

1978

A study of the differential effects of three career counseling techniques on career-related activities and attitudes of black college freshmen

Judith Glenn Burke
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CAREER-RELATED ACTIVITIES AND ATTITUDES OF
BLACK COLLEGE FRESHMEN.

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BLACK COLLEGE FRESHMEN

A Dissertation
Presented to the
Faculty of the School of Education
College of William and Mary in Virginia

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education


By
Judith Glenn Burke

August 1978

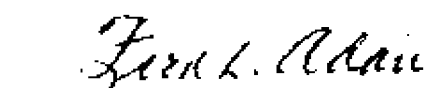
APPROVAL SHEET

We the undersigned do certify that we have read this dissertation and that in our individual opinions it is acceptable in both scope and quality as a dissertation for the degree of Doctor of Education.


Accepted August 1978 by



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A Study of the Differential Effects of Three
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Related Activities and Attitudes of
Black College Freshmen

Chapter 1

Introduction

The failure of the educational process to provide Black students with opportunities for learning vocational and career development skills has been investigated and documented by psychologists and educators (Banks, 1971). It is seen that Black youth are over-represented in the ranks of school suspensions, expulsions and dropouts and, as a result, they are deprived of career opportunities and the acquisition of vocational skills (Carkhuff, 1971). With no skills and no opportunities, Black youth fill the ranks of the under-employed, unemployed and those on welfare.

Thus, after a long period of neglect, vocational psychologists and counselors are beginning to focus their attention on the career development of Black individuals. Much of this interest is reflected in the relatively recent increase in the number of studies (Thomas, 1970; Slocum, 1972; Blocher, 1973; Borgen, 1973; Dillard, 1975; Parker, 1976) which have investigated the vocational aspirations, interests, choices and maturity of Black adolescents as well as the job attitudes, values and work satisfaction of Black adults.

The question remains, however: Has this growing body of research actually contributed to a better understanding of the vocational development of Blacks? Smith (1975) suggests that "at present, research on the vocational development of Black

individuals--both adolescents and adults--constitute a disparate body of knowledge (p. 41)." After assessing the major concerns of the field of vocational guidance by reviewing the research literature over a 5-year period beginning in 1971, Holcomb and Anderson (1977) found that out of some 522 articles only 3.1% represented Black subjects. These investigators, along with others (Jepsen, 1974; Banks, 1976 and Crites, 1974 (b)) advocate continued research on processes, methods and outcomes of programs in career counseling. Smith (1975) asserts that intervention techniques are needed to facilitate the career development of Blacks, but that they should be strategies which involve the whole individual--techniques which take into account his background, his cultural differences, as well as his points of human commonalities. The more recent trend of career development focuses on the "whole" person.

Gysbers and Moore (1975) define career development as: "Self development over the life span through the integration of the roles, settings, and events of a person's life (p. 648)." Career education (Marland, 1972; Hansen, 1972) approaches the total person by highlighting experiences in occupational, educational, learning and social/personal behaviors. It encourages the individual to familiarize himself with work values of the society and to integrate these values into his personal value system, and further, to implement these values into his life in such a manner as to make work meaningful and satisfying. Career development then can be viewed as an approach to career education that emphasizes ways in which the counselor can facilitate

techniques that will meet the total needs of the student.

Delivering this quality of career counseling services to Black students prompts counselors to function in the most efficient manner. Expanded use of group procedures has been proposed (Hewer, 1968; Sprague and Strong, 1970; Kuehn, 1974; Harman and Dutt, 1974) as one approach toward more effective use of a counselor's time. Among the various group counseling formats designed for career development with college students is Birney et al.'s (1970) Life Planning Workshop (LPW) which is a systematic program for helping participants take an active role in examining their present and future plans.

Likewise, enabling counselors to perform in a more productive fashion has been cited as a reason for the introduction of self-assessment instruments for use in vocational counseling (Magoon, 1968; Graff, et al., 1972). One such instrument is the Self Directed Search (Holland, 1970). Holland contends that the Self Directed Search (SDS) provides a vocational counseling experience by simulating what a person and his counselor do in several interviews. The SDS, which is based on Holland's theory of vocational choice, includes content in the form of self-assessment scales that corresponds roughly to the content of traditional modes of vocational counseling. The author's claim that this instrument multiplies the number of clients a counselor can serve seems reasonable in that the SDS is self-administered, self-scored and self-interpreted.

Since effecting behavioral and attitudinal change is a primary goal of counseling, it follows that the value of any counseling

experience is determined by its influence on the subsequent actions and attitudes of the counselees. Accepting that group procedures as well as the SDS provide vocational exploration experiences requires that the effectiveness of these career counseling techniques be considered.

Statement of Problem

Faced with this challenge, the investigator asked: How does the SDS compare with more traditional career counseling experiences, i.e., group counseling, in terms of its effect on Black students' behavior and attitude? Can techniques that have been used with predominantly white samples be successful with an all-Black group of subjects?

Answers were sought to more specific questions: Can career counseling intervention lead to a change in the Black student's vocational maturity? Will certain treatments effect specific vocational information-seeking behaviors? Will Black students respond more favorably to one type of treatment than to another? What effect will group interaction with peers have on the vocationally undecided student? Will individual counseling enhance the effectiveness of the SDS? Does the vocationally mature Black student manifest certain personality characteristics? Are Black females significantly different from Black males in their career development?

In an attempt to answer these questions, the purpose of this study was to compare the effects of three career counseling treatments on the career maturity, vocational indecision and vocational information-seeking behavior of a select group of Black college freshmen. In juxtaposition to the major thrust of this study, there was also an

endeavor to determine what relationship exists between career maturity and the personality variables of self-acceptance, achievement and intellectual efficiency of the subjects.

Forty-eight subjects were randomly assigned to three treatment conditions and one control group. The treatments were a group process, the SDS and the SDS coupled with individual counseling sessions. Posttesting of the subjects determined indices of career maturity, using the Career Maturity Inventory (CMI); vocational undecidedness, using the Scale of Vocational Indecision (SVI); and the frequency of vocationally-related activity, using a Vocational Checklist (VC). In addition, the California Psychological Inventory (CPI) was administered in order to assess certain personality variables relevant to the study.

Theoretical Rationale

The concepts represented by these chosen treatments and measuring instruments are subsumed under broader, more basic foundations of vocational theory. On the whole, however, vocational theory has revealed little information about the Black individual; most theories are based on the career development of the white middle class male. From their explorations into the vocational adjustment of this group, theorists have generalized to other populations. That there exists a limited generalizability of the present theories to minority populations has been emphasized by a number of researchers (Steffire, 1966; Tyler, 1967; LoCasio, 1967). However, this present investigator shares the contention of Smith (1977) who states:

It is not difficult to understand how counseling literature may

have become caught up in the dilemma of stereotyping. Whenever any body of research focuses primarily upon one race of people, there is the potential danger of stereotyping. In an effort to sensitize others to the situations of members of a particular racial group, we sometimes ignore individual differences--defeating in part the very goals we set out to accomplish (p. 390).

Therefore, this researcher will not propose a new theory, but will use existing ones, based on the supposition they can be applicable to the Black population used in this study.

This theoretical rationale is expressed by the following assumptions: 1) the vocational orientation of a college student is largely developmental, emphasizing the implementation of the self-concept, and 2) there is an integration of personality into career choice and vocationally-related activities. These assumptions are supported by Erikson's psychosocial theory as it provides a developmental perspective on career maturity; by Super's developmental self-concept vocational theory, and by Holland's career typology theory of vocational behavior.

Munley (1977) outlined some of the contributions of Erik Erikson's theory in providing a developmental approach to vocational adjustment. Erikson's first four stages theoretically make contributions toward the fifth stage of identity. Some possible analogies to career development might be along the following lines: The development of a sense of basic trust versus mistrust may contribute to the trust a person has in himself, others and his ability to perceive meaning in the world of work. Development of a sense of autonomy as opposed to shame and doubt may enhance a sense of self-control, self-direction, and the ability

to will freely and decide on a work activity. Development of a sense of initiative as opposed to guilt may lead to establishing a basis for a realistic sense of ambition and purpose, finding out what one might become. The development of a sense of industry as opposed to inferiority may contribute to a sense of competency, productivity, a sense of being able to make things work, or, as Erikson puts it: "I am what I can learn to make work." The implication of these proposed interrelationships among the stages is that difficulty in resolving earlier stage crises in childhood leaves one more vulnerable in terms of the identity crisis and career development.

These notions seemed to grow out of an earlier study of Munley (1975), in which a sample of college students were given two measures assessing stage resolution attitudes for Erikson's first six stages. In addition, students' scores on the Scholastic Aptitude Test were obtained and students were asked to state their probable vocational choice and complete the Strong Vocational Interest Blank and Crites' (1973) CMI. Among the findings was the indication that students with more mature career attitudes demonstrated more positive resolutions of Erikson's stage crises. In general the findings tended to support the proposal that career development takes place within the context of a psychosocial development.

Super's (1964) theory also emphasizes a sequence in vocational development. A major influence in his theory is Charlotte Ruehler's developmental psychology as presented in Osipow (1973). She maintains that life can be viewed as consisting of distinct stages. The first is a growth stage (birth - 14 years); the second is an exploratory stage,

occurring between ages 15 and 25; the maintenance stage follows and covers the next 40 years, ending at about age 65, whereupon the final stage, designated as decline, begins. Super's vocational theory of development builds on these life stages suggesting that vocational tasks reflect larger life tasks. On the basis of these principles Super (1953) generated ten propositions which summarize his theory:

1. People differ in their abilities, interests, and personalities.
2. They are qualified, by virtue of these characteristics, each for a number of occupations.
3. Each of these occupations requires a characteristic pattern of abilities, interests, and personality traits, with tolerances wide enough, however, to allow both some variety of occupations for each individual and some variety of individuals in each occupation.
4. Vocational preferences and competencies, the situations in which people live and work, and hence their self-concepts, change with time and experience (although self-concepts are generally fairly stable from late adolescence until late maturity), making choice and adjustment a continuous process.
5. This process may be summed up in a series of life stages characterized as those of growth, exploration, establishment, maintenance, and decline, and these stages may in turn be subdivided into (a) the fantasy, tentative, and realistic phases of the exploratory stage, and (b) the trial and stable phases of the establishment stage.
6. The nature of the career pattern (that is, the occupational

level attained and the sequence, frequency, and duration of trial and stable jobs) is determined by the individual's parental socioeconomic level, mental ability, and personality characteristics, and by the opportunities to which he is exposed.

7. Development through life stages can be guided, partly by facilitating the process of maturation of abilities and interests, and partly by aiding in reality testing and in the development of the self-concept.
8. The process of vocational development is essentially that of developing and implementing a self-concept; it is a compromise process in which the self-concept is a product of the interaction of inherited aptitudes, neural and endocrine makeup, opportunity to play various roles, and evaluations of the extent to which the results of role playing meet with the approval of superiors and fellows.
9. The process of compromise between individual and social factors, between self-concept and reality, is one of role playing, whether the role is played in fantasy, in the counseling interview, or in real life activities such as school classes, clubs, part-time work, and entry jobs.
10. Work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, interests, personality traits, and values; they depend upon his establishment in a type of work, a role which

his growth and exploratory experiences have led him to consider congenial and appropriate (p. 189-190).

According to Super in Osipow (1973) "the self-concept of a well-integrated individual is a continually developing entity, shifting somewhat through life as experiences indicate that changes are necessary to reflect reality (p. 135)." A recurring theme is that an individual chooses an occupation which permits him to function in a role consistent with his self-concept. As the person matures vocationally, he passes through a series of developmental stages which afford him opportunities to deal with specific tasks. The ability to cope with the attitude and behavioral tasks is a measure of an individual's level of vocational maturity. Vocational maturity attitudes include orientation toward future work, independence in decision-making, preferences for various vocational choice factors, and perceptions of the vocational choice process. Crites' (1973) CMI, which was used in the current study, reflects these notions proposed by Super's theory.

Whereas Super focuses on the developmental process, Holland concentrates more on vocational choice. Holland (1959, 1966) has constructed and refined a typological theory of vocational choice in which he operationally defines six modal personality types and six corresponding environmental conditions. Vocational choice is viewed as an extension of personality in that individuals orient themselves toward work environments, sometimes perceived in terms of stereotypes (Hollander and Parker, 1969) that are compatible with their personal characteristics. The six personality types identified by Holland are realistic, investigative (formerly intellectual), social, artistic,

enterprising, and conventional. The environmental models related to the various personality types can be defined by clusters of preferred occupations. For example, realistic types prefer such occupations as mechanic, electrician and civil engineer.

Interactions with environment influence the extent to which an individual resembles the six personality types. The relationship between type and model is described as congruent or incongruent, depending upon whether an individual's personality matches his environment. The concepts of consistent and inconsistent describe the relatedness of primary and secondary types most descriptive of an individual. Differences among individuals in intelligence, self-evaluation and training explain the variety of occupational areas and levels that might be found within a single environment. Assuming that the person enters a given vocation because of his history and personality, therefore, the same vocation will attract individuals who are alike, thus creating a characteristic interpersonal environment. Vocational satisfaction, stability, and achievement depend on congruence between one's personality and the environment in which he works.

Holland has operationalized his theory of vocational choice with the introduction of the SDS (Holland, 1970). This instrument, used in the present investigation, not only assesses individual interests, abilities, and self-estimates, but it also arranges these assessments to fit Holland's theory.

Although Super and Holland's theories have been researched as distinct and separate concepts, some writers (Jones, et al., 1976) maintain that this is an artificial distinction. An integration of the

variables of self-concept (Super) and personality types (Holland) provides the foundation for combining the theories. "The self concept is a function of the developmental life history of the individual which leads to the incremental building of Holland's typology of personality types. Maturation as experience contributes to the individual's personality type, until eventually, the individual develops a modal personality profile (p. 33)."

In summary, the theoretical foundation for the orientation of this experiment was found in Erikson's psychosocial theory as it parallels to vocational maturing; Super's developmental vocational theory which emphasizes the implementation of the self-concept; and Holland's integration of personality with career-related choices and activities.

Hypotheses

Specific testable hypotheses for the study were generated from the above statement of problem and theoretical rationale. These hypotheses fell into three categories: 1) comparing the effects of treatment, 2) determining relationships, and 3) comparing males and females on the variable of career maturity.

Hypothesis I. The subjects in the experimental groups will score statistically significantly higher on the CMI than the subjects in the control group.

Hypothesis I-A. There will be statistically significant differences among experimental groups in terms of career maturity as determined by the Attitude Scale and Competence Test of the CMI.

Hypothesis II. The SVI scores of the subjects in the

experimental groups will be statistically significantly lower, indicating less vocational undecidedness, than the subjects' scores in the control group.

Hypothesis II-A. There will be statistically significant differences among the experimental groups in terms of vocational undecidedness as determined by the SVI.

Hypothesis III. There will be a statistically significantly greater frequency of vocational information-seeking behaviors among the subjects in the experimental groups than the control group.

Hypothesis III-A. There will be statistically significant differences among the experimental groups in terms of frequency of vocational information-seeking behaviors as determined by the VC.

Hypothesis IV. A statistically significant correlation will exist between scores of self-acceptance, a sense of well-being, achievement and intellectual efficiency on the GPI and scores on the CMI.

Hypothesis V. Female scores will be statistically significantly higher than male scores on the CMI.

Definition of Terms

For adequate understanding of the variables used to test these hypotheses certain terms were identified as follows:

Career Maturity. Crites (1961) delineates this concept by degree and rate. Degree of vocational development refers to the maturity of an individual's vocational behavior and that of the oldest individual in his vocational life stage. In contrast, rate of vocational development refers to the maturity of the individual's vocational behavior in comparison with that of his own age group.

