school because I am being prepared for college	4	3	2	1
I like coming to school because I am being prepared for a job	4	3	2	1

6. Subjects liked:

(Please circle a num

	Strongly Agree	Agree	Disagree	Strongly Disagree
I like to study Art	4	3	2	1
I like to study Music	4	3	2	1
I like to study Math	4	3	2	1
I like to study PE	4	3	2	1
I like to study English	4	3	2	1

I like to study Social Science	4	3	2	1
I like to study Computer	4	3	2	1
I like to study Reading	4	3	2	1

7. Influences on attitudes toward work, school and decision-making:

(Please circle a num

	Strongly Agree	Agree	Disagree	Strongly Disagree
I talk to my parents about what I would like to do when I leave school	4	3	2	1
I talk to my friends about what I would like to do when I leave school	4	3	2	1
I talk to my teachers about what I would like to do when I leave school	4	3	2	1
I talk to my brothers, sisters or relatives about what I would like to do when I leave school	4	3	2	1
I talk to the school counselor about what I would like to do when I leave school	4	3	2	1
I talk to my school principal about what I would like to do when I leave school	4	3	2	1
I talk to my coach about what I would like to do when I leave school	4	3	2	1
I talk to my minister about what I would like to do when I leave school	4	3	2	1
I don't talk to anyone about what I would like to do when I leave school	4	3	2	1

8. I understand:

(Please circle a num

	Strongly Agree	Agree	Disagree	Strongly Disagree
What a Bachelor's degree is	4	3	2	1
What a college preparatory course is	4	3	2	1
The requirements for getting into college	4	3	2	1
The requirements for getting a scholarship to college	4	3	2	1

9. When I leave school I will do which one of the following:

(Please circle a num

	Strongly Agree	Agree	Disagree	Strongly Disagree
Go to college	4	3	2	1
Go to technical school	4	3	2	1
Find a full time job	4	3	2	1

10. Future Goals

When I leave school I intend to do the following: (describe what you intend to do)

11. Mother's occupation _____

12. Father's occupation _____

13. Mother's educational level:

(Please circle one)

1. Attended high school
2. Graduated from high school
3. Some college
4. College degree
5. Attended technical school
6. Don't Know

14. Father's educational level:

(Please circle one)

1. Attended high school
2. Graduated from high school
3. Some college
4. College degree
5. Attended technical school
6. Don't know

15. The likelihood that I will enroll in a college or technical school in the state of Georgia is as follows:

(Please circle one)

1. Extremely likely
2. Somewhat likely
3. Might or might not
4. Somewhat unlikely
5. Extremely unlikely

16. I may not go to college because…

(Please circle as many as apply)

1. The cost
2. Low grades
3. Not being able to make college entrance examination score (SAT, ACT)
4. Not enough college prep courses
5. Other personal issues

4. With Step-Mother
5. With Step-Father
6. With Grandmother
7. With Grandfather
8. With aunt or Uncle
9. With Other People (Specify)_____

21. Have your parents ever been on a college campus?

(Please circle one)

1. Yes
2. No

22. Have you ever had a brother or sister attend college?

(Please circle one)

1. Yes
2. No

Thank you for participating in this survey.

APPENDIX D

UNIVERSITY LETTER GRANTING PERMISSION

TO USE PRE-EXISTING DATA

Office of the Vice President
for Academic Affairs

4225 University Avenue
Columbus, Georgia 31907-5645

COLUMBUS STATE
UNIVERSITY

(706) 568-2061
FAX (706) 569-3168

June 23, 2004

Institutional Review Board
Auburn University
Auburn, Alabama

To the IRB:

I am happy to provide support for the research project currently being undertaken by Katherine Carlisle in which she will obtain anonymous, electronic survey data from the "I'm Taking the Step Toward College Prep" program. She may use this data for her Auburn research and retain it indefinitely.

Sincerely yours,

Martha Dunagin Saunders
Vice President for Academic Affairs

APPENDIX E

MISSION AND OBJECTIVES

Harris County Board of Education

BOARD MEMBERS
Diane R. Sandifer, Chairman
Jack C. Stewart
Robert P. Jones
Karen D. Hopkins
William B. Cliatt
Steve F. Goodnoe

P.O. Box 388
Hamilton, Georgia 31811-0388
(706) 628-4206
Fax (706) 628-5609

SUPERINTENDENT
Dr. Susan C. Andrews

ASSISTANT SUPERINTENDENT
CURRICULUM
Angel M. Culp

ASSISTANT SUPERINTENDENT
BUSINESS SERVICES
Phillip D. Love

DIRECTOR OF FEDERAL PROGRAMS
Betty Dunlap

"Taking the Step to College Prep"
Mission and Objectives

Mission Statement:

Harris County School System, in partnership with Columbus State University, will provide activities, incentives, and preparation to all students in an effort to increase their aspirations toward post-secondary education.