Specific behaviors which Super (1953) considers to be indicators of vocational maturity are an orientation to vocational choice, crystallization of traits, information and planning, consistency of vocational preference, and wisdom of vocational preferences. Along with Crites and Super, Gibbons and Lohnes (1968) suggest that the concept of vocational maturity is more comprehensive than vocational choice; it includes not only the selection of an occupation but also attitudes toward decision-making, understanding of job requirements, planning activities, and development of career capabilities. For the purpose of this research, career maturity was operationally defined by scores on Crites' (1973) Career Maturity Inventory.

Vocational Undecidedness. This construct reflects an individual's inability to make an appropriate and required degree of commitment to an educational or vocational direction. Indecision involves a lack of structure and confidence on the part of the individual in approaching the task of vocational decision-making and choice anxiety, both potentially leading to avoidance of a choice. It suggests some perceived external barrier to a career choice; some personal conflictual problem regarding how to make a decision. Indices of vocational undecidedness for the current study were taken from the subjects' scores on the Scale of Vocational Indecision.

Vocational Information-Seeking Behaviors. These actions include cognitive as well as behavioral activities that indicate the subjects' interest in acquiring more information and/or assistance in making career-related decisions. Subjects who participated in the investigation reported frequency and variety of vocational information-

seeking behaviors on the Vocational Checklist.

Specific personality variables salient to this current study were self-acceptance, sense of well-being, achievement via conformance, achievement via independence, and intellectual efficiency. Self-acceptance (Sa) reflects a sense of self-worth, having the capacity for independent thinking and action, self-confidence and self-assurance. A Sense of well-being (Wb) identifies persons who minimize their worries and complaints, and who are relatively free from self-doubt and disillusionment. Achievement via conformity (Ac) reveals industry and co-operative, efficient behavior which facilitates achievement in situations where conformance is a positive behavior. Achievement via independence (Ai) indicates dominance, forcefulness, self-reliance and autonomy. Intellectual efficiency (Ie) can be defined as clear-thinking, intelligence, being alert, well-informed, and self-directed. Scores on the CPI gave these personality traits operational definition.

Plan of Presentation

In the preceding chapter the present investigator has dealt primarily with the introduction, statement of the problem, theoretical rationale and hypotheses. In Chapter 2 the related research including reports supporting the theory, the chosen treatment methods, the designated population, and the criteria for assessing the treatment effects are presented. The present experimenter devotes Chapter 3 to describing the sample, the subjects' environment, a validation of the instruments used, an outline of the treatment modes, the procedure for data collection, the experimental design employed, and the statistical method of analysis. Results pertinent to the stated hypotheses and

additional findings are presented in Chapter 4. The fifth and final chapter is composed of a summary of the study, conclusions drawn from analyzing the data, limitations of the experiment, and a discussion of the implications and recommendations the investigation has for future research.

Chapter 2

Review of Research

The investigator's purpose in this chapter is to present existing research relating to the problem stated in Chapter 1. Accomplishing this end requires that the practice of vocational counseling be defined, the chosen treatment methods be considered in terms of their origin and outcome studies, the research that has significance to the specific population be reviewed and studies using the designated criteria of treatment effectiveness be reported.

Counseling that focuses on problems of career choice and adjustment is commonly referred to as vocational counseling. Differentiating vocational counseling from personal adjustment counseling is best accomplished by identifying the type of problem presented by the counselee. Assisting counselees to formulate educational plans, choose a career, and pursue vocationally-related behaviors are all common functions of the career counselor. Other distinguishing factors that characterize vocational counseling are its traditional emphasis on the interpretation of test results (McCabe, 1965) and the relatively few number of interviews required.

Awareness of the goals associated with the process is important to the understanding of vocational counseling. Perez (1965) summarizes these goals by observing ". . . the goal of each (vocational counselor) is essentially the same, namely to help the individual to function better in his environment (p. 25)." This statement ably describes

an ultimate objective of vocational counseling. Problems which motivate individuals to seek career counseling are typically related to educational or occupational planning. Societal demands impel individuals to make decisions at certain junctures, e.g., entering high school or college, separation from the military, enforced retirement, etc., along the continuum of what has come to be known as the vocational choice process (Super, 1957). It is around these critical points that career counseling is most likely to occur. Viewed within this context, it becomes understandable why vocational counseling is often conceived of as a process aimed at enhancing an individual's ability to make decisions (Williamson, 1965; Tiedeman, 1961; Gelatt and Clark, 1967) that influence current as well as future vocational behavior.

The present investigator suggests that the current study was conducted at a vocationally critical point in the development of the subjects. Being second semester freshmen, they had been acclimated to college life and were now facing decisions that would effect the course of their futures such as career choice, educational plans and other vocationally-related activities.

In the next section of this chapter attention is focused on some of the techniques used in vocational counseling. The research cited supports the particular methods employed in the present experiment.

Treatment Methods

Discussions of group methods have often focused on clarifications of the goals of guidance, counseling, and therapy groups (Mahler, 1971; Gordon and Liberman, 1971). Hewer (1968) has captured the essence of various definitions of these three group processes with her statement,

". . . group guidance is a direct, cognitive process of giving information; group counseling is concerned with increasing self-understanding, changing attitudes, and choosing a vocation . . . and group therapy is concerned with changing personality structure, necessitating deep therapies (p. 250)."

Group Counseling

Meyer and Smith (1977) point out that the group process is potent and effective and is potentially the dominant and most efficient therapeutic technique. They state that:

Group counseling uniquely allows a greater range of behavioral models, more realistic immediate feedback, and consensual validation of decisions and future plans . . . The efficiency of group therapy is evident in the term itself, since a significantly greater number of people can be seen per unit of a therapist's time than in individual therapy (p. 638).

Noted therapists (Rogers, 1968; Shostrom, 1967; Mower, 1964) support the argument for positive effectiveness of the group process.

Gazda and Larsen (1968) suggest that outcome research concerning group counseling generally looks promising as approximately half of the studies they reviewed indicated positive growth or change. After evaluating some 60 studies using group procedures with college students, LeMay (1967) concludes that the potential of group counseling is clearly demonstrated, although the effectiveness of group procedures has not been empirically substantiated with any degree of regularity.

In a later report (Meltzoff and Kornreich, 1970), group-treatment studies were considered in terms of their experimental

methodologies. It was found that almost 80% of those studies with adequate methodologies reported either major or minor benefits for counselees, while only minor benefits or no effect was found in 70% - 80% of those studies with poor methodology. These findings were supported by Back (1974) in a similar sophisticated review.

One research endeavor of this present study was to determine if individual counseling would increase the effectiveness of the SDS as compared with the group process. Various researchers support the assumption that individual and group vocational counseling can be equally effective (Smith and Evans, 1973; Krivatsy and Magoon, 1976; Holcomb and Anderson, 1977).

Hoyt (1955) compared 30 college freshmen who received group counseling with a group of 15 college freshmen who were exposed to individual counseling on pre and posttest ratings of four dimensions of vocational choice. All of the participants were described as vocationally undecided. Students counseled individually averaged 2.6 appointments while students counseled in groups (ranging in size from five to seven) averaged 2.3 appointments. A control group was also included. Both treatment groups scored statistically higher than the control group on the posttest scores for three criterion variables. However, no significant differences were found between posttest measures of students counseled in groups and those students counseled individually.

In another study designed to compare group and individual counseling with a self-assessment instrument, Graff, et al. (1972) found that all three treatments were superior to control conditions on several self-ratings completed by 208 college students. Although the

principal finding for this investigation was that students who completed the self-assessment instrument rated themselves significantly higher than students in the other groups on three measures related to educational planning, it was also reported that no significant differences were reflected between the group and individually counseled students. Subjects assigned to individual counseling had two to three interviews with a counselor and group subjects attended three to four meetings.

The preceding research has focused on the effectiveness of group counseling in general and on the comparison of group and individual methods. The present researcher will now evaluate specific models of group vocational counseling that bear resemblance to the format chosen for this present investigation.

There seems to be strong indication in the literature that the facilitation of vocational maturity, attitudes, activities and the acquisition of decision-making skills is possible by group process. A case conference model for group vocational counseling with college students has been proposed and refined (Hewer, 1959, 1968). This approach involves a general orientation toward group goals, expectations, and the responsibilities of each group member. Subsequent meetings focus on the problems of each group member in turn. After each individual's problem is defined, group discussion follows a decision-making paradigm, i.e., consideration of alternative courses of action, assessment of probable success, and evaluation of satisfaction with each alternative. The group leader's role is to orient the group, assist in interpretation of test results, and to react to suggestions

made by group members that are clearly unsuitable. Hewer has recommended that groups range from six to eight members in size. Since one meeting is devoted to dealing with the problems presented by each member, the number of group meetings is determined by how many are in the group.

Sprague and Strong (1970), referring to the case conference model as vocational choice group counseling, tested Hewer's model with five groups of college students. A follow-up questionnaire was used to solicit information from the students who had completed group counseling. Approximately 70% of the students responded and at least half of those who responded indicated that they had either made a vocational choice or had progressed toward identifying alternatives.

Another model for group vocational counseling is described by its developer (Healy, 1973), as a replicable method of group career counseling. This approach is a highly structured, sequential group program that draws on aspects of Super's theory of vocational choice. The model suggests five group meetings, each of which involves specific tasks related to the well-defined objectives. Assessment of personal traits, examination of job demands, and classification of occupations are some of the activities in which group members engage. The participants are required to evaluate self-ratings and to relate their evaluations to plans of action. The goals and activities for each meeting provide the stimuli for group discussion. The counselor's role includes explaining procedures, reinforcing verbal behaviors, and evaluating the progress of the group.

A field test of this model has been reported by Healy (1973).

A total of 35 college students volunteered to participate. The groups consisted of four to seven students. Each group had four meetings of two hours in duration. Follow-up questionnaires were obtained from the participants. Significant t scores were computed for pre and posttest measures pertaining to certainty of work goals, college majors, and occupational preferences.

Parker, et al. (1974) constructed a behavioral model for group vocational guidance at the college level designed to encourage occupational exploration and self-assessment. A semester-long course is divided into two 7-week segments, a vocational exploration block and an orientation to teaching block. The first segment provides students with opportunities for self-assessment, then exposes students to information about job realities. The self-assessment methods involve the exploration of internal subjective factors such as needs, interests, values, and abilities and how they can be implemented into career decisions. Informational topics concern external job realities such as occupational outlook and skill and educational requirements.

As this program was developed for students enrolled in the educational department, at the end of the vocational exploration block, students were exposed to the orientation to teaching block, which explores teaching as a career. A student opinion survey was conducted at the end and the results revealed that the students found the program helpful in assessing their interests, values, abilities and needs in relation to occupations and that it facilitated career decision-making.

In contrast to the comprehensive program constructed by Parker

et al., Storey and O'Brien (1977) proposed a miniworkshop for career exploration. This group experience, designed to help participants understand themselves and their values in relation to the world of work, is divided into three parts and is conducted in one session. Part one uses exercises to assist students in clarifying their own priorities and value systems. The student is introduced to actual work possibilities in the second part of the session. The final segment is used to expose students to information about particular jobs and their educational and skill requirements. The author claims that the "strength of this technique is that it has demonstrated effectiveness in providing substantive and practical vocational assistance to our students who need this important help (p. 147)."

Similar programs of other college vocational group guidance are reported by Kuehn (1974) and Harman and Dutt (1974). These researchers suggest that the student seeking a vocational group may profit from an increased emphasis on a decision-making approach.

In observing the reports referenced in this section, it is appropriate to mention that emphasis on the active participation of all group members is a prominent characteristic of group vocational counseling. Two other distinguishing features of group career counseling are that it ordinarily involves fewer meetings and more structured activities than is the case with other types of group counseling. The Life Planning Workshop, a structured group format chosen for the current experiment, answers to these characteristics.

Life Planning Workshop

The LPW, which helps the participant develop a realistic outlook on his ability to be the primary determiner of his future, had its beginnings at Colorado State University (Birney, Thomas and Hinkle, 1970) where materials designed for an industrial setting were adapted for student use. The major study conducted there had multiple purposes: 1) to identify salient variables being influenced by the workshop, 2) to determine how these variables were being changed, 3) to provide descriptive information to the coordinators of the workshop, and 4) to develop information that can be used in further research and planning for future workshop programs. The variables assessed fell into the broad categories of 1) a "meaningfulness" dimension intended to measure the importance of the concepts for the participant, and 2) an anxiety measure to evaluate the anxiety associated with specific concepts. The concepts assessed were: 1) myself, 2) getting a job, 3) other people, 4) five years from now, and 5) a blank scale to be filled in by the individual with a concept he felt to be especially important to him.

The instrumentation used in pre and posttesting was presented in a semantic differential format. Anxiety associated with the concepts was assessed by the Concept-Specific Anxiety Scale (Cole, Oetting, and Sharp, 1969).

Out of 50 separate analyses, there were 19 significant findings. The results of this investigation demonstrated emphatically that the LPW has a marked influence on the participants' perceptions of themselves and others. This impact is most pronounced in two areas:

the "self" (this may be interpreted as an increase in the individual's feeling of self-worth and his understanding of himself) and "other people" (the subject's perception of other people was changed in the direction of more meaningful impact). In each instance there was an increase in the saliency of the concepts accompanied by a decrease in the anxiety associated with them.

In a subsequent study at Colorado State University, using Rotter's (1966) Internal-External Scale (I-E), Thomas (1972) evaluated the workshop subjects and found significant changes in the anticipated (more "internally controlled") direction. The Internal-External Scale purports to measure the construct of how much control one feels one has over life contingencies and therefore appeared to be an appropriate instrument to evaluate a workshop designed to help clients take direction of their own life affairs.

Delworth (1972) reported additional information by employing the same scale and a straightforward questionnaire in workshops presented at Brigham Young University. The research was completed in five studies and involved more than 350 students. It supported the notion that the technique could effectively produce the gains which it was constructed to produce.

The purpose of Lynch, Ogg and Christensen's (1975) study was to investigate the efficacy of the LPW as a means of assisting participants in developing an internal locus of control. Again, Rotter's I-E Scale was used to assess gains by the participants of the group. Findings showed LPW subjects made significantly greater progress ($p > .05$) than did a control group of non-participants in the

development of an internal locus of control.

The above studies, taken collectively, warrant the conclusion that the LPW can be effectively applied to career counseling with college students. The LPW can provide a viable alternative to "in office" counseling and, as reported by participants, it appears to accomplish what it is intended to accomplish--to assist students in exploring and becoming more in touch with their current needs and values and learning goal-setting skills.

Researchers of previous experiments using the LPW have proposed the following suggestions: 1) the LPW be compared with other techniques, 2) more versatile criteria be used to assess its effectiveness, and 3) the LPW be experimented with various types of college populations. These suggestions have given impetus to the present researcher's methodology, variety of measuring instruments, and the choice of population. The Self Directed Search was the treatment method that was compared with the LPW in the current study.

The Self Directed Search for Educational and Vocational Planning

Self-assessment procedures designed to facilitate educational-vocational planning have been introduced recently (Magoon, 1969; Holland, 1970; Gilbert and Bwing, 1971; Graff et al., 1972). Attempts to develop self-assessment devices have been influenced by a shortage of counselors (Graff, et al., 1972). Of all the available self-assessment devices used in vocational counseling, the SDS has received the most attention (Betz, 1972).

Holland (1970) has estimated that 50 to 60 percent of those individuals engaged in career planning can be helped by the SDS.

Accordingly, a counselor might use the SDS to identify for further counseling assistance those individuals who find the SDS of little or no use. Implicit in Holland's appraisal of the SDS is that its use may help to breach the supply-and-demand gap as it pertains to vocational counseling services.