Vision Statement:

Students who graduate from Harris County High School will have great expectations for their future. They will be prepared academically to compete with students across the nation in post-secondary programs. Through a partnership with Columbus State University, the students will also have the knowledge necessary to apply for scholarships and complete admissions applications. These students will understand what to expect in the transition between high school and post-secondary schools. They will have a command of the vocabulary necessary to get all of the questions answered concerning their post-secondary options in order to make informed decisions concerning their future. Their parents will also have an understanding of how to support and encourage their children in the pursuit of a post-secondary experience.

Objectives:

There will be a five- percent increase annually in the number of Harris County High School graduates who attend post-secondary institutions.

For students who are involved in the "Steps" Incentive Program, there will be a twenty-five percent increase annually in the number of African American males graduating from Harris County High School who will attend post-secondary institutions.

The dropout rate among students who participate in the "Steps" Program will decrease annually by ten percent.

For students with disabilities who participate in the "Steps" program, there will be a five- percent increase annually of students who received regular education diplomas and who attend post-secondary institutions (to include university, college, training centers, vocational rehabilitation/career programs).

Parents of students in the Harris County School System will be provided information to assist and encourage their children's success to ensure preparation for the rigors of post-secondary education.

APPENDIX F

LETTER TO THE PARENTS

Harris County Board Of Education

P.O. Box 388
Hamilton, Georgia 31811-0388
(706) 628-4206
Fax (706) 628-5609

SUPERINTENDENT
Dr. Susan C. Andrews

Dear Parent,

As you are aware, your child has been selected to participate in our "Taking the Step Toward College Prep" program. We will have a "prep" rally on August 29th at Columbus State University to kick off the program, and we encourage you to attend. A school lunch will be provided for your child. Please call his/her school by August 15th and let us know if you plan to attend. You may also request a lunch for yourself. More details of the rally will follow when we receive your response to attend.

The enclosed survey is an important part of this program which will help us better determine how we can encourage your child to pursue higher education in the future. **Please complete the survey and return it to your child's school no later that August 15th.** When we receive your completed survey, your child will receive a "Taking the Step" t-shirt and pin to wear to the rally as well as an entry ticket.

If you have any questions about the program, please contact your child's teacher. We hope to see you on the 29th!

Sincerely,

Susan C. Andrews

Susan C. Andrews

Cc: Elementary School Principals

APPENDIX G

WHAT'S IT ALL ABOUT?

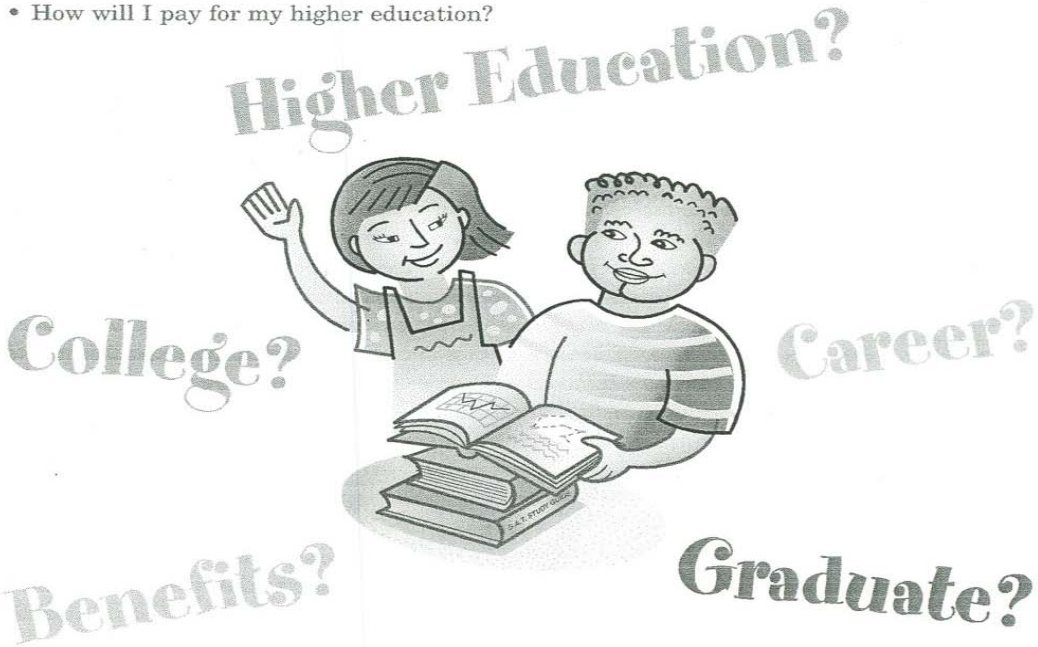
What's it all about?

Does going to college seem like a mystery to you? It doesn't have to be.

"Going to college" or "getting a higher education" just means getting any type of education or career training after you graduate from high school. It takes planning and money to get a higher education. But if you start preparing now, you can go to any kind of college you want!

You'll need to discover the answers to important questions like:

- Why is college so important?
- What classes should I take in high school?
- What are the different types of colleges?
- How do I get into college?
- What's the price of getting a higher education?
- How will I pay for my higher education?



Teacher's note: Divide class into five groups, cut questions into strips and have groups to discuss and attempt to answer their question. Then have each group to present their solution to the class.

What's It All About?

Why is college so important?
What classes should I take in high school to prepare me for college?
What are the different types of colleges?
What are the steps needed to get into college?
What's the price of getting a higher education, and how will I pay for my higher education?

Teacher's note: Divide class into five groups, cut questions into strips and have groups to discuss and attempt to answer their question. Then have each group to present their solution to the class.

What's It All About?

Teacher's key

Why is college so important? Answers may vary.
What classes should I take in high school to prepare me for college? Answers may vary, but may include foreign language, pre-calculus, chemistry, physics, biology
What are the different types of colleges? Universities, technical college, community college, trade school (The difference between a trade school and a community college is that a trade school prepares students for a particular trade I.e. cosmetology while a community college prepares students for a university and offers certificate and some degrees.)
What are the steps needed to get into college? Answers may vary but may include making good grades, having good study skills and organizational skills, etc. Also, they must be in a college prep curriculum, make high scores on college entrance exams, have a high GPA from high school, etc.)
What's the price of getting a higher education, and how will I pay for my higher education? Tuition varies from college to college and also depending on what type of school being attended. Of course it also depends on the type of degree being sought. A cosmetology certificate may cost $2,500 while a doctorate degree in medicine may be $25,000 per year- not including the cost of the bachelor's degree!

APPENDIX H

YOUR CAREER JOURNEY

Self-Esteem

Your Career Journey

Have you ever thought about what job you may want when you're older?

Learning about careers is a journey. A journey is a trip you take where you see and learn many new things. It's never too early to start thinking about what you'd like to do after high school. The more you do now to prepare for your future, the more choices you'll have.

Have you ever pictured yourself as an adult?

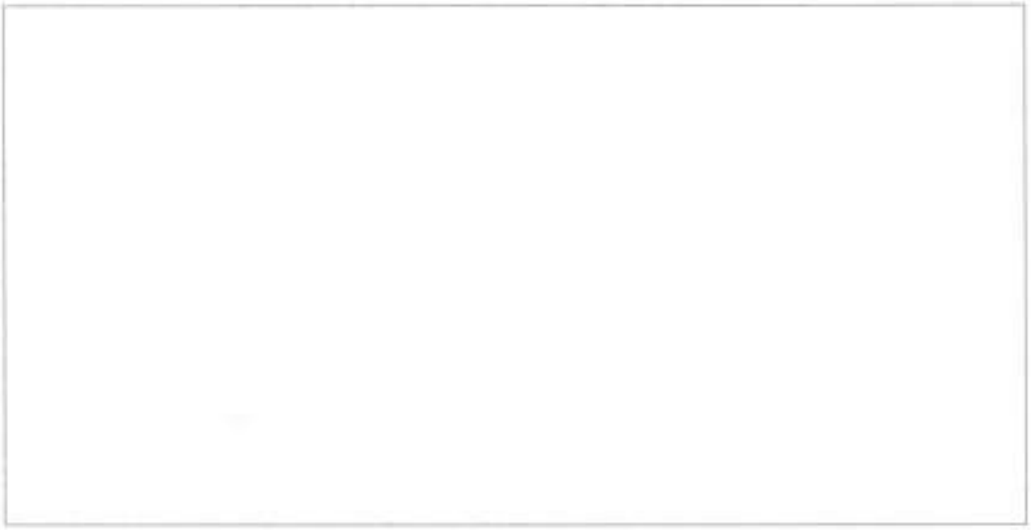
What do you see?

What type of career will you have?

Draw a picture of yourself in 15 years.

How old are you?

What career do you have?



Describe your future: _____

_____

_____

_____

_____

APPENDIX I

SHOW ME THE MONEY

Show me the money!

"I never realized that college could help you in so many different ways," Maylee said.

"No matter what you want to be, having a higher education can really help you," said Nou. "And there's another area college can really help in..."

"Making more money?" interrupted Maylee.

"That's right," Nou said. "Let's do some math. Ready?"

Investigation

Does it pay to go to college?

Pretend that you're an adult. These are the things you will need: a place to live, food, clothing, and other costs (doctor bills, electricity, heat, furniture...). We call this the "cost of living." It's about $950 a month. Subtract this cost from the different levels of income. Then, subtract the costs of the other things you want to purchase. With a college education, you're likely to have more money for the things you want and need.

	Less than High School Education	High School Education	College Education
What will your monthly income be?	**$ 1,067**	**$ 1,600**	**$ 2,800**
The cost of living for a month	– 950	– 950	– 950
How much money will you have left over?	**$**	**$**	**$**
Deposit in savings account:	–	–	–
How much money will you have left over?	**$**	**$**	**$**
What do you want to buy? _____ Cost:	–	–	–
How much money will you have left over?	**$**	**$**	**$**
What do you want to buy? _____ Cost:	–	–	–
How much money will you have left over?	**$**	**$**	**$**
What do you want to buy? _____ Cost:	–	–	–
How much money will you have left over?	**$**	**$**	**$**

Examples of what things cost:
CDs $15, tennis shoes $100, video game $30, bike $150, car payment $200, pet dog $30, in-line skates $200, new clothes $70, night out with your friends $20, sports equipment $100, books $10, 24 pack of pop $5, trading cards $1.