The SDS consists of a two-step format involving the use of an assessment booklet and a classification booklet (The Occupation Finder). The assessment booklet is organized in terms of Holland's six personality types. The first section instructs the individual to list his occupational daydreams. The individual is then directed to assess himself on the scales and ratings pertaining to attractive activities, perceived competencies, preferred occupations, and self-ratings. Additional sections provide instructions on scoring, graphing, and interpreting responses. This sequence of activities leads the individual to a three-letter summary code. The summary code "types" the individual. For example, the code SAI means that the individual resembles a social--artistic--investigative type. The next step is to search the classification booklet for occupations associated with the code SAI.

The occupational classification booklet lists 456 occupations which encompass 95% of the labor force. The occupations are catalogued according to the six personality types. Occupational sub-classes are ordered by level of general education (GED) required for the occupation. Dictionary of Occupational Titles (DOT) numbers accompany most of the occupations listed.

With reference to the purposes of the SDS, Holland (1971) has

stated that the SDS can be used effectively with students and adults. It is primarily intended to assist individuals to identify occupations compatible with their personalities. The SDS is designed to be completed independently in about 45 minutes to an hour. It can also be valuable, according to the author, as a legitimate source of referrals for counseling, i.e., for situations where there is incongruence between summary code for occupational daydreams and for individuals with summary code inconsistencies.

Interpretation of the SDS is based on five estimates of an individual's resemblance to each of the six personality types derived by graphing the scores for two self-estimates and the three scales (activities, competencies, and occupations). Since these estimates are always in the order (RIASEC), the five profiles should look similar. Inferred from profile similarity is that an individual's self-concept, competencies, activities, and occupational preferences are well-defined. Immaturity, tendency to rate oneself as average, and cultural difference may explain why some individuals do not obtain well-defined summary codes.

The origin of the SDS is rooted in Holland's theory of vocational choice. Holland has stated that the self-ratings and scales comprising the self-assessment part of the SDS were selected because they fit the theory of how types develop and because they have provided consistent predictions about types. Studies (Holland, 1961; Nichols and Holland, 1963; Richards, Holland and Lutz, 1967) have suggested that these scales can yield predictions about different kinds of non-academic achievement.

Under Holland's system, personality types and corresponding occupational classes are arranged in the following order: realistic, investigative, artistic, social, enterprising, and conventional. The intercorrelations among these categories can be represented by a hexagon in which distances between occupational classes vary inversely with the correlations between them. For example, enterprising and conventional categories are adjacent in Holland's arrangement of types. These two types are located next to each other on the hexagon and there is a strong positive correlation between them. In contrast, enterprising and investigative types are farthest apart in Holland's arrangement because of their dissimilarities. These two types are situated opposite one another on the hexagon and, as expected, their correlation index is relatively low.

Various reliability and validity studies support the present investigator's use of the SDS. Cutts (1977) reports that the subscales show a moderate degree of internal consistency. Samples of 2,000 to 6,000 college freshmen show the KR-20's range from .67 to .94. Retest reliabilities show that the SDS summary codes have the highest degree of reliability. College students' scales are reported to be more reliable than high school students.

Gaffey and Walsh (1974) explored the concurrent validity of the SDS for employed men by administering the Vocational Preference Inventory, the SDS and the Holland Scales (Set I and Set II) to 153 male workers established in occupational environments consistent with Holland's six vocational environments. The correlation coefficients for same named scales for all possible combinations of the four

inventories were all found to be significant. A later study (O'Brien and Walsh, 1976) with a similar design established concurrent validity for non-college degreed Black working men. These studies seem to lend support to other validity reports of the SDS (Lacey, 1971; Hollander and Nafziger, 1975).

Although these studies have shown the SDS to have validity for certain samples, other writers have pointed to some possible areas of concern with the instrument. Gelso, et al. (1973) reported that as many as 50% of incoming college freshmen make serious scoring errors on the SDS. In addition, less than half of the subjects felt that their summary codes reasonably correlated with their own perceptions.

However, still claiming this self-administered guidance system does show much promise, Christensen et.al. (1975) deemed it important to search for ways of reducing scoring errors and a means of enhancing students' attitudes toward the instrument. Their study sought to determine the effect of three variables (administrator attitude toward the instrument, group size, and monitoring of test administration) on both the accuracy of students' self-scoring and students' satisfaction with their results. Of the 184 freshmen students who took the inventory, over one-fourth made scoring errors and over one-half obtained incorrect summary codes. Of the three independent variables, only monitoring reduced self-scoring errors, and more affected satisfaction.

These results raise the question as to whether or not the SDS should be considered a "self" counseling device. Siebel and Walsh (1977) proposed a modification of the instructions to the instrument.

These authors examined whether the actual wording of the instructions to the various sections of the instrument was in some way contributing to the dissatisfaction and inaccuracies. Therefore, they reworded the instructions to the Activities and Competencies sections of the SDS to provide the user with greater flexibility in responding to the items (i.e., on the basis of interest alone and not necessarily experience with certain activity; on the basis of possible competencies in certain activities and not necessarily proven competencies; and on the basis of enjoyment of an activity and not simply experience doing it). Fifty male and female freshman college students were administered two versions of the SDS one week apart: one containing the standard instructions and one containing the modified instructions. Results of the investigation indicated that the modified instructions did significantly alter the user's summary codes in terms of an actual change in letter although the subjects were not more satisfied with these summary codes. In general, satisfaction with both sets of summary codes were quite high. These modifications were very similar to the ones used by Dolliver and Hansen (1977). Their review of Holland's instrument seems to indicate more involvement by the counselor at the administration of the instrument.

Observing these preceding reports, the present investigator used the suggested modification in instruction and close monitoring while the subjects were being given the SDS in the current study. This was done in order to circumvent certain hazards that would possibly decrease the effectiveness of the treatment method.

Of many possible aspects regarding the SDS, perhaps most

important is its impact on the person completing the instrument. Various investigations reveal that the SDS produces positive outcomes. McGowan (1977) hypothesized that career indecision and indecisiveness are differentially related to anxiety and vocational maturity. A total of 126 high school seniors were randomly assigned to experimental and control groups and tested for anxiety and vocational maturity levels; the experimental subjects were given the SDS. Statistical analysis indicated that the SDS was an effective instrument in reducing career indecision.

Krivatsy and Magoon's (1976) investigation compared three career counseling treatments in terms of differential effects. These treatments included the SDS, a modification of the SDS and traditional counseling. Pretest and posttest scores were obtained on frequency and variety of vocational information-seeking behaviors, satisfaction with treatment, and other measures. Results indicated that all treatments were about equally effective as measured and that the subjects appeared equally satisfied with them. However, in addition, a cost analysis conducted revealed that the traditional counseling treatment cost six times more per subject than the SDS and four times more than the modified SDS (which used some individual counseling). Low delivery cost and comparable effectiveness provide evidence for the self-administerable treatment modes as viable alternatives to traditional counseling methods.

Comparing the use of the VPI, the SDS, and no treatment, Zener and Schnueella (1976) treated a large group of high school students.

Among other outcomes, the students in either the VPI or SDS groups were found to be considering more occupational alternatives and were more satisfied with their current occupational choices than were students in the control group. The SDS group, as in Krivatsy and Magoon's report, showed less of a need to see a counselor than did students in either the VPI or control groups. However, the study revealed relatively minor differences between the two groups. Here again, there seems to be consistency with the Krivatsy and Magoon study, with different treatments producing little in the way of differentiable outcomes.

In an exploratory study, Nolan (1973) compared Holland's SDS with a group vocational exploration experience on the criteria associated with effectiveness in vocational counseling. The dependent variables included frequency and variety of information-seeking behaviors along with realism of expressed vocational choice. A group of 90 soon-to-be discharged military personnel who ranged from 21 to 26 years of age was used for the sample. It was concluded from the statistical analysis that group vocational exploration was more effective than the SDS programs in promoting frequency of information-seeking behavior, but that neither treatment was more effective in promoting variety of information-seeking behavior or realism of expressed vocational choice.

Avallone's (1974) study appears to support the notion that the SDS is essentially equal to the effects of the counselor. In short, the SDS effects both men and women in beneficial ways; provides

more vocational alternatives, reassures people about current alternatives, stimulates exploration, reduces indecision, and leads to greater satisfaction with choice.

Recognizing the positive effects these treatment methods have been shown to have had in various studies, the researcher now focuses on the specific population that was administered these treatments in the current experiment. The homogeneity of race warrants a consideration of what has been said in the literature about this population and what the researcher might expect in the present investigation.

Research on Population

The profile of the Black individual has been presented as a portrait of a vocationally-handicapped person (Smith, 1975). The average Black is one who may lack positive work role models; he may tend to have a negative self-image; his aspirations are high, but his expectations of achieving his desired occupational goals are low. He has limitations placed on his occupational mobility; he evidences interests that are more person-than-thing oriented, and he is vocationally immature.

Throughout vocational literature, theorists have generally assumed that Black youth have low self-esteem and consequently negative concepts of work. The studies of Leonard and Petrofesa (1969) and Bayer and Boruch (1969) support this assumption. Hauser (1971) researched identity formation and foreclosure in the vocational development of adolescents. He found little structural integration of their ego and self-images. In addition, whereas the self-images of Black males were relatively fixed, whites demonstrated greater

flexibility in their self-images. Black males also experienced a significantly higher degree of identity foreclosure; that is, they evidenced a rigid closing out of vocational possibilities, primarily on the bases of their fixed sense of self and direction.

Most researchers agree (Rosen, 1959; Veroff, et.al., 1960; Antonovsky and Lerner, 1959) that the Black youth has a great deal of incongruency of vocational aspirations and his occupational expectations.

Haberman (1966) explains that "disadvantaged youngsters often overcompensate for feelings of inadequacy by assuming superficially high aspirations (p. 50)." Littig (1968) examined the idea of achievement motivation in terms of Black college freshmen males' aspiration to traditionally closed or traditionally open occupations for members of their racial group. He established that those males who identified with the working class tended to have a strong achievement and aspired to traditionally closed occupations.

In similar studies (Mussen, 1953; Boyd, 1952; Pettigren, 1964), lower-class Black youth were found to be inclined to retreat from competition and that middle class Blacks were inclined to set very high levels of academic and occupational achievement--levels even higher than those of white youth of comparable socioeconomic background.

Research on the career maturity of Black youth has tended to be comparative and, generally speaking, low socioeconomic Blacks have been characterized as being less vocationally mature than middle class

whites. Maynard and Hansen (1970) found that Black youth were lowest in maturity; the white inner-city youth were next; and the suburban whites were highest.

Vriend (1969) also investigated the career maturity of inner-city youth from lower socioeconomic backgrounds. Although both white and Black subjects were used, no racial comparisons were made. His findings focused on the fact that when exposed to structured career-related activity through a vocational guidance program, the indications of career maturity were evidenced in the subjects' responses to a Vocational Maturity Rating Scale. This evidence of positive response to career guidance programs has special significance to the present study.

A major research question of the current experiment was: How will Black students respond to the SDS? If one assumes the task of counseling is in part to help people overcome handicaps or deterrents in their backgrounds so that their potential can be reached, then one may have a problem with the SDS. Since the SDS relies on past experiences (particularly in the competencies section), it may serve to reinforce the student's background rather than to help him through educational or vocational experiences.

Preliminary use of the SBS with incoming freshmen at the University of Maryland led Kimball, Sedlacek and Brooks (1973) to speculate that it may be inappropriate with Black students for reasons cited above. The purpose of their study was to compare the pattern of vocational planning choices made by Black and white students as

measured by the SDS, and to determine student satisfaction with SDS results. The SDS was administered to 4,631 incoming freshmen; a sample of 143 Blacks was randomly drawn for purposes of comparison. The results clearly indicated that Blacks do not obtain more Realistic summary codes than whites; in fact, whites had more first choice Realistic summary codes than Blacks. Additionally, the competencies section did not seem to effect obtained summary codes for Blacks or whites. Also, Blacks and whites were equally satisfied with their summary codes; therefore, reactions of students did not seem to be differentiated by race.

Secondary findings revealed that Blacks tended to have more first choice Social codes. Bayer and Boruch (1969) found that Blacks were more likely to seek social service occupations than were whites. Hager and Elton (1971) found that Black males expressed more interest in social services on the Strong Vocational Interest Blank than did white males. The SDS appears to yield similar results.

Research also supports the notion that Black college students respond to group techniques. Tucker (1973) found that counselees who received action-oriented intervention techniques reported a high level of satisfaction. Workman (1974) reports that the behavioristic approach to group counseling with Black clients is highly successful in increasing the participants' productivity.

Hefland (1967) maintains that peer group support is an effective way of boosting the self-confidence of minority youth in vocational decision-making crises. He asserts that group sharing of common employment problems helps such individuals to gain psychological

support in their occupational endeavors. The problem, as Hefland conceptualizes it, is not so much that disadvantaged youth do not want to work but rather that they lack self-confidence in themselves. Group support makes it easier for minority youth to face their own limitations without losing status among their peers or feeling greater destructive erosion of their self-concepts. The group affords a kind of dress rehearsal to help overcome employment shock.

At this juncture, the following points intrinsic to the thesis of the current study should be made: 1) voluminous research (examples of which were cited in the initial part of this section) points to the Black student as being vocationally-handicapped. 2) Black students respond to career counseling interventions.

However, in drawing conclusions relating to the first point, the present investigator assumes the stance of other writers (Sedlacek and Brooks, 1973; Smith, 1975; Smith, 1977; Caplan and Nelson, 1974) who have pointed out that often investigators of Black people are lured by the unusual, the pathological, tending to take their subjects from the ghetto and from the severely disadvantaged. Therefore, generalizations made from this type of sampling tend to produce distorted pictures of the Black person's vocational attitude and actions. Smith (1977) goes on to say:

Within any group of people, there is a broad range of behavior; viewing Black individuals as nearly all the same or as merely further instances of a type rather than as individuals is a dangerous course and promotes ill-conceived and poor counseling strategy (p. 395).

Inferences made from the second point are in consonance with others (Smith, 1977; Tucker, 1973) who suggest that the techniques and ingredients of effective counseling with whites are also important with Black clients. Therefore, this study proceeded from the standpoint that 1) the Black student should be viewed as an individual facing crucial career-related decisions and 2) certain career counseling techniques can augment appropriate maturity and vocationally-related behavior. This leads the researcher to consider the criteria that will best assess the effectiveness of these techniques.

Criteria for Effectiveness of Career Counseling

Certain criteria were chosen for appropriately assessing the treatment effectiveness of the current study. These variables included career maturity, vocational undecidedness, and vocational information-seeking behaviors. Although these attitudes and actions are closely related, they will be discussed separately in the following sections.

Career Maturity

The basic concept which underlies the definitions of vocational maturity is that behavior changes systematically in various ways with increasing age (Crites, 1965). In Chapter 1 these definitions were discussed in specific terms. Crites (1961) suggests:

that to measure an individual's vocational maturity . . . requires (1) a comparison of his vocational behaviors with those which are typical of the different life stages and (2) a statement about which life stage he most closely resembles. This specification of an individual's vocational life stage then represents his vocational maturity "score" (p. 256).

In developing the CMI out of the Vocational Development Inventory, Crites (1974) constructed a pool of items that were theoretically relevant, and linguistically representative of the verbal vocational behavior of adolescents. He then selected from this pool items that differentiated among age and grade levels. He achieved content validity on the Attitude Scale by having expert judges--counseling psychologists--indicate what they considered to be the most mature response to each item.