College graduate have higher incomes and are less likely to be unemployed than someone with only a high school diploma.

APPENDIX J

THE CAREER INTEREST CHECKLIST

The Career Interest Checklist

The **Career Interest Checklist** is a quick and easy beginning point for exploring careers. The results do not necessarily indicate the "right" careers for you, and shouldn't be confused with more scientific career assessments. Exploration and careful study will help you find careers that might be "right" for you. We encourage you to look through many sources and experience careers through job shadowing, volunteer work and internships (related ICPAC Publication available.)

Note: You can only save your results to your Backpack if you are logged in before you begin.
Get info on an ICPAC Backpack.

Instructions

1. Check the subjects or activities that are most appealing to you.
2. Get better results by checking more items.
   Include all items that interest you, even if you haven't actually done them.
3. Submit your choices using the button at the bottom of the page.

text and pdf version

☐ Following a budget	☐ Flying airplanes
☐ Studying people in other lands	☐ Going to concerts
☐ Fixing cars	☐ Creative writing
☐ Physics	☐ Playing music
☐ Interior decorating	☐ Typing reports
☐ Reading art and music magazines	☐ Keeping detailed records
☐ Being with leaders	☐ Being in a science fair
☐ Teaching children	☐ Working on a sales campaign
☐ Foreign languages	☐ Talking to salespeople
☐ Advanced math	☐ Belonging to a club
☐ Making new friends	☐ Working in a lab
☐ Carpentry	☐ Buying clothes for a store
☐ Talking to people at a party	☐ Word processing
☐ Fixing electrical appliances	☐ Astronomy

- [ ] Filing letters and reports
- [ ] Attending sports events
- [ ] Working nine to five
- [ ] Being elected class president
- [ ] Working with the elderly
- [ ] Fashion design
- [ ] Helping people solve personal problems
- [ ] Using business machines
- [ ] Selling life insurance
- [ ] Wildlife biology
- [ ] Using a cash register
- [ ] Being in a play
- [ ] Giving speeches
- [ ] Putting together model kits
- [ ] Working with animals
- [ ] Cooking
- [ ] Doing puzzles
- [ ] Drawing or painting
- [ ] Going to church
- [ ] Using a chemistry set

Submit Clear

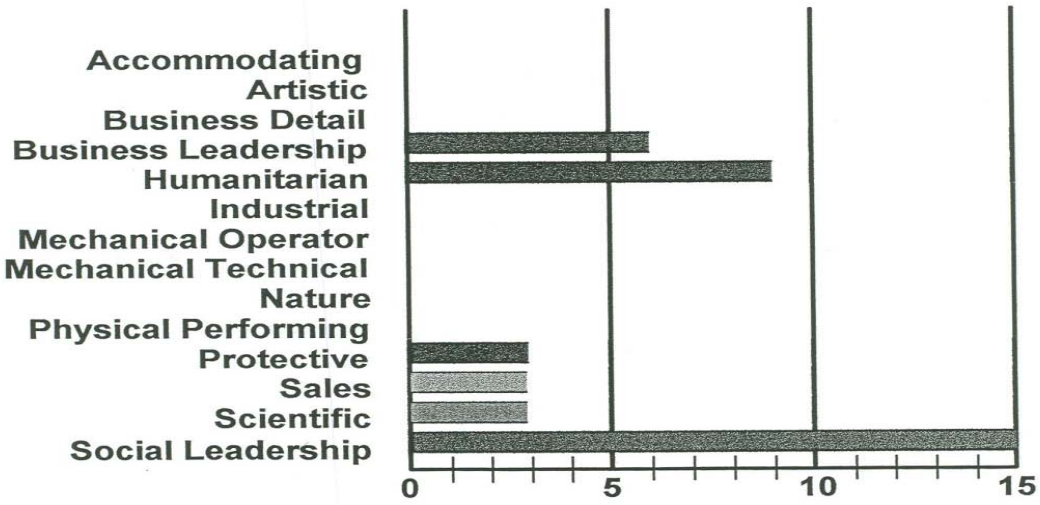
icpac

APPENDIX K

INTEREST SURVEY

INTEREST SURVEY

This is an interest survey that a teacher completed. Once the questions have been answered, the student will "submit" them. The results will come up as a graph. You will need to instruct students to keep their graphs on the desktop while being printed because there isn't anywhere that the student will be able to print their names on their graphs. You will also notice that at the bottom of the sheet there is an "overview" of the different careers that a student may be interested in, and he or she can click onto those careers for additional information.



Overview

This is an interest in leading and influencing others by using high-level verbal or numerical abilities. You can satisfy this interest through study and work in a variety of professional fields. You may enjoy the challenge and responsibility of leadership. You could seek work in administration or management. You may prefer helping others to learn through teaching or related educational fields. You might like to research human behavior or provide advice on legal matters. Employment in radio/television broadcasting or newspaper publishing would be a possible choice.

- Careers in Communications
- Careers in Law
- Educational and Library Services Careers
- Regulations Enforcement Careers
- Services Administration Careers
- Social Research Careers

Career Spotlight

List of Occupations

Accountant: takes care of money received or spent by businesses or people

Air traffic controller: guides airplanes that are in the air

Animal caretaker: looks after animals in shelters, cars, and animal hospitals

Anthropologist: studies how people live and exist together

Architect: designs or draws plans of buildings or places

Astronaut: trains to travel into space

Astronomer: studies the sun, stars, planets, and galaxies

Banker: advises people on how to take care of their money

Biologist: learns about living things such as plants and animals

Carpenter: builds and repairs houses, buildings, and other structures

Chemist: mixes chemicals in a laboratory and tests these chemicals

Child care worker: looks after children in schools, homes, and day care centers

Clergy: leads worship services and offers support to people in the community

Computer programmer: writes programs or software for computers

Counselor: listens and helps people resolve issues and problems

Crane operator: operates cranes to lift heavy machinery or materials

Detective: looks for clues and other information to solve crimes

Dietician: teaches people about nutrition and helps plan healthy meals

Doctor: provides medical advice or treatment to patients

Drafter: draws detailed pictures of bridges, building, and other structures for workers to build

Electrician: works with electrical wiring in buildings and other structures

Electronics technician: makes and repairs electric devices like TVs and VCRs

Engineer: designs and builds products and buildings using science and math

Engineering technologist: helps engineers design and develop products

Environmental officer: enforces laws and teaches people how to stay safe and healthy

Flight attendant: serves passengers on airplanes

Forester: figures out how forest land should be used

Game warden: protects fish and wildlife by enforcing laws and rules

Geologist: studies rocks, minerals, and other materials that make up the earth

Graphic artist: creates art and designs to promote products

Hair stylist: shampoos, cuts, and takes care of people's hair

Health technician: runs machines to help people learn about their health

Insurance agent: sells contracts to people for health, car, and property

Interior designer: decorates the inside of houses, schools, and other buildings

Interpreter: translates from one language into another language

Lawyer: works with clients to help them with their legal rights

Locksmith: makes and installs locks

Manager: leads and guides people in the workplace to get their jobs done

Mathematician: uses math and numbers to measure things

Mechanic: fixes cars, motorcycles, and trucks

Medical assistant: helps doctors in the doctor's office

Military officer: works in the Air Force, Marine Corps, Coast Guard, Army, or Navy

Millwright: fixes and takes care of machinery used in factories

Miner: removes minerals, coal, and metals from the earth

Paramedic: responds to emergencies and takes injured people to hospitals

Park ranger: takes care of parks

Pharmacist: fills prescriptions written by medical professionals

Physical therapist: works with injured people to help them gain mobility

Physicist: researches and finds information about energy and matter

Politician: represents the people of a city, state, or country

Real estate agent: helps people rent, buy, and sell property

Receptionist: answers phones and greets guests to an office

Sales representative: sells products and services to people and businesses

Social worker: works with clients to solve personal or family problems

Telecommunications specialist: maintains and fixes equipment that transmits information

Travel agent: helps clients make travel plans

Veterinarian: takes care of and gives medical attention to animals

Welder: makes objects with heat and metal

Well driller: drills for oil, gas, and water with specialized machines

Wood worker: uses wood to make products

Word processor: enters data and information into computers

List some other careers:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Download worksheet to Microsoft Word
or print worksheet

return

OCCUPATION INVESTIGATION WORKSHEET

Occupation: _____

1. Describe the nature of the work including the nature of the work and required skills.
2. Identify the education or training that is required to enter and to progress in the field.
3. Identify opportunities for advancement.
4. Research the projected outlook and trends in this field.
5. Find out the salary range and types of benefits you can expect. Consider nonmonetary rewards also.
6. Identify the personal characteristics that are required of someone in this occupation.
7. Based on your research, determine how well the nature of the work suits your interests, values, skills, and personality. List the advantages and disadvantages of this occupation for you.

Advantages	Disadvantages

Return to top of page

APPENDIX L

CAREER COMPARISON ORGANIZER

Student's name: _____ Date: _____

Careers Comparison Organizer

	Career Choices:		
	Career # 1:	**Career # 2:**	**Career # 3**
Education/training/costs and earnings:			
Years required to receive degree:			
Type of school where degree is offered: (I.E. University, Community College, etc.)			
Estimated cost of education:	$	$	$
Name of school/university which offers this degree:			
Location of school: City/state			
Estimated annual income- (List and compare three U.S. states of interest)			
1. State:	$	$	$
2. State:	$	$	$
3. State:	$	$	$
Related jobs: (Name three)	1.	1.	1.
	2.	2.	2.
	3.	3.	3.

Created by Cathryn S. Goodwin 7/21/03

APPENDIX M

YOUR CAREER PYRAMID

Your Career Pyramid

It's important to know what you like and don't like. Knowing this information can help you choose possible careers.