Subject content for the Competence Test was selected from counseling case summaries of students in order to present the kind of reality problems with which a student might be expected to cope. Along with other reviewers (Bartlett, 1971; Westbrook, 1974; Walsh and Hanle, 1975; Herr and Enderlein, 1976), Sorenson (1974) claims that much is commendable in Crites' CMI and that it appears to be a valid and reliable guide for assessing students' attitudes and competencies.

The construct of vocational maturity is increasingly recognized as a relevant factor in vocational adjustment of young people (Super, 1957; Crites, 1965, 1971; Gribbons and Lohnes, 1968). It has been correlated with certain personality variables throughout the research reports. One research endeavor of the present experimenter was to determine the correlation of career maturity with specific personality characteristics.

Numerous studies have supported the notion that there is a relationship between vocational and personality development. Bohn (1966) used the Interest Maturity Scale (IMS) of the Strong Vocational

Interest Blank as a measure of vocational maturity and the Adjective Checklist (ACL) as a measure of personality. He hypothesized that individuals with high IMS scores would have personality profiles appearing more mature than those of individuals with low IMS scores. The result of his study supported his hypothesis. The high IMS scorers were more achievement-oriented, independent, sociable, sensitive, persuasive, and less self-critical. Bohn (1966) concluded that: "Vocational maturity seems to be a reflection of general personality development and must be taken into account in effective vocational counseling (p. 125)."

Using the Vocational Maturity Scale (VM) of the Vocational Development Inventory as a measure of vocational maturity and the ACL to measure personality variables, Bartlett (1968) found that individuals with higher VM scores were more self-confident, achievement-oriented, independent, forceful, less self-critical and less deferent in their relations with others. These results were consistent with Bohn's (1966) findings.

In a more comprehensive study, Lawrence and Brown (1976) investigated self-concept, intelligence, socioeconomic status, race and sex as possible indicators of career maturity, as measured by the CMI. It was expected that by knowing the level of self-concept for a group of twelfth graders (46 Black males, 50 Black females, 92 white males and 78 white females), prediction of their career maturity could be improved regardless of the race or sex of the subjects. However, the results of this study indicated that self-concept appears to have

a different impact on the career maturity for twelfth graders depending upon the race and sex of the subjects. The results further indicated that self-concept was a significant predictor for only certain aspects of career maturity as scaled by the CMI. Since socioeconomic status failed to improve prediction of career maturity as hypothesized, it was suggested that instead of looking at the counselee's socioeconomic status, counselors should pay more attention to the significant persons in the environment who may serve as role models and/or information providers. However, results of this study revealed that intelligence was significantly correlated with career maturity as measured by the CMI.

In a study of 252 Black males, Dillard (1976) investigated the relationships between career maturity and self-concept. The samples used represented suburban and urban middle- and urban lower-class students. The CMI Attitude Scale and Coppersmith Self-Esteem Inventory were used to assess the correlation. Statistical analysis indicated weak-positive relationships between career maturity and self-concepts. Of the set of variables (socioeconomic status, family intactness, place of residence, and reading) predicting and estimating variance accounted for, socioeconomic status was found to have the strongest predictive value on career maturity. From his findings the author suggested caution in the use of the CMI with lower-class and/or minority persons.

Even though Crites' CMI is one of the most universally accepted and utilized instruments for measuring the construct of career

maturity, others have voiced caution in its use. Moore and McClean's (1977) study emphasized the validity of the CMI Attitude Scale when used with a college population. Based upon the item analysis, reliability, and factorial validity results of this study, the authors found reason to question the applicability of the CMI to college students. This study would seem to constitute a warning to the present researcher; however, it is important to point out that Moore and McClean's sample consisted of sophomores and juniors who had made initial decisions concerning careers.

In contrast, other studies (Mansfield, 1973; Walsh and Hanle, 1975) support the use of the CMI. In a study conducted by Jones, et.al. (1976), correlation analysis was computed to determine whether vocational maturity and self-concept were significantly related with Holland's six vocational preference categories. A simple regression analysis revealed that the relationship between vocational maturity and self-concept was weak but significantly related to the Realistic, Social, Conventional and Artistic preferences.

Although career maturity has received much attention in the literature, vocational and educational undecidedness constitutes another major presenting problem for students receiving career counseling. This variable represents another criterion which was used to measure treatment effect of the current experiment.

Vocational Undecidedness

One of the major goals of guidance is the development of clients' decision-making behavior (Gelatt, 1962; Harman and Dutt, 1974). The counseling process is aimed at helping them achieve more realistic

choice-making based on consideration of relevant information, weighing of alternatives and arriving at their final goal. In a study to test the effect of planned reinforcement counseling on client decision-making behavior, Ryan and Krumboltz (1964) randomly assigned 60 male college students to three treatment groups: 1) decision group in which clients' decision responses were reinforced; 2) deliberation group, in which clients' deliberation responses were reinforced; and 3) a control group, in which neither decision nor deliberation responses were reinforced. The study demonstrated that counselors have the power to influence the clients' tendency to make either decision or deliberation responses; and that behavior modification in a counseling setting generalizes to a non-counseling environment.

A concept closely related to vocational decision-making and decisiveness is the action of seeking information relating to vocation.

Vocational Information-Seeking Behavior

A virtually unchallenged notion in vocational counseling is that the acquisition of occupational information is pertinent to career decision-making. Hoppock (1967) has stated succinctly, ". . . the wise choice of an occupation requires accurate information about what occupations are available, what they require and what they offer (p. 8)." The value of occupational information in communicating knowledge about the psychosocial aspects of the world of work has been stressed by Gibbons and Lohnes (1968). Elaborating on the same theme, Osipow (1968) conveyed that occupational information can contribute toward clarifying career choices for a counselee. Other

writers (Williamson, 1965; Magoon, 1964; Tyler, 1969) have commented on the counselor's responsibility in assisting individuals to obtain occupational information. This favorable attention accorded the role of occupational information in career counseling has prompted researchers concerned with counseling for behavioral change to seize upon information-seeking behavior as a criterion for evaluating vocational counseling.

The criteria behavior for Krumboltz and Thoresen's (1964) investigation consisted of the frequency and variety of student information-seeking behavior which occurred outside the counseling interview during a three-week period of time after the first counseling interview. Some 192 high school juniors were randomly assigned to individual and group counseling settings. The four procedures used with the groups were: 1) reinforcement of verbal information-seeking behavior, 2) presentation of a tape-recorded model interview followed by reinforcement counseling, 3) presentation of film or filmstrip plus discussion as a control method, and 4) inactive control.

For each subject two scores were derived from the interview protocol, the frequency of information-seeking behavior and the variety of those behaviors. The frequency refers to the total number of actions, e.g., writing to four different colleges for catalogues would give a frequency of four. The variety referred to the number of different types of such behaviors.

Results from the study indicated that model-reinforcement and reinforcement counseling produce more external information-

seeking behavior than control procedures; and with a male model, model-reinforcement counseling surpassed reinforcement counseling for males but not for females. Group and individual settings were about equally effective on the average.

Group reinforcement counseling was used with a sample of undecided college students who were categorized according to measures of consistent-inconsistent vocational patterns and vocational maturity-immaturity (Aiken and Johnson, 1973). Forty-six students were assigned to the experimental group which was divided between two counselors. Counseling groups consisted of four to six members who attended two to three 90-minute group sessions. Information-seeking behavior was the criterion for this study. An unanticipated result of this study was that the consistent subjects were inclined to increase their information-seeking behavior more than the vocationally inconsistent subject.

Another study (Borman, 1972) used information-seeking behavior as a criterion measure in determining the effects of a reinforcement style of counseling. The experiment demonstrated that the effectiveness of certain techniques in producing information-seeking behavior varies with different levels of motivation for educational and vocational planning. The significant interaction between treatment and motivation seems to justify such a conclusion. For the more motivated students the educational and vocational guidance treatment appears to have more effectiveness, while the individual counseling-reinforcement treatment seems to be more appropriate for the less motivated student.

Summary

Effectiveness of career counseling has been found in the area of group counseling as well as the individual interview. Research indicates that vocational group techniques are not only needed to assist students with career choices and decision-making skills, but they can be successfully implemented in the college setting. Although it has not been used with an all-Black population, the LPW has enjoyed research outcomes that have shown growth and change in the participants.

The SDS offers what might well be a preferable alternative to traditional counseling. At face value the SDS appears equally suitable for high school and college students. Its superiority in terms of how many individuals one counselor can serve is easily demonstrated. Perhaps the SDS's most unique feature, however, is that it blends together a theory of vocational choice with a procedure for arriving at a vocational choice.

Although vocational literature pictures the Black student as vocationally-handicapped, the more insightful researcher sees him as an individual who faces the common career-related crises and who can respond positively to career exploration experiences.

To adequately measure the effectiveness of vocational counseling interventions, appropriate criteria must be considered. Career maturity constitutes one such measure. It has been operationally defined, extensively researched and shown to be amenable to counseling intervention techniques. Vocational undecidedness and vocational information-seeking behaviors are obvious desirable outcomes of a

vocational counseling experience.

In the following chapter the researcher will describe the specific methodology used in the investigation of selected career counseling treatment methods of the current study.

Chapter 3

Methodology

This study was undertaken for the purpose of discovering the differential aspects of various methods of career counseling on the career maturity, vocational undecidedness and vocationally-related activities of a select group of college freshmen. In this chapter the researcher will describe the subjects, their particular setting, the instruments that were used to measure the variables in question, the treatment models applied, the procedure of data collection, the mechanics of the research design and the method of statistical analysis.

Subjects and Environment Description

The all-Black group of 48 second-semester freshmen who participated in this experiment were enrolled in the Freshman Interdisciplinary Program at Hampton Institute in Hampton, Virginia.

Founded in 1868, Hampton Institute is a small, private, independent, predominantly Black, residential academic community. The six Academic Divisions of the College and its 26 departments accommodate the 2,734 students from 35 states and nine foreign countries. These students do not represent any particular geographic area. The majority come from large urban areas such as New York, Boston, Philadelphia, Chicago, Baltimore, Washington, D.C., and New Jersey. Some come from Virginia, North Carolina and the Virgin Islands. Their parents represent varied occupational and social strata.

The present admissions policy at Hampton Institute has the following criteria:

1. General high school average of "C" or better.
2. Combined SAT scores of 750 or above, or a comparable American College Testing (ACT) score.
3. Standing in the upper half of the high school graduating class.
4. Recommendations of high school principal, guidance counselor, and outstanding community leader.

In addition, a number of "high-risk" students are admitted to the College at the discretion of the Admissions Committee. This permits students with poor academic backgrounds to pursue a limited curriculum (12 hours). The average I.Q. for "high-risk" students is 95, while the average I.Q. for the regular freshman is 100. SAT scores range from 460 to 950 for "high-risk" students and from 490 to 1,130 for regularly admitted freshmen

The Freshman Interdisciplinary Program (FIP) is an integrated course taught by a team of teachers, composed of instructors selected from each of the three departments which offer the traditional courses in Oral Communication, English and History. All of these courses are currently required of entering freshmen. These teachers operate as a teaching team to unify and focus the content of their respective components in terms of the thematic structure of the course overall. FIP is divided into two sections which meet five two-hour sessions per week.

Although not statistically randomly selected from the freshman population, the co-ordinators of FIP, with the assistance of the Office of Freshman Studies, selected these 48 students with the notion of their being representative of the freshman class. All of the FIP students, 20 males and 28 females, ranging in ages from 18 to 21, participated in the study; there were 16 "high-risk" students among the group.

Instruments

The instruments used in this investigation were chosen on the basis of their appropriateness to the type of experiment undertaken and to the particular subjects who were treated. By the review of research in Chapter 2, it was illustrated that these instruments have been used to evaluate numerous research projects under conditions which were similar to the current study.

Career Maturity Inventory

The Career Maturity Inventory (formerly entitled the Vocational Development Inventory) was constructed by Crites (1973) to measure the maturity of attitudes and competencies that are critical in realistic career decision-making. The Attitude Scale, composed of 50 items in a true-false format, reflects five attitudinal clusters which are specifically: involvement in the career choice process, orientation toward work, independence in decision-making, preference for career choice factors, and conceptions of the career choice process.

In contrast, the Competance Test, consisting of five parts, measures the more cognitive factors involved in choosing a career. According to Crites (1973), these include: "how well the individual

can appraise his job-related capabilities (strengths and weaknesses); how much he knows about the world of work; how adept he is in matching personal characteristics with occupational requirements; how insightful he is in planning a career; and how effectively he can cope with the problems which arise in the course of career development (p. 3)."

Analyses of the reading difficulty of the CMI set an effective "floor" (sixth grade level) for administration of the inventory; however, large testings of college students have indicated that there is a sufficient "ceiling" to administer it to college sophomores and juniors and even selected seniors, primarily those who are still undecided about their careers.

According to Crites (1973), although the possibility of sex differences on the CMI still exists, it appears to apply equally to males and females. This inventory is applicable to a wide range of groups, differing in curricular, demographic, and racial characteristics.

Reliability for the scales has been reported in terms of internal consistency with values averaging .74; the highest reported an .84 and the lowest a .65. Crites (1974) proposes that these reports are consistent with the expectations for a factorially complex inventory such as the CMI, whose internal consistency should be expected to be less than a uni-dimensional scale. Test-retest reliability over a year's time has been ascertained as .71. The validity of the scales has been established with regard to: content validity by selecting of appropriate test material by expert judges; criterion-related validity by correlations with relevant variables

and other scales; and construct validity by correlation with intellectual and nonintellectual variables.

Scale of Vocational Indecision

Osipow and Carney's (1976) Scale of Vocational Indecision attempts to measure the various aspects of vocational undecidedness (see Appendix A). This questionnaire dealing with 16 distinctive antecedents of educational and/or vocational indecision was devised, based on interview experience with clients. Presumably, the presence of any of these 16 aspects of indecision would potentially reduce the individual's ability to make an appropriate and required degree of commitment to an educational and vocational direction. Responses to the items are made on a scale of 4 (exactly like me) to 1 (not at all like me).

The 16 indecision items were intercorrelated and factor-analyzed, based on data drawn from a sample of 837 students. The four factors that emerged explained 81.3% of the total variance. Factor I appears to have two basic elements involving a lack of structure and confidence on the part of the subject in approaching the task of vocational decision-making and choice anxiety, both potentially leading to avoidance of a choice. Factor II suggests the presence of perception of some external barrier to a preferred choice and questions about alternative possibilities on the part of the subject. Factor III seems to imply an "approach-approach" problem where the subject has difficulty deciding from among a number of attractive alternatives. Factor IV indicates that there is some kind of personal conflict regarding how to make a decision.

An item by item test-retest Pearson correlations are generally high, ranging from .343 to .820. Also, taken from two untreated samples, the test-retest correlations for the overall scores were .902 and .819 respectively. Generally, the results indicate the scale is reliable, appears to discriminate career-decided from career-undecided students, and is responsive to interventions designed to alleviate educational-vocational indecision.

Vocational Checklist

The Vocational Checklist, revised by Krivatsy and Magoon (1976), is a version of the Vocational Guidance Questionnaire (Zener and Schnuelle, 1972) on which subjects record frequency and variety of vocational information-seeking behaviors (see Appendix B). The items deal with commonly-used vocational outcome variables such as time spent thinking about an occupation, need for more information, number of occupations being considered, need to see a counselor, vocational maturity, satisfaction with vocational choice and plans, satisfaction with treatment and understanding of the relationship between occupations and personality. These variables were similarly employed in earlier outcome research studies (Krumboltz and Thoresen, 1964; Thoresen, Zener and Schnuelle, 1972).

California Psychological Inventory

In constructing the California Psychological Inventory, Gough (1975) had a two-pronged goal: to develop descriptive concepts which possess broad personal and social relevance, and to devise brief, accurate and dependable subscales for the identification and measurement of the variables chosen for inclusion in the inventory.