Why is this important? If you don't like animals, would you want to be a veterinarian? If you don't like the sight of blood, would you want to be a nurse? If you love to read and write stories, do you think that being an editor is a possible career?

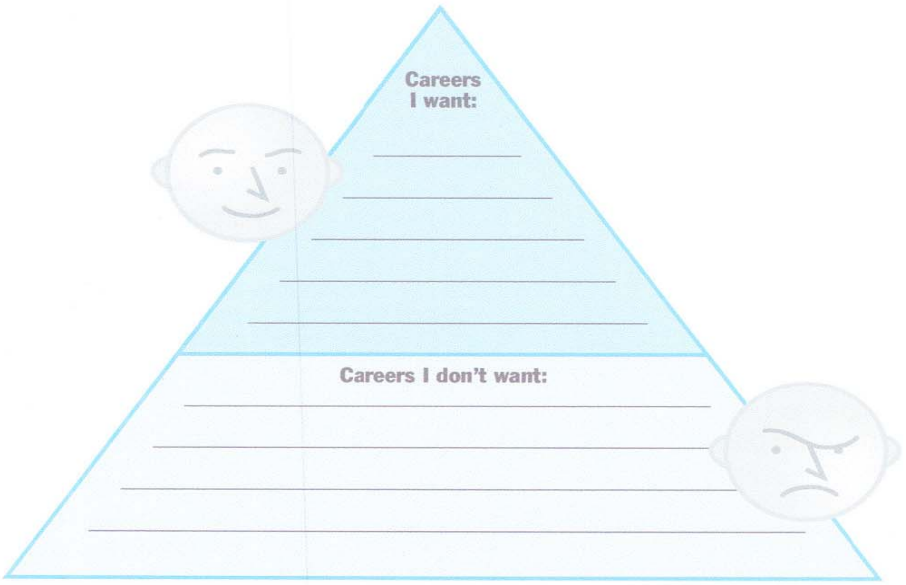
Think about what you like to do. Now, think about what you don't like to do.

What I like: _____

_____

What I don't like: _____

_____



APPENDIX N

GOING FOR THE GOAL

Going for the Goal

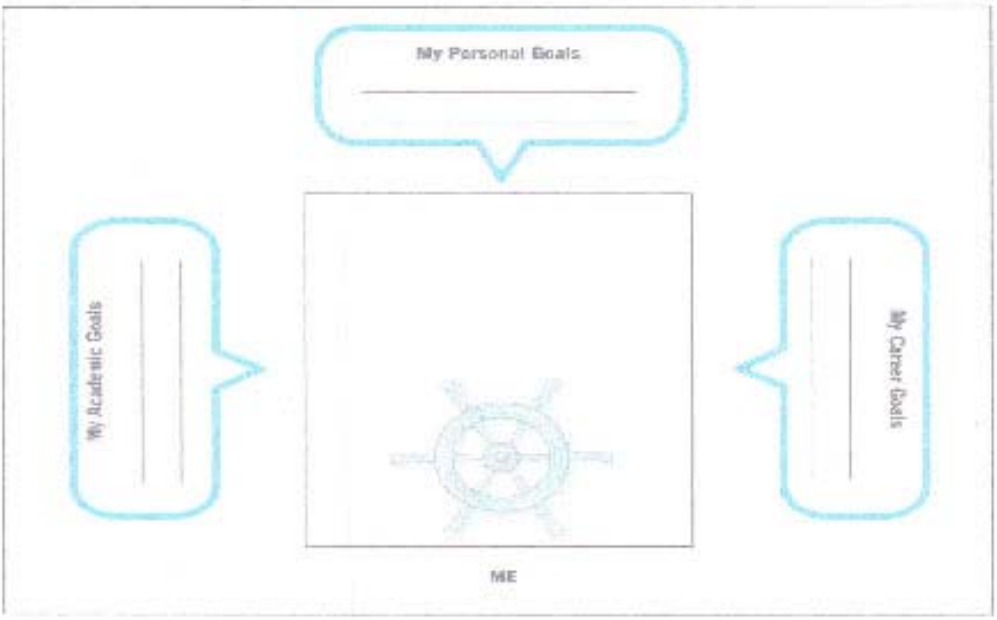
APPENDIX O

PLANNING FOR A GOAL

Planning for a Goal

Your goals make up who you are and who you will become.

Your academic, personal, and career goals help you navigate your journey through life. Draw your picture behind the ship's wheel, and write down some of the goals that will assist you in reaching your destination.



The four steps to planning a goal are listed below, but they are in the wrong order. Read each step aloud and put the steps into the correct order. Good luck!

____ Decide if your plan is working.
____ Know your goal; decide what you want.
____ Put your plan into action.
____ Make a plan to reach your goal.

APPENDIX P

STORY STARTER ACTIVITY

December Class Meeting #5
Story Starters: Form A

Name: _____

Choose one of the following story starters below and write a five-paragraph story using the steps in the writing process.

These story starters are taken from a common day of a person working in their career choice. Create a fun story that explains the career, typical situations that may happen in one day, and positive or negative features of this career choice.

1.) It was 2AM and I was fast asleep. The phone rang and Mrs. Peterson said, "I think it is time." Quickly I leaped out of bed and…

2.) This morning I met the Peterson family at the new home on Windsor Court. I was so nervous at first because this was my first day working for the Dixon and Jones Company. I arrived early, unlocked the door, and …

3.) I got home late today because I had a last minute call from the Young family. They were really upset because their newly installed digital service was not working properly. I arrived at their home, knocked on the door, and…

4.) I can't believe I made it home. We are all so tired and ready to see our families. My wife/husband will want to know everything about my experiences in Africa. I will sadly tell her/him about…

December Class Meeting #5
Story Starters: Form B

Name:_____

Choose one of the following story starters below and write a five-paragraph story using the steps in the writing process.

These story starters are taken from a common day of a person working in their career choice. Create a fun story that explains the career, typical situations that may happen in one day, and positive or negative features of this career choice.

1.) I got my first clue from the bus boy working at China Moon café. This led me to question Mr. Lee about his story on the night of November 21st. He seemed nervous. No eye contact was made. I began by stating…

2.) Wow, I thought today would never end! I arrived at the salon around 9AM. My first customer was Mrs. Clark. She arrived 15 minutes late, came in angry over a speeding ticket, and looked at me to say…

3.) I was so excited about getting the Jackson contract. It was a challenge for me, but I knew my crew could handle anything. Things went great for the first couple of weeks, but then the rain came and…

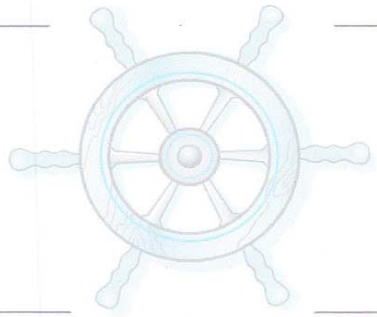
4.) This year was one I will never forget. I knew it would be exciting on the first day when little Billy walked into my classroom and said…

APPENDIX Q

YOUR CIRCLE OF SUPPORT

Your Circle of Support

There's a whole world of support to help you on your journey out there. Just look around. Who are some of the people in your community? Who are some of your support people? Where can you find information? Write down the names of the people in your circle of support.



A **mentor** is someone who helps you or makes a difference in your life. Who is your mentor?

What can you do right now in your community to learn about what you might like to do in the future?

Research Project

1. Look up community service agencies on the Internet. What agencies did you find?

2. What community programs can you volunteer with?

3. What programs can you get involved with at your school?

APPENDIX R

RESUME WORKSHEET

RESUME

NAME _____

ADDRESS _____

PHONE NUMBER _____

E-MAIL ADDRESS _____

JOB TITLE _____

EDUCATION (from most recent to the past)

_____

_____

_____

EXPERIENCE (skills that relate to the job)

_____

_____

_____

ACTIVITIES (sports, clubs, volunteer work, honors received, etc.)

_____

_____

_____

PERSONAL (important and/or interesting information about yourself)

_____

_____

_____

REFERENCES (people who can verify what a great person you are)

_____

APPENDIX S

MOCK INTERVIEW QUESTIONS

Mock Interview Sheet

SouthCentral CAREER Information System

Your Career Puzzle Solver

Finding Out About Careers

- Students/Job Seekers
- Educators
- Career Providers/Employers
- News
- Resources
- Who We Are
- Home Page
- Contact Us

Been There, Done That Interview Guide

Name of person being interviewed: _____.

Their Job Title: _____.

Name of Business: _____.

Address: _____.

Phone Number: _____ email: _____.

1. What is your typical day like?
2. Of all of the things you did to prepare for this job, what helped you the most?
3. What two or three skills help you the most in doing your job?
4. How did you learn these skills?
5. What kind of education did you need for this job?
6. What kind of courses should I take in high school to prepare me for this job?
   What kind of education will I need after high school?
7. What do you like the most about this career?
8. What's the hardest part of your job?
9. What do you think the future looks like for this kind of career?
10. What kind of salary can I expect?
11. If you had a chance to do things over again, what would you change?
12. What motivates you with your job?
    What makes you feel real excited about it?
13. What kind of personality does well in a career like this?
14. Is there a question you think I should have asked to better understand this career?
15. Any other advice you'd like to give me?

Be sure to thank them for their time! It's a very good idea to write them a thank you note by regular e-mail. If things went well and you are very interested in this line of work, ask if they would allow yc shadow them for a day on the job!

COOL TIP: Compare the answers of the skills needed, what's hard about this job and what kind of works well with this job with your Personal Career Journal. Do they match up??

http://www.sccis.org/main/portfolio/beentheredt.htm 7/22/03

APPENDIX T

WANT TO APPLY TO A COLLEGE?

Want to apply to a college?

Complete the following practice college application. Answer all the questions accurately. Write clearly and neatly.