The instrument is intended primarily for use with "normal" subjects and its scales are addressed to personality characteristics important for social living and social interaction. The 18 scales are grouped for convenience into four broad categories, bringing together those having related implications.

The Class I category measures poise, ascendancy, self-assurance, and interpersonal adequacy. Subscales included are: dominance, capacity for status, sociability, social presence, self-acceptance, and a sense of well-being. The Class II category, reflecting socialization and certain intrapersonal values, reports measures of the following subscales: responsibility, socialization, self-control, tolerance, good impression and communality. The Class III category measures achievement via conformance, achievement via independence, and intellectual efficiency. In the Class IV category, the subscales of psychological-mindedness, flexibility and femininity are included.

One reliability study using the test-retest method reported ten of the 18 scales reaching .80 to .87 coefficients. The correlations in this group were as high as those generally found in personality measurement. Another study using high school students reported more modest coefficients; however, this may reflect in part the differing rates of maturation. Evidence of validity is drawn from cross-validated studies. Buros (1972) reports some 370 studies using the CPI.

Treatment of Subjects

The 48 subjects were randomly assigned to one of the following four experimental conditions: 1) Experimental Group I used the format

of the Life Planning Workshop, 2) Experimental Group II was given the Self Directed Search plus two individual counseling sessions, 3) Experimental Group III took the SDS with no further counseling, and 4) Group IV (no treatment) served as a control group.

Life Planning Workshop

The LPW (see Appendix C) is a structured group experience which emphasizes getting to know oneself and choosing and finding one's place in life. The group process involves a series of structured activities which are typically completed in a one-day session (6 hours). However, the treatment of Experimental Group I was three two-hour weekly sessions (6 hours total). The 12 subjects were divided into two smaller groups which were led by trained facilitators. The participants in the groups were encouraged to act as consultants to one another, and to intervene, reflect, probe and even push to help others examine their future.

The workshop exercises designed to help the subjects clarify and identify their roles in life, and to think constructively and realistically about the future, are summarized in the following paragraphs:

Life Line. Participants schematically, on paper, separate their lives into two parts, past and future, with a focus on the future. Discussion centers around how much living remains, rather than dwelling on past failures or accomplishments. This exercise helps to guide the subjects' thinking ahead.

Identification and Stripping of Roles. This exercise involves the identification of significant roles in the lives of the partici-

pants (i.e., husband, father, student, son) and arrangement of these roles in a hierarchy of importance. Then each person is asked to "strip" himself of each role. Following the removal of each role will be a discussion of the individual feelings resulting from the loss of the role. This exercise is designed to help individuals recognize the influence of specific roles on their lives and on their future plans.

Typical Day and Special Day of the Future. Each person, while free of roles, is asked to create his own future. The subject writes a brief description of a typical day and of a special day of himself in the future, and shares them with the rest of the group. The group members are encouraged to help each other by looking for inconsistencies, by examining the realistic aspects of the person's goals, as well as those parts which may be too idealistic, and by examining the possibility of his imaginations coming true. This exercise, together with the role-stripping, is intended to help the person see the impact that his roles have in molding his future, and to perhaps facilitate a re-examination of his roles in terms of what he really wants for himself.

Life Inventory. In this activity a series of questions are posited for the participant's reaction (i.e., "things I do badly and would like to stop doing; things I do well . . ."). The purpose of this exercise is to have the individual focus on specific areas where change may be desired, as well as the recognition of positive traits. It serves as a preliminary goal-setting experience.

Values Auction. Each participant is given a hypothetical \$5,000 to use in this auction. He is told to rank his personal values

and budget the amount he plans to spend on each one. A mock auction is then held, auctioning off each item to the highest bidder. This exercise assists the participant in becoming aware of his values and gives him practice in integrating these values.

Reassume Roles. Participants are asked to reassume the roles they have discarded, or to substitute other roles they may now wish to have in place of one or more of the original ones. This procedure accentuates any changes that the participants have seen fit to make during the workshop and gives them a real sense of involvement in decision-making about their future.

Goal Setting. Each individual is asked to write down specific behaviors that he can perform, both immediately and in the near future, in order to actively direct himself toward future goals. The important aspect of this exercise is the individual's own involvement in implementing change and orientation toward his desires.

At the end of the group sessions, the participants were given a list of campus vocational information sources. Vocational aids such as the Dictionary of Occupational Titles and the Occupational Outlook Handbook were at the subjects' disposal.

Self Directed Search for Educational and Vocational Planning

According to Holland (1972), the SDS is a "self-administered, self-scored and self-interpreted vocational counseling tool (p. 3)." The instrument has two primary objectives: 1) to allow a counselor to serve many more people with educational-vocational problems; and 2) to "provide a vocational counseling experience for people who do

not have access to professional counselors, or who cannot afford their services (p. 3)." The SDS is composed to two booklets, one of which is a list of occupations coded with three letters according to Holland's (1966) personality theory. The examinee fills out the former booklet to the best of his ability and obtains a three-letter code which is then compared to the occupations listed in the occupational classification booklet which is keyed with the same three letters.

The validity of the SDS is based on Holland's six personality types--Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Through the use of the five test sections (occupational daydreams, activities, competencies, occupations, and self-estimates), Holland attempts to form a code of three of the six personality types which best express the subject's interests and experiences. Holland (1971) provided reliability coefficients (KR-20) for individual scales ranging from .53 to .87 for men and women. O'Connell and Sedlacek (1971) provided test-retest reliabilities of summary codes over a 7-10 month period for 65 college freshmen of .75 (Pearson), .92 (Spearman-Rho) and .87 (average common elements).

Experimental Group II was given the SDS; they were also given a list of campus vocational information sources and the Dictionary of Occupational Titles and the Occupational Outlook Handbook were available for them to consult. During the two consecutive weeks following the administration of the SDS, Group II received individual counseling (two 45-minute sessions) by their respective faculty members who teach in the Freshman Interdisciplinary Program. Prior

to this counseling these faculty members received a training program as outlined below:

1. Reading the Manual for the SDS.
2. Experimenter gave an informal lecture followed by discussion of Holland's theory.
3. Taking the SDS themselves.
4. Discussing the results with the experimenter.
5. Being present when the SDS was administered to the subjects of Group II and III.
6. Obtaining a score of at least 90% on the self-test for administrators on the SDS (Holland, 1972).

Experimental Group III was given the SDS at the same time as it was given to Group II. The subjects (Group III) were also given a list of campus vocational sources and exposed to the Dictionary of Occupational Titles and the Occupational Outlook Handbook; however, they received no further counseling.

Group IV (control group) was told they were acting as a control condition for the experiment. However, after the data were collected for the study, this group was given an opportunity to take the SDS and received counseling by the experimenter.

Collection of Data Procedure

Two weeks after the group process (Experimental Group I) and individual counseling sessions for Group II were completed, all subjects were administered the instruments chosen to evaluate the differential effects of the above-described treatments. Two consecutive class periods were used to administer the CPI and the

CMI. The SVI and the VC were given to the students to take home, fill out, and return. All data were collected within 3-5 days.

Experimental Design

The present study used a Posttest-Only Control Group Design (Campbell and Stanley, 1963) outlined as follows:

R	X_1	(Group I, LPW)	O_1
R	X_2	(Group II, SDS + Coun.)	O_2
R	X_3	(Group III, SDS)	O_3
R	X	(Group IV, control)	O_4

This design adequately satisfied internal validity demands. In terms of external validity, however, the randomized selection of subjects was impossible and therefore, the results were not generalizable beyond a similar population of college students.

Subjects were assigned randomly to the three experimental groups and the control condition. The control group gave the comparability required. The random assignment provided assurance that the groups were statistically equal and that systematic sources of variance were eliminated.

The procedure for randomized assignment of subjects to experimental and control groups included the following (Kerlinger, 1973): 1) the generation of a computerized random list of numbers 1-48; 2) the placement of the numbers 1-48 alternately into four groups as they turned up in random order; and 3) random assignment of these four groups to the treatments. In assigning the groups to treatments, first the groups were labeled #1, #2, #3, and #4. These numbers were then drawn from a table of random numbers (see Appendix D)

and assignment to experimental condition A (LPW), experimental condition B (SDS plus counseling), experimental condition C (SDS) and experimental condition D (control) followed according to their position in the random order. Each subject was assigned a number prior to the study. His number was the number that came up next in the random order list of numbers 1-48. For the purpose of illustration, if numbers 14, 17, 1, 2 and 42 represented the first five numbers in the random list of numbers; the first subject was assigned #14, the second #17 and so on. This assured adherence to the randomized assignment procedure (see Appendix D for random order list).

Statistical Method of Analysis

Various statistical methods were used in the treatment of data testing specific hypotheses:

Hypothesis I: After raw scores on the two scales of the CMI were obtained by hand scoring each subject's inventory, a t-test was applied to the data to determine if significant differences existed between experimental groups and the control group on the variables of attitude and competence. Hypothesis I-A: Data from the experimental groups were subjected to a one-way analysis of variance. Galfo and Miller (1970) state that this variance technique "provides a statistical method for determining if variations that appear among groups can be attributed to sampling error or to varying conditions (p. 163)." The one-way ANOVA was applied to determine if any significant differences existed among experimental groups.

Hypothesis II: Mean level of SVI scores (lower scores indicated less vocational undecidedness) were determined and a t-test was applied to the data to determine if there existed a significant

difference between experimental groups and the control group on the criterion of vocational indecision. Hypothesis II-A: The data from the experimental groups were subjected to a one-way ANOVA to determine if there were any significant differences among groups.

Hypothesis III: Total numbers of vocational information-seeking behaviors were obtained from the VC responses for the experimental groups and control groups. The mean level of the experimental groups was statistically compared with the mean level of the control group by a t-test in order to determine significant differences. Hypothesis III-A: A one-way ANOVA was applied to the means of the individual experimental groups to determine if statistical differences existed among the groups.

Hypothesis IV: To test the relatedness between the CMI and specific scales of the CPI, the Pearson Product Moment correlations were applied to the scores from those scales.

Hypothesis V: The means of the female scores on both parts of the CMI were compared with the male scores by submitting the data to a t-test in order to determine if there existed a statistically significant difference between the two groups.

All hypotheses were tested using a .05 level of significance.

Chapter 4

Results

This study assessed the differential effects that completion of the SDS, group vocational counseling, and the SDS experience paired with individual counseling had on post-treatment measures of career maturity, vocational undecidedness and vocational information-seeking behavior. An all-Black sample of 48 college freshmen were randomly assigned to these treatment conditions and one non-treated control group. All groups were equal in size. Treatment Group 1 participated in the LPW, a group counseling experience; Group 2 was administered the SDS and received individual counseling; Group 3 completed the SDS but had no further counseling. Two weeks following exposure to the treatment, appropriate inventories which indicated levels of career maturity, vocational undecidedness and frequencies of career-related activity were given to all subjects.

Specifically, this investigation was addressed to the following major research questions:

1. Is there any significant difference in the career maturity of treated groups and the non-treated group which can be attributed to the completion of the SDS, a group procedure or the SDS with individual counseling as determined by the subjects' scores on the CMI? Will there emerge any significant differences in career maturity among the experimental groups which can be attributed to these treatment methods?

2. Is there any significant difference in the vocational undecidedness of experimental subjects and control subjects which can be attributed to the SDS treatments or the group process as determined by the subjects' scores on the SVI? Are there any significant differences in vocational undecidedness (as defined by the SVI) among the treated groups which can be attributed to these treatment methods?

3. Is there any significant difference in the frequency of vocational information-seeking behavior of the treated subjects and the control group subjects that can be attributed to the SDS, the SDS with counseling or the group process method as determined by subjects' scores on the VC? Are there significant differences in the frequency of vocational information-seeking behavior (as defined by the VC) among the treated groups which can be attributed to these treatment conditions?

4. Is there a significant correlation between career maturity as determined by scores on the CMI, and the personality variables of self-acceptance, a sense of well-being, achievement and intellectual efficiency as indicated by scores on the subscales of the CPI?

5. Is there a significant difference in career maturity of female subjects and male subjects as determined by scores on the Attitude Scale and Competence Test of the CMI?

Questions 1, 4 and 5 which deal with career maturity in this study can each be considered in subparts based on the two scales of the CMI. The major hypotheses generated from the preceding questions were tested using a Posttest-Only Control Group Design (Campbell and

Stanley, 1963). The data to test for differences between treated and non-treated subjects were subjected to a t-test. A one-way analysis of variance was performed on the data to determine the differences among the treated groups. To test for relatedness between career maturity and selected personality variables, Pearson correlations were applied to the data.

For the balance of this chapter the statistical results of the current study are presented by hypotheses.

Hypothesis I

Hypothesis I stated that subjects in the experimental groups would score statistically significantly higher on the CMI than the subjects in the control group. To test the subparts of hypothesis 1, posttest data obtained from each of the scales on the CMI were separately subjected to a t-test. After this statistical test had been carried out with regard to each scale these analyses produced the following T values: a) Attitude Scale T=2.93, and b) Competence Test T=1.91. The T value for the Attitude Scale was statistically significant at the .05 level; however, the T value of the Competence Test did not reach a .05 level of significance. Table 1 presents the means and standard deviations of the variable under consideration in terms of the control and experimental groups for the Attitude Scale and Competence Test. The CMI raw scores utilized in each of these analyses are reported in Appendix E.

The research hypothesis that subjects in the experimental groups would score statistically significantly higher on the CMI than subjects in the control group was accepted for the Attitude

Table 1
 Hypothesis 1--T-Test of Control and Experimental Group Scores on the
 Career Maturity Inventory Attitude Scale (CMI-A)
 Competence Test (CMI-T)*

		CMI-A			
	Mean	Standard Deviation	Degrees of Freedom	T	2-tail Prob.
Exper. Groups (n=36)	39.555	2.772			
			46	3.47	.001
Control Group (n=12)	36.000	3.885			
CMI-C					
Exper. Groups (n=36)	74.555	8.182			
			46	1.85	.071
Control Group (n=12)	69.583	7.704			

* This analysis reflects the use of raw scores.

Scale but rejected for the Competence Test. The experimental group Attitude Scale scores were shown to be significantly higher than the control group scores at the .05 level. The Competence Test Scores of the experimental group, however, failed to reach a .05 level of significance and therefore cannot be considered to be statistically significantly higher.

A one-way analysis of variance was performed on the CMI scores of the three experimental groups to determine if there existed any statistically significant differences among the groups on the variable of career maturity, as stated in Hypothesis I-A. After the ANOVA had been applied to the data from each of the scales the analyses produced the following F ratios: a) Attitude Scale $F=2.039$, and b) Competence Test $F=.891$. These F values are not significant at the .05 level. Table 2 presents information relevant to each analysis of variance used in testing the differences among groups.

Hypothesis I-A, stating that there would be statistically significant differences among the experimental groups in terms of career maturity as determined by the Attitude Scale and Competence Test of the CMI was rejected. There were no statistically significant differences among the three treatment conditions at the .05 level of significance. The CMI raw scores used are found in Appendix E.

Hypothesis II

Hypothesis II stated that the SVI scores of the subjects in the experimental groups would be statistically significantly lower, indicating less vocational undecidedness, than the subjects' scores in the control group. To test this hypothesis, posttest data were

Table 2
 Hypothesis 1-A-One-way Analysis of Variance of Experimental
 Groups on the Career Maturity Inventory
 Attitude Scale and
 Competence Test*

CMI-I					
Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	F Prob.
Between Groups	2	29.570	14.785	2.039	0.1463
Within Groups	33	239.333	7.252		
Total	35	268.903			

CMI-C					
Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	F Prob.
Between Groups	2	120.083	60.041	0.891	0.4197
Within Groups	33	2222.831	67.358		
Totals	35	2342.914			

*This analysis reflects raw scores used.

subjected to a t-test. The analysis following this statistical test produced a T value of -4.23. This T value is significant at the .05 level. Table 3 presents the means and standard deviations of the variable under consideration for the experimental and control groups.