Application for New Students — **The College of Detective Knowledge**

First Name: _____ Middle: _____ Last Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Date of Birth: _____ Phone Number: ( ) _____

Name of Parent or Guardian: _____

Is English your first language? ☐ Yes ☐ No

Ethnic Background (Optional): ☐ American or Alaskan Indian ☐ Black
☐ Asian or Pacific Islander ☐ Foreign ☐ Hispanic ☐ White ☐ Other: _____

Gender: ☐ Male ☐ Female

What would you like to learn in college? _____

_____

_____

What are you best at in school? _____

_____

_____

What kind of activities do you enjoy? _____

_____

_____

Name the last two schools you have attended. Please list the city and state of each.

1. _____

2. _____

Everything above is true to the best of my knowledge.

Signature: _____ Date: _____

·The average age of undergraduate college students in Minnesota is about 26 years old. 25

APPENDIX U

SAMPLE SAT

The SAT

Quantitative Comparison PracticeQs

For all Quantitative Comparison questions, answer (A) if Column A is greater, (B) if column B is greater, (C) if the columns are equal, or (D) if more information is needed to determine the relationship.

1.
$x > 1$
$y > 0$

Column A	Column B
y^x	$y^{(x+1)}$

(A) (B) (C) (D)

Get answer

2.
When m is divided by 5 the remainder is 2.
When n is divided by 5 the remainder is 1.

Column A	Column B
The remainder when $m + n$ is divided by 5	The remainder when mn is divided by 5.

(A) (B) (C) (D)

Get answer

3.
$2a + b = 17$
$b - 3 = 2$

Column A	Column B
a	b

(A) (B) (C) (D)

Get answer

4.
$x > 1$

Column A	Column B
x^5	$(x^3)^2$

(A) (B) (C) (D)

Get answer

The SAT
Regular Math PracticeQs

1. If $3x + y = 14$, and x and y are positive integers, each of the following could be the value of $x + y$ EXCEPT

A. 12
B. 10
C. 8
D. 6
E. 4

Get answer

2. What is the minimum number of rectangular tiles, each 12 centimeters by 18 centimeters, needed to completely cover five flat rectangular surfaces, each 60 centimeters by 180 centimeters?

A. 50
B. 100
C. 150
D. 200
E. 250

Get answer

3. A machine labels 150 bottles in 20 minutes. At this rate, how many minutes does it take to label 60 bottles?

A. 2
B. 4
C. 6
D. 8
E. 10

Get answer

4. Two hot dogs and a soda cost $3.25. If three hot dogs and a soda cost $4.50, what is the cost of two sodas?

A. $0.75
B. $1.25
C. $1.50
D. $2.50
E. $3.00

Get answer

5. A motorist travels 90 miles at rate of 20 miles per hour. If he returns the same distance at a rate of 40 miles per hour, what is his average speed for entire trip, in miles per hour?

A. 20
B. (65/3)
C. (80/3)
D. 30
E. (130/3)

Get answer

6. If the three-digit number 5W2 is evenly divisible by 8, which of the following could be the value for the digit W?

A. 2
B. 3
C. 4
D. 5
E. 6

Get answer

The SAT
Sentence Completion PracticeQs

Select the lettered word or set of words that best completes the sentence.

1. In the years following World War II, almost all Canadian Inuits _____ their previously nomadic lifestyle; they now live in fixed settlements.

A. abandoned
B. continued
C. fashioned
D. preserved
E. rebuilt
Get answer

2. A newborn infant's _____ skills are not fully _____, for it cannot discern images more than 10 inches away.

A. perceptual..stimulated
B. visual..developed
C. descriptive..ripened
D. olfactory..shared
E. average..familiar
Get answer

3. Some geysers erupt regularly, while others do so _____.

A. consistently
B. copiously
C. perennially
D. sporadically
E. violently
Get answer

4. Because of the lead actor's _____ performance, the play received poor reviews from influential theater critics, and was canceled only one week after it opened.

A. erudite
B. corporeal
C. overwrought
D. fractious
E. resplendent
Get answer

5. Sociologists have found that, paradoxically, many children of unorthodox, creative parents grow up to be rather tame _____.

A. idealists
B. conformists
C. individualists
D. alarmists
E. elitists
Get answer

http://www.kaptest.com/repository/templates/ArticleInitDroplet.jhtml?_relPath=/repository/c

APPENDIX V

SAMPLE DIPLOMA

Congratulations, Detective!

Investigation

Create your own college diploma!

Fill in the spaces below and imagine how it will feel to be a college graduate.

THE TRUSTEES OF

_____

(NAME OF SCHOOL)

ON THE NOMINATION OF THE FACULTY
HEREBY CONFER UPON

_____

(YOUR NAME)

THE DEGREE OF

_____

TOGETHER WITH ALL THE HONORS, RIGHTS, AND
PRIVILEGES PERTAINING THERETO.

IN THE MONTH OF _____, IN THE YEAR _____

_____

(OFFICIAL SIGNATURE)

A degree is what you earn when you graduate from college. 29