The research hypothesis that the SVI scores of the subjects in the experimental groups would be statistically significantly lower than the subjects' scores in the control group was accepted. The experimental group scores were statistically significantly lower at the .05 level.

A one-way analysis of variance was performed on the SVI scores of the three experimental groups to determine if there existed any statistically significant differences among the groups on the variable of vocational indecision as stated in Hypothesis II-A. After an ANOVA had been applied to the data obtained from the three treatment groups analysis produced a F ratio of 2.168. This F value is not significant at the .05 level. Table 4 presents the information relevant to the analysis of variance used in testing the differences among groups.

Hypothesis II-A, stating that there would exist statistically significant differences among groups on the variable of vocational undecidedness was rejected. The computed differences among the groups did not reach the .05 level of significance.

Hypothesis III

Hypothesis III stated that there would be a greater frequency of vocational information-seeking behaviors among the subjects in the experimental groups than the control groups. To test this hypothesis,

Table 3
 Hypothesis II--T-Test of Control and
 Experimental Group Scores on the
 Scale of Vocational Indecision

	Mean	Standard Deviation	Degrees of Freedom	T	2-tail Prob:
Exper. Groups (n=36)	1.538	0.439			
			46	-4.39	0.001
Control Group (n=12)	2.192	0.472			

Table 4
 Hypothesis II-A-One-way Analysis of Variance
 of Experimental Groups on the Scale
 of Vocational Indecision

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	F-Prob.
Between Groups	2	0.783	0.391	2.168	0.130
Within Groups	33	5.954	0.184		
Total	35	6.737			

the subjects' total frequencies were computed and the data were subjected to a t-test. The analysis following this statistical test produced a T value of 6.72. This T value is significant at the .05 level. Table 5 presents the mean and standard deviations of the variable under consideration for the experimental and control groups. The Vocational Information-Seeking Behavior Checklist raw scores used in this analysis are reported in Appendix F.

The research hypothesis that there would be a greater frequency of vocational information-seeking behaviors among subjects in the experimental groups than the control group was accepted. The experimental group's scores were statistically higher at the .05 level of significance.

A one-way analysis of variance was performed on the total scores of the subjects in the three experimental groups to determine if there existed any statistically significant differences among groups in the frequency of information-seeking behavior, as stated in Hypothesis III-A. After the ANOVA had been applied to the data the analysis produced an F ratio of 1.444. This F value is not significant at the .05 level. Table 6 presents the information relevant to the analysis of variance used in testing the differences among groups.

Hypothesis III-A, stating that there would be a statistically significant difference among experimental groups in the frequency of vocational information-seeking behavior was rejected. The computed differences among the groups did not reach the .05 level of significance.

Table 5
 Hypothesis III-A--T--Test of Control and Experimental
 Group Scores on the Vocational Information-
 Seeking Behavior Checklist

	Mean	Standard Deviation	Degrees of Freedom	T	2-Tail Prob.
Exper. Groups (n=36)	13.750	2.998			
			46	6.03	0.001
Control Group (n=12)	8.000	2.412			

Table 6

Hypothesis III-A-One-Way Analysis of Variance of
 Experimental Groups on the Vocational
 Information-Seeking Behavior
 Checklist

Source	Degrees of Freedom	Sum of Squares	Mean Squares	F	F-Prob.
Between Groups	2	25.167	12.583	1.444	0.250
Within Groups	33	287.583	8.715		
Total	35	312.750			

Hypothesis IV

Hypothesis IV states that a statistically significant correlation will exist between scores of self-acceptance, a sense of well-being, achievement and intellectual efficiency on the CPI and scores on the CMI. To test the subparts of this hypothesis, posttest data from the five appropriate CPI scales and the CMI Attitude Scale and Competence Test were subjected to a Pearson Product Moment correlation. After computations were accomplished with regard to each scale, these analyses produced the following correlation coefficients with the Attitude Scale: self-acceptance $r = .252$; sense of well-being $r = .261$; achievement via conformance $r = .290$; achievement via independence $r = .388$ and intellectual efficiency $r = .525$. Correlations with the Competence Test of the CMI indicated the following coefficients: self-acceptance $r = .319$; sense of well-being $r = .183$; achievement via conformance $r = .290$; achievement via independence $r = .319$ and intellectual efficiency $r = .420$. The correlations of self-acceptance with CMI-C, achievement via conformance with CMI-A, achievement via independence with CMI-A, achievement via independence with CMI-C, intellectual efficiency with CMI-A and intellectual efficiency with CMI-C reflected significant coefficients reaching the .05 level. The three correlations which exceeded the required .05 level and reached a .01 level of significance were: achievement via independence with CMI-A, intellectual efficiency with CMI-A and intellectual efficiency with CMI-C. Table 7 presents the information relevant to the Pearson Product Moment used in these correlations.

Table 7
 Hypothesis IV--Pearson Correlation Coefficients
 of the Career Maturity Inventory and the
 California Psychological
 Inventory Raw Scores

	CMI-A	CMI-C
Self-Acceptance	0.252	0.319*
Sense of Well-Being	0.261	0.183
Achievement via Conformance	0.290*	0.137
Achievement via Independence	0.388**	0.319*
Intellectual Efficiency	0.525**	0.420**

* $p. < .05$

** $p. < .01$

The CMI and CPI raw scores utilized in each of these analyses are reported in Appendices E and G, respectively.

The research hypothesis that there would exist a statistically significant correlation between scores of self-acceptance, a sense of well-being, achievement and intellectual efficiency on the CPI and scores on the CMI was accepted in regard to the correlations of achievement via conformity, achievement via independence and intellectual efficiency with the Attitude Scale of the CMI; and the correlations of self-acceptance, achievement via independence and intellectual efficiency with the Competence Test of the CMI. The coefficients of these correlations reached the .05 level of significance.

Hypothesis V

Hypothesis V stated that female scores would be statistically significantly higher than male scores on the CMI. To test the subparts of this hypothesis, posttest data obtained from the scales on the CMI were separately subjected to a t-test. After this statistical test had been carried out with regard to each scale, these analyses produced the following T values: a) Attitude Scale T = -0.53, and b) Competence Test T = 0.55. Neither of the T values was statistically significant at the .05 level. Table 8 presents the means and standard deviations of the variable under consideration in terms of the sex identification of the subjects. The CMI raw scores by sex used in each of these analyses are reported in Appendix H.

The research hypothesis that female scores would be statistically significantly higher than male scores on the CMI was rejected. The

Table 8
Hypothesis V--T-Test of Male and
Female Scores on the Career
Maturity Inventory

CMI-A					
	Mean	Standard Deviation	Degrees of Freedom	T	2-Tail Prob.
Male (n=23)	38.391	4.218			
			46	-0.53	0.599
Female (n=25)	38.920	2.532			
CMI-C					
Male (n=23)	74.000	8.141			
			46	0.55	0.586
Female (n=25)	72.680	8.513			

female scores were not shown to be statistically higher in regard to career maturity than male scores at the .05 level of significance.

Additional Analyses

In this section, findings not directly associated with the research hypotheses but pertinent to the scope of vocational counseling techniques are presented. Satisfaction with treatment as reported by the subjects was explored by comparing mean scores of experimental groups on item #26 of the Vocational Information-Seeking Behavior Checklist. The relationship of vocational undecidedness and the frequency of information-seeking behavior was also examined. The observations relating to these two areas are now reported.

Treatment Satisfaction

Upon examining the differential effects of group counseling and the SDS, the present researcher asked: Is there a statistically significant difference in regard to satisfaction with treatment method among experimental groups as reported by subjects on the VC?

Treated subjects indicated satisfaction with treatment on item #26 of the VC by reporting a value of 1 to 5 (5 representing highest satisfaction). The experimental groups' scores of this item were subjected to a Kruskal-Wallis one-way analysis of variance. Nie and Hull (1977) state concerning this statistical test of difference in medians:

This extension of the Mann-Whitney Test is a very useful alternative to the parametric F-Test (i.e., one-way analysis), since the F-test is sensitive to deviations from normality. . .

All cases from the K groups are ranked in a single series. If the K populations are the same, no group should be very much different from another in terms of the sum of ranks within the groups. The rank sum is computed for each group. From these, the Kruskal-Wallis H statistic is computed, which has approximately a chi-square distribution (p. 53).

After computation was carried out a chi-square of .097 was reported. This result was not found to be significant at the .05 level. Table 9 presents the mean ranks of the variable under consideration in terms of the experimental groups. Item #26 raw scores are reported in Appendix I.

This analysis suggests that the experimental groups are not statistically significantly different in regard to their perceptions of satisfaction with treatment.

Relationship of Vocational Undecidedness and Frequency of Vocational Information-Seeking Behavior

In order to determine what statistically significant correlation existed between the variables of vocational undecidedness and frequency of vocationally-related behavior, a Pearson Product Moment was applied to data obtained from the experimental groups' responses on the SVI and the VC. After computation was completed a correlation coefficient of -0.382 with a significance probability of .004 was reported. This analysis suggests an inverse relationship between vocational undecidedness and frequency of vocational information-seeking behavior which is statistically significant at the .05 level.

Table 9

Additional Analysis--The Kruskal-Wallis One-Way
 Analysis of Variance of Experimental Groups
 on Satisfaction with Treatment

	<u>Mean Rank</u>	<u>Chi-Square</u>	<u>Significance</u>
LPW (n=12)	19.13		
SDS + Coun. (n=12)	18.58		
SDS	17.79		
		0.097	0.953

Summary

The primary findings presented in this chapter were derived from the testing of five research hypotheses. It was found that experimental groups scored statistically higher than did the control group on the Attitude Scale of the CMI; however, the scores of the experimental groups were not found to be statistically significantly higher than control group scores on the Competence Test of the CMI. No statistically significant differences were observed among the treatment groups on the measure of career maturity. Experimental group scores on the SVI were shown to be statistically significantly lower (indicating less undecidedness) than control group scores; however, no statistically significant differences on the SVI scores were found among the experimental groups. A statistically significantly greater frequency of vocational information-seeking behavior was reported by the experimental groups than was reported by the control group; no statistically significant differences were found in frequency of vocational information-seeking behavior as reported by the subjects among the experimental groups. Statistically significant positive correlations were found to exist between the personality variables of achievement via conformance, achievement via independence and intellectual efficiency, as indicated by the CPI, and career maturity, as indicated by the CMI-A. Statistically significant correlations were found to exist between the CPI subscales of self-acceptance, achievement via independence and intellectual efficiency and the CMI-C. Female scores on the CMI Attitude Scale and Competence Test were not found to be statistically significantly

higher than male scores.

Incidental findings included: 1) No statistically significant differences existed among the experimental groups in regard to satisfaction with treatment, and 2) a statistically significant inverse relationship was found to exist between vocational undecidedness and frequency of vocational information-seeking behavior among the experimental groups.

Chapter 5

Summary, Conclusions

Implications and Recommendations

The purpose of this final chapter is for the present investigator to evaluate the results reported in Chapter 4 by summarizing the study, presenting the conclusions, and discussing the implications and recommendations for future research which seem pertinent.

Summary

Career counseling has emerged in this century as a widely practiced social service to college students. The increased demand for this service witnessed in the past decade has challenged counselors to implement group procedures and self-assessment instruments in order to extend assistance to more individuals. Although sometimes stereotyped and represented by vocational research as an anomaly, the Black student faces career-related crises and decision-making points in his vocational development which are shared in common with his white counterpart. There exists a paucity of research investigating the response of the Black student to career counseling interventions that have been used with predominantly white populations.

The primary purpose of this investigation was to assess the differential effects of group procedure, the SDS and the SDS augmented by individual counseling on career maturity, vocational undecidedness and vocational information-seeking behavior of a select group of Black college students. Forty-eight Black freshmen were randomly assigned to four groups of equal size. The groups were then randomly

assigned to three treatment conditions and one control group. The experimental methods included the LPW, a group procedure, the SDS with added individual counseling and the completion of the SDS with no further treatment.

A Posttest-Only Control Group Experimental Design was used for the study. Two weeks after exposure to the treatment methods, all subjects were given the inventories designated to measure the criterion variables.

Separate t tests were computed in comparing the mean scores on measures of career maturity, vocational undecidedness and vocational information-seeking behavior. A statistically significant difference was observed at the .05 level of confidence between treated groups and the control group on the Attitude Scale of the CMI, the Scale of Vocational Indecision and the Vocational Information-Seeking Behavior Checklist with the experimental groups scoring higher in each case. No statistically significant differences were found to exist among the experimental groups on the criterion measures of career maturity, as determined by the CMI; on vocational undecidedness as determined by the SVI; or on vocational information-seeking behavior as determined by the VC. Correlation coefficients significant at the .05 level, and in the positive direction, were detected when the Attitude Scale of the CMI was paired with the CPI subscales of achievement via conformance, achievement via independence, and intellectual efficiency. CPI subscales of self-acceptance, achievement via independence and intellectual efficiency correlated statistically significantly, and in

the positive direction, with the Competence Test of the CMI. Female scores on the CMI were not found to be statistically significantly higher than male scores on the CMI.

Conclusions

The conclusions concerning the differential effects of the LPW, the SDS and the SDS with individual counseling in terms of career maturity, vocational undecidedness and vocational information-seeking behavior as defined by this investigation will be presented by hypotheses.

Hypothesis I

The research hypothesis that the experimental groups would score statistically significantly higher on the CMI than the subjects in the control group was accepted in regard to the Attitude Scale of the CMI. The analysis of this subpart reached the required .05 level of significance. Hypothesis I was rejected on the subpart reflecting the comparison of the two groups on the Competence Test of the CMI. It was concluded that the experimental groups scored higher than the control group under the conditions of this experiment in terms of career maturity as defined by the Attitude Scale of the CMI.

Hypothesis I-A, stating that there would be statistically significant differences among experimental groups in terms of career maturity as determined by the Attitude Scale and Competence Test of the CMI was rejected. For both subparts of hypothesis I-A the null was accepted. There were no statistically significant differences among the groups on the two scales at the .05 level of significance.

It was concluded that no statistically significant differences existed among the groups under the conditions of this experiment in terms of career maturity as it was defined by the CMI.

Hypothesis II

The research hypothesis that the SVI scores of the subjects in the experimental groups will be statistically significantly lower (indicating less vocational undecidedness) than subjects' scores in the control group was accepted. The analysis indicated statistically significantly lower scores at the .05 level of significance; therefore, it was concluded that the experimental groups scored statistically significantly lower under the conditions of this study in terms of vocational undecidedness as determined by the SVI.

Hypothesis II-A, stating that there would be statistically significant differences among the experimental groups in terms of vocational undecidedness as determined by the SVI was rejected. For hypothesis II-A the null was accepted. There were no statistically significant differences among the groups at the .05 level of significance; therefore, it was concluded that no statistically significant differences existed among the experimental groups under the conditions of this study in terms of vocational undecidedness as determined by the SVI.

Hypothesis III

The research hypothesis that there would be a statistically significantly greater frequency of vocational information-seeking behaviors among the subjects of the experimental groups than the control group was accepted. The results of the t test which was

applied to test this hypothesis reached the required .05 level of significance. It was concluded that the experimental groups exhibited a greater frequency of vocational information-seeking behavior which was statistically significant than the control group under the conditions of this experiment in terms of the stated variable measured by the VC.

Hypothesis III-A, stating that there would be statistically significant differences among the experimental groups in terms of frequency of vocational information-seeking behaviors as determined by the VC was rejected. For hypothesis III-A the null was accepted. There were no statistically significant differences among the groups at the .05 level of significance; therefore, it was concluded that no statistically significant differences existed among experimental groups under the conditions of this experiment in terms of frequency of vocational information-seeking behavior as determined by the VC.

Hypothesis IV

The research hypothesis that there would exist a statistically significant correlation between scores of self-acceptance, a sense of well-being, achievement and intellectual efficiency was accepted in regard to the following correlations: CMI-A with achievement via conformance, CMI-A with achievement via independence, CMI-A with intellectual efficiency, CMI-C with self-acceptance, CMI-C with achievement via independence and CMI-C with intellectual efficiency. The coefficients of these correlations reached the required .05 level of significance. It was concluded that the Attitude Scale of the CMI statistically significantly correlated with the CPI subscales

of achievement via conformance, achievement via independence and intellectual efficiency; and that the Competence Test of the CMI statistically significantly correlated with the CPI subscales of self-acceptance, achievement via independence and intellectual efficiency under the conditions of this study.

Hypothesis V

The research hypothesis that female scores would be statistically significantly higher than male scores on the CMI was rejected. The results of the t test applied to the data did not reach the required .05 level of significance; therefore, it was concluded that female scores were not statistically significantly higher than male scores under the conditions of this experiment in terms of career maturity as determined by the CMI.

Limitations

The generalizability of the results of the current study is limited because of certain logistical concerns that existed within the framework of this investigation. The most outstanding ones are discussed here briefly.

1. The external validity of this present study is restricted by the size and characteristics of the sample. As the experimental design called for four groups, the resulting number of 12 in each group was admittedly small. Also the group was comprised of intact classes; therefore, the generalizability of the results may not be extended to other populations such as those made up of volunteers.

2. Although the subjects in the present experiment were randomly assigned to groups and the groups subsequently were randomly

assigned an experimental condition, complete randomization of the population was logistically impossible as it was necessary to use intact classes for the study.

3. Because self-reports are susceptible to "socially desirable" answers, one weakness of this present investigation was the exclusive use of self-reports. Reliability of unconfirmed reports of attitudes and behaviors is somewhat questionable.

Implications

Implications drawn from the results of this present research endeavor concern 1) the effectiveness of and satisfaction with treatment method, and 2) the personality factor as it relates to vocational development.

The effectiveness of the experimental treatments that was borne out in the current report implies that career maturity, vocational undecidedness and vocationally-related activities can be influenced by structured career counseling interventions. These analyses from the present investigation concur with earlier reports (Krivatsy and Magoon, 1976; Nolan, 1973; Avallone, 1974; Holcomb and Anderson, 1977). The lack of significance in the difference between treated and non-treated groups on the Competence Test of the CMI could be a function of the test structure rather than a reflection of the lack of treatment effectiveness. The Competence Test is a lengthy section of the CMI and students have reported informally of it being tedious to complete. The fact that many investigators have used only the Attitude Scale attests to the difficulty of administering the entire instrument as a criterion measure in evaluating career maturity.

The statistical results from the current experiment showing that the SDS treatments were as effective as the group procedure on the criterion measures does not necessarily preclude the possibility that the SDS can always be chosen as an alternative to counseling. However, these findings do tend to support other outcome studies (Smith and Evans, 1973; Krivatsy and Magoon, 1976; Graff, et.al., 1972) which report that the SDS is equally effective.

It was anticipated that the subjects in the LPW and SDS plus individual counseling groups would report a higher degree of satisfaction with treatment than subjects taking the SDS alone since the former groups received more verbal reinforcement and personal attention from facilitators, peer participants and faculty counselors. However, the absence of a difference in satisfaction with treatment among groups tends to further support the notion that the SDS is perceived by students as providing a meaningful vocational exploration experience. All in all, satisfaction with treatment across all treatment conditions was high based on a 1-5 scale of reporting. The means computed were: LPW = 4.42, SDS plus counseling = 4.08, and SDS = 4.67. This indication agrees with Krivatsy and Magoon (1976) who found subjects to report a high degree of satisfaction and with Kimball, et.al. (1973), who reported that Black students found the SDS to be a satisfying career-related experience.

Significant correlations of career maturity with certain personality variables as reported by the current study agree with earlier reports of similar comparisons (Bohn, 1966; Bartlett, 1968;

Dillard, 1976). This finding lends support to the implication that vocational maturity parallels personality development. Recognizing this relationship, the effective career counselor will give appropriate attention to the personality of the individual who is receiving vocationally-related assistance.

This present investigator's presupposition that vocational undecidedness would motivate more vocational information-seeking behaviors was not supported. But on the contrary, there was a statistically significant inverse relationship found between the indecision of the subjects and their subsequent vocationally-related activity. This unanticipated trend, however, is supported by Aiken and Johnson (1973) who found a similar inverse relationship. Perhaps better insight into the personality elements in vocational development would aid the counselor in motivating the indecisive student.

The fact that the results of this present investigation are supported by so many similar studies leads the present researcher to imply the following: In the area of vocational development and career counseling, the Black student tends to share more commonalities with his white counterpart than he shows differences.

Recommendations

The limitations of the present investigation as well as some of the observed implications provide suitable points around which recommendations for future research can be organized.

1. Replications of this experiment seem in order; however, the generalizability of results would be increased by using a completely randomized sample and by using larger numbers of subjects

participating in the treatment conditions and control group.

2. Modifying the design to include an all-white group for comparative assessment would expand the scope of a similar investigation.

3. Also modifying the design in order to investigate what type of personality responds best to what treatment method would provide the investigator with a wide range of research possibilities.

4. Giving more sophisticated structure to behavioral checklists and self-report questionnaires in order to confirm frequency and variety of vocational information-seeking behaviors and career-related activities would lend more credence to these all-important criteria of assessing treatment effectiveness.

5. Conducting a longitudinal study or a follow-up investigation at strategic points in the subjects' career development to check the efficacy of treatment methods would enlighten researchers as to the long-range effect of these techniques.

Present vocational literature does not reflect an exhaustive research effort in the study and assessment of career counseling methods. Therefore, it is suggested that counselors and researchers in this crucial area look critically at the treatment methods suggested in this present investigation and continue to develop more efficient and effective vocational exploration experiences for the college student.

Appendix

Appendix A

A Scale of Vocational Indecision

Directions: Read the statements below and rank each one on a scale from 4 (most like me) to 1 (least like me).

- ___ 1. I have decided on a career and feel comfortable with it. I also know how to go about implementing my choice.
- ___ 2. I have decided on a major and feel comfortable with it. I also know how to go about implementing my choice.
- ___ 3. If I had the skills or the opportunity I know I would be a _____ but this choice is really not possible for me. I haven't given much consideration to any other alternatives, however.
- ___ 4. Several careers have equal appeal to me. I'm having a difficult time deciding among them.
- ___ 5. I know I will have to go to work eventually but none of the careers I know about appeal to me.
- ___ 6. I'd like to be a _____ but I'd be going against the wishes of someone who is important to me if I did so. Because of this, it's difficult for me to make a career decision right now. I hope I can find a way to please them and myself.
- ___ 7. Until now, I haven't given much thought to choosing a career. I feel lost when I think about it because I haven't had many experiences in making decisions on my own and I don't have enough information to make a career decision right now.
- ___ 8. I feel discouraged because everything about choosing a career seems so "ifly" and uncertain; I feel discouraged, so much so that I'd like to put off making a decision for the time being.
- ___ 9. I thought I knew what I wanted for a career, but recently I found out that it wouldn't be possible for me to pursue it. Now, I've got to start looking for other possible careers.
- ___ 10. I want to be absolutely certain that my career choice is the "right" one, but none of the careers I know about seem ideal to me.
- ___ 11. Having to make a career decision bothers me. I'd like to make a decision quickly and get it over with. I wish I could take a test that would tell me what kind of career I should pursue.
- ___ 12. I know what I'd like to major in, but I don't know what careers it can lead to that would satisfy me.
- ___ 13. I can't make a career decision right now because I don't know what my abilities are.
- ___ 14. I don't know what my interests are. A few things "turn me on" but I'm not certain that they are related in any way to my career possibilities.
- ___ 15. So many things interest me and I know I have the ability to do well regardless of what career I choose. It's hard for me to find just one thing that I would want as a career.
- ___ 16. I have decided on a career but I'm not certain how to go about implementing my choice. What do I need to do to become a _____ anyway?

- _____ 17. I need more information about what different occupations are like before I can make a career decision.
- _____ 18. I think I know what I want to major in but feel I need some additional support for it as a choice for myself.
- _____ 19. None of the above items describe me. The following would describe me better: (write your response on the answer sheet).

Appendix B

VOCATIONAL INFORMATION-SEEKING
BEHAVIOR CHECKLIST

Directions: Check those items that describe your attitude or activity.

- 1. Reading occupation information.
 - 2. Sending for books or brochures.
 - 3. Interviewing professionals
 - 4. Thinking (specific)
 - 5. Talking to professors
 - 6. Talking to parents
 - 7. Visiting job sites
 - 8. Seeing programs, exhibits
 - 9. Thinking (careers)
 - 10. Talking to counselor
 - 11. Talking to students about careers
 - 12. Applying for job
 - 13. Understanding of jobs suited to personality
 - 14. Correct match of jobs to Holland's code (for SDS groups)
 - 15. Have considered seriously at least one job.
 - 16. Appropriateness of 1st vocational choice
 - 17. Appropriateness of 2nd vocational choice
 - 18. Satisfaction with vocational plans
 - 19. Need information about self
 - 20. Need information about occupation
 - 21. Need information about academic programs (majors, schools)
 - 22. Need for counselor
 - 23. Have thought about a job daily
 - 24. Have consulted the campus vocational information center.
 - 25. Have thought about a job in relation to my personality.
 - 26. Satisfaction with treatment
 - 27. Other vocational-related activity _____
-

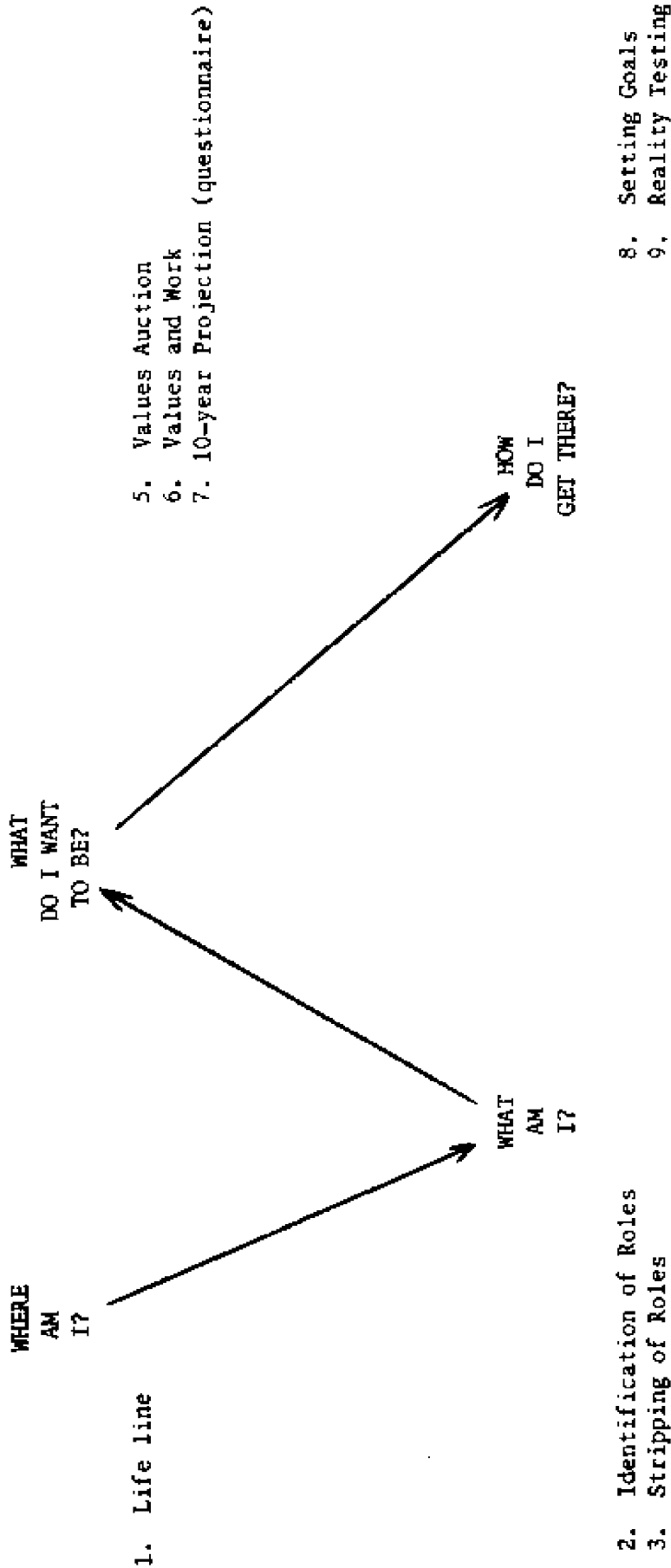
Appendix C: Life Planning Workshop Outline

Session	Objective	Activities	Materials Needed
<p>Session 1 (2 hours)</p>	<ol style="list-style-type: none"> 1. To give participants a general understanding of the purpose of the workshop. 2. To aid participants in gaining a clearer perception of the future by examining the past and present. 3. To afford the participant the sense of being in control of his future. 	<ol style="list-style-type: none"> 1. Leader gives overview of LPW (5 min). Leader shows LPW Flow Chart. 2. Participants get acquainted (10 min.). Each person gives name and tells one to three skills he is good at. 3. Life Line Charts are made (60 min.). <ol style="list-style-type: none"> a. Leader demonstrates by showing Life Line Chart and explaining high and low points (See Life Line Chart example). b. Each person is given a large sheet of newsprint on which to illustrate his life line from birth to death. Participants are encouraged to examine life from emotional, educational and vocational standpoints. 4. Participants identify roles (30 min.). <ol style="list-style-type: none"> a. Each person lists five roles which are significant to him at this time. b. Roles are then ranked from 1-5 (1 representing the most important. c. Role lists are shared with group. 5. Stripping of roles in fantasy (20 min.). Leader asks participant to close his eyes imagine himself floating on a raft in the sun, e.g. "try to imagine what it would be like without one or more of these roles that you have now." Voluntary sharing with group fellows. 	<ol style="list-style-type: none"> 1. LPW Flow Chart 2. Life Line Chart example 3. Newsprint 4. Felt tip pen 5. Masking tape

Session	Objective	Activities	Materials Needed
Session 2 (2 hours)	<ol style="list-style-type: none"> To assist the participant in becoming aware of his values. To allow the participant to see the correlation between his values and the world of work. To give him practice in integrating values. To help participant daydream about his future. 	<ol style="list-style-type: none"> Leader briefly reviews last session (5 min.). Participants take Life Inventory and examine values (see Values Auction Instructions). Use Handouts 1, 2, 3 (60 to 90 min.). Participants relate values to work (30 min.). <ol style="list-style-type: none"> Leader distributes list of 10 work values and grid sheet. Exercises proceed according to directions on Handouts 4 and 5. Participants make projections about future (15 to 20 min.). <ol style="list-style-type: none"> Leader distributes Handout 6. Participants fill out questionnaire (if time allows; if not, assign for homework) Volunteer sharing of 10-year projections. 	<ol style="list-style-type: none"> LPW Flow Chart Values Auction Instructions Handout 1 (Value Clarification) Handout 2 (Values Auction) Handout 3 (Values Auction Key) Handout 4 (Work Values) Handout 5 (Grid Sheet) Handout 6 (10-year Projection)
Session 3 (2 hours)	<ol style="list-style-type: none"> To guide the participant in relating the past and present to his anticipated future. To reiterate the ability the participant has to control his own future. 	<ol style="list-style-type: none"> Continue discussion of 10-year Projection (30 to 40 min.). Think about the future in terms of the 10-year Projection. <ol style="list-style-type: none"> Past/present occupation vs. future occupation Past/present income vs. future income Past/present relationship vs. future relationships 	<ol style="list-style-type: none"> Handout 6 (10-year Projection Questionnaire) Handout 7 (Aids to Successful Goal Setting) Handout 8 (Goals I Want to Accomplish)

Session	Objective	Activities	Materials Needed
Session 3 (cont.)	3. To aid the participant in developing goal-setting and decision-making skills.	<ul style="list-style-type: none"> d. Past/present life-style vs. future life-style e. Past/present problems vs. future problems f. Past/present feelings about vs. future feelings 	
		2. Reassume roles (20 min.). Participants recall original 5 roles and think about modification for future.	
		3. Leader introduces goal-setting ideas. Distributes Handout 7. Discussion follows.	
		4. Leader distributes Handout 8. Discussion follows (60 min. for 3 and 4).	

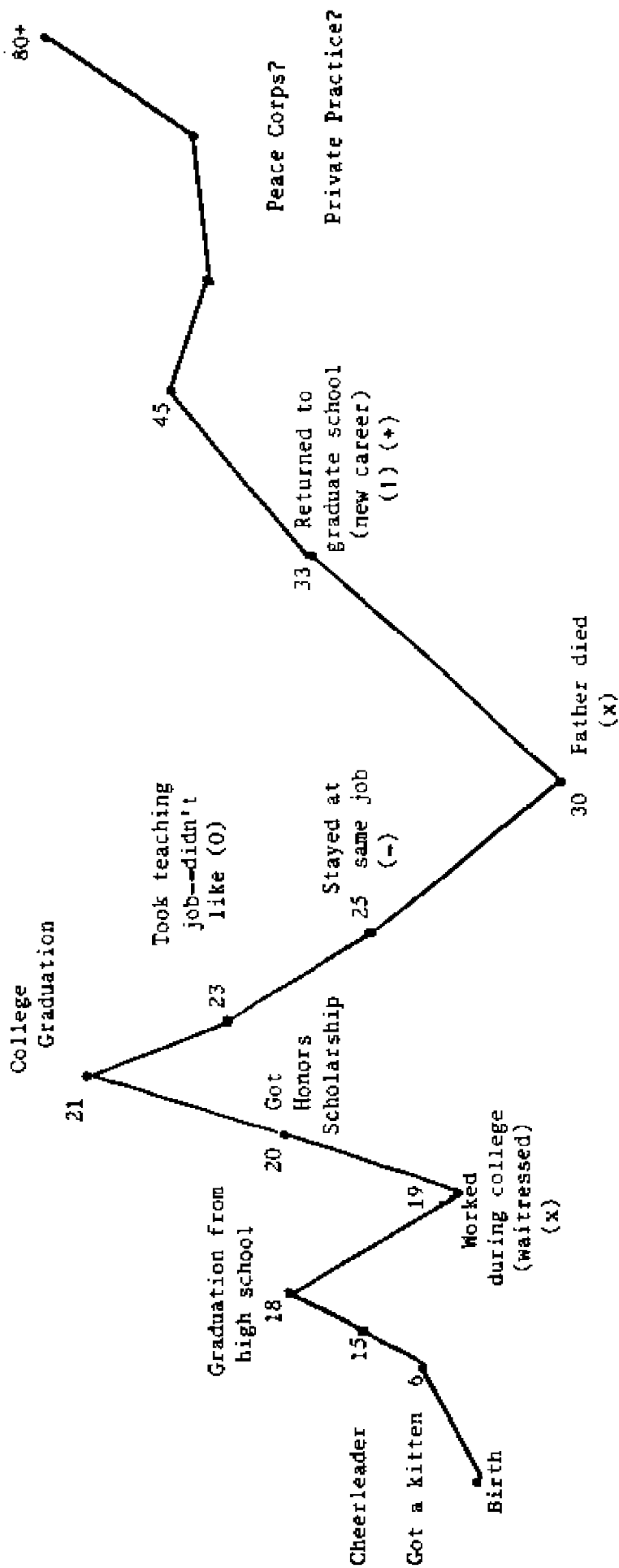
LIFE PLANNING WORKSHOP FLOW CHART



Note: Adapted from: Johnson, R. B. Life planning workshops. Personnel and Guidance Journal, 1977, 55 (9), 546.

Figure 1.

LIFE LINE EXAMPLE



Key to Symbols

- (1) Greatest risk
- (x) Obstacle prevented me from getting or doing what I wanted
- (+) Best decision I ever made
- (0) Critical decision that was made for me by someone else
- (-) Worst decision I ever made
- (?) Critical decision I see in the future

Figure 2.

INSTRUCTIONS FOR VALUES AUCTION

1. Give each participant the Value Clarification sheet and ask him to rank personal values.
2. Distribute the Values Auction sheet and explain that each of the items on this sheet will be auctioned off to the highest bidder. Each person will have \$5,000. for the auction, and is told to take a few minutes to budget the amount he plans to spend on any given item. Participants can spend the money on one or two items, or on as many as they wish, so long as the total budget doesn't exceed \$5,000.
3. The leader becomes the auctioneer, and begins with any item on the auction sheet. It is best to proceed randomly, rather than from top to bottom in the order in which items are found.
 The leader says: "We are ready to begin the auction. Before we begin, let me make some comments. First, you may bid on any item you wish so long as you do not spend more than \$5,00. Second, when you have bought an item, that money is gone from your budget. If you bid and do not get the item, you can use the money budgeted on another item of your choice. Third, please enter the highest amount you bid on any item into the middle column. Finally, enter the top bid that bought the item in the last column on the right. We will be bidding in the increments of \$50. Now let us begin. Who will open the bidding at \$50. for . . .?"
4. When the auction has been completed, distribute the Values Auction Key sheets. Let the participants compare the values they bought or bid the highest on with the values they ranked highest at the beginning. Is there any similarity between the two sets of values? If so, where?

RANKING: rational approach to values

BIDDING: emotional approach to values

After comparing the items purchased with those they originally ranked high in priority, participants discuss what they learned. It is important to emphasize that we are constantly weighing our values, against other personal values, as well as against those of other people and society. Often one makes bargains with values when making choices or exhibiting certain behaviors.

Note: From A Career Planning Program for Women: The Experience Cue by Mary W. Khosh, 1976. Reprinted by permission of Eric Counseling and Personnel Services Information Center; University of Michigan; Ann Arbor.

Handout 1
 VALUE CLARIFICATION
 Experience CUE

Mark your preferences in rank order:

<u>Values</u>	<u>Rank</u>
Health	()
Religion	()
Security	()
Family	()
Travel	()
Aesthetics	()
Power	()
Marriage	()
Justice	()
Recognition, Approval	()
Honesty	()
Love	()
Personal Autonomy (Freedom)	()
Friendship	()
Emotional Well-Being	()
Appearance	()
Knowledge, Wisdom	()
Pleasure	()
Altruism (Social Welfare)	()
Achievement	()

Note: From A Career Planning Program for Women: The Experience Cue by Mary W. Khosh, 1976. Reprinted by permission of Eric Counseling and Personnel Services Information Center; University of Michigan: Ann Arbor.

Handout 2
VALUES AUCTION

	<u>Amount I Budgeted</u>	<u>Highest Amount I bid</u>	<u>Top Bid?</u>
A satisfying and fulfilling marriage	_____	_____	_____
A way to do your own thing without hassling	_____	_____	_____
The Presidency	_____	_____	_____
The love and admiration of the whole world	_____	_____	_____
Unlimited travel and tickets to any concert, play, opera or ballet	_____	_____	_____
Complete self-confidence with a positive outlook on life	_____	_____	_____
A happy family relationship	_____	_____	_____
To be the most attractive person in the world	_____	_____	_____
To live to a hundred with no illness	_____	_____	_____
The most complete library of great books for your own private use	_____	_____	_____
Harmony with God	_____	_____	_____
Time with nothing to do but enjoy yourself with all needs met and desires automatically met	_____	_____	_____
To be the richest person in the world	_____	_____	_____
A house overlooking the most beautiful view in the world	_____	_____	_____
A chance to rid the world of prejudice	_____	_____	_____
A chance to serve the sick and needy	_____	_____	_____
To be voted outstanding person of the year and praised in every newspaper in the world	_____	_____	_____

	<u>Amount I Budgeted</u>	<u>Highest Amount I bid</u>	<u>Top Bid?</u>
Perfect insight into the meaning of life	_____	_____	_____
A way to avoid the world of unfairness, graft and lying	_____	_____	_____
A chance to set your own working conditions	_____	_____	_____
The perfect love affair	_____	_____	_____
To master the profession of your choice	_____	_____	_____

Note: From A Career Planning Program for Women: The Experience Cue by Mary W. Khosh, 1976. Reprinted by permission of Eric Counseling and Personnel Services Information Center; University of Michigan; Ann Arbor.

Handout 3
VALUES AUCTION KEY

		<u>Values</u>
A satisfying and fulfilling marriage	_ _ _	(marriage)
A way to do your own thing without hassling	_ _ _	(personal autonomy)
The Presidency	_ _ _	(power)
The love and admiration of the whole world	_ _ _	(love, friendship, approval)
Unlimited travel, and tickets to any concert, play, opera or ballet	_ _ _	(travel, pleasure, aesthetics)
Complete self-confidence with a positive outlook on love	_ _ _	(emotional well-being)
A happy family relationship	_ _ _	(family)
To be the most attractive person in the world	_ _ _	(appearance)
To live to a hundred with no illness	_ _ _	(health)
The most complete library of great books for your own private use	_ _ _	(knowledge)
Harmony with God	_ _ _	(religion)
Time with nothing to do but enjoy yourself with all needs and desires automatically met	_ _ _	(pleasure)
To be the richest person in the world	_ _ _	(security)
A house overlooking the most beautiful view in the world	_ _ _	(aesthetics, achievement)
A chance to rid the world of prejudice	_ _ _	(justice)
A chance to serve the sick and needy	_ _ _	(altruism)
To be voted outstanding person of the year and praised in every newspaper in the world	_ _ _	(recognition, approval)

Values Auction Key (cont.)

	<u>Values</u>
Perfect insight into the meaning of life	___ ___ ___ (wisdom)
A way to rid the world of unfairness, graft and lying	___ ___ ___ (honesty)
A chance to set your own working conditions	___ ___ ___ (personal autonomy)
The perfect love affair	___ ___ ___ (love)
To master the profession of your choice	___ ___ ___ (achievement)

Note: From A Career Planning Program for Women: The Experience Cue by Mary W. Khosh, 1976. Reprinted by permission of Eric Counseling and Personnel Services Information Center; University of Michigan: Ann Arbor.

Handout 4

WORK VALUES

- 1.....INTEREST. In the column you have labeled INTEREST, put a check by any activity on your list that you did because you really liked doing it. It is one of your special interests, and you find it a stimulating activity.
- 2.....INDEPENDENCE. In the column you have labeled INDEPENDENCE, put a check by any activity you did because you like to do things on your own, without having a lot of orders and directions. You like the feeling of being independent.
- 3.....SELF-EXPRESSION. In the column you have labeled SELF-EXPRESSION, put a check by any activity you did in any area of your abilities because you feel that using your natural talent or ability helps you express who you really are and what you do well.
- 4.....SERVICE. In the column you have labeled SERVICE, put a check by any activity you did because it had meaning for others or because it was for another person's benefit. You have a need to help others, and you like to do a good and useful job wherever you are needed.
- 5.....LEADERSHIP. In the column you have labeled LEADERSHIP, put a check by any activity you did because you like to use your leadership abilities. You enjoy planning and organizing a program or activity, and you get a feeling of satisfaction from knowing that you can direct and supervise the activities of others.
- 6.....REWARD. In the column you have labeled REWARD, put a check by any activity you did because you expected to receive money or some other kind of reward. Perhaps you received the approval of someone significant to you or perhaps you earned a special privilege like being invited to join some select group.
- 7.....ACHIEVEMENT. In the column you have labeled ACHIEVEMENT, put a check beside any activity you did because advancement and growth are important to you. You like to do things well, to do your best when you do something.

Work Values (cont.)

- 8.....RECOGNITION. In the column you have labeled RECOGNITION, put a check beside any activity you did because recognition of your work by others is important to you. You like being respected, having prestige, and receiving approval for what you do.
- 9.....VARIETY. In the column you have labeled VARIETY, put a check beside any activity you did because you like to do new and different things. You don't like routine or repetitious work.
- 10.....SECURITY. In the column you have labeled SECURITY, put a check beside any activity you did because you feel comfortable doing it. You are familiar with this, and you find it easy to do.

Handout 7

AIDS TO SUCCESSFUL GOAL SETTING

The following questions should be asked as a goal is set:

1. Is the goal achievable?
 - a. Can I accomplish it in the time span I have set?
 - b. Does the accomplishment of the goal depend only on me, and not on conditions outside of me?
2. Do I believe I can achieve this goal?
 - a. Are my skills and abilities equal to this goal?
3. Will I know when I have done it?
 - a. Have I set my goal in specific terms?
4. Do I want it?
 - a. Is the goal one that interests me?
5. Is the goal presented without an alternative?
 - a. Have I made a decision?
 - b. Am I focused in on what I will be doing?
6. Is the goal motivating to me?
 - a. Are my primary motivators involved?
7. Is the goal of value to me?
 - a. Is the goal compatible with my values?

Handout 8

GOALS I WANT TO ACCOMPLISH:

1. Things I want to do starting right now
 - a.
 - b.
2. Long term goals
 - a.
 - b.

HOW DO I GET STARTED?

In reaching my immediate goals, is there anything I can do before tomorrow? What specifically?

What can I realistically have accomplished by one week from today?

What specifically can I do within one month to implement or reach my goals?

Appendix D

Computer-Generated Random
Number List (1-48)

14	17	1	2	42	36	47	38	48	46	38
10	21	19	29	16	45	40	43	11	41	25
22	26	8	30	12	5	20	3	9	37	24
31	4	15	28	18	27	44	7	39	32	23
13	35	6	34							

Group IGroup IIGroup IIIGroup IV

12

3

34

1

8

37

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31

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36

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4

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36

2

Random Assignment to Treatment Conditions

LPW
Group 3SDS
Group 2SDS & Counseling
Group 4Control
Group 2

Appendix B

Career Maturity Inventory Attitude Scale
and Competence Test Raw Scores

LPW		SDS + Coun.		SD		Control	
CMI-A	CMI-C	CMI-A	CMI-C	CMI-A	CMI-C	CMI-A	CMI-C
42	75	42	87	41	84	34	54
38	70	39	84	43	80	36	79
40	80	43	80	37	74	38	80
41	58	42	79	40	74	38	65
38	63	42	83	39	75	36	73
40	82	42	78	34	56	37	79
42	79	35	64	39	83	38	65
43	70	43	79	34	70	34	70
36	81	39	79	35	62	40	72
37	66	37	63	39	71	38	65
42	80	40	75	40	86	36	63
42	70	41	69	39	70	25	70

Appendix F

Vocational Information-Seeking
Behavior Checklist
Total Number of Behaviors Checked

LPW	SDS + Coun.	SD	Control
10	11	11	6
21	18	16	11
10	11	11	10
11	17	18	7
10	15	14	7
13	16	13	7
10	10	12	9
13	14	17	11
15	18	14	4
10	16	14	5
12	11	18	11
16	13	16	8

Appendix G

California Psychological Inventory
Raw and Standard Scores on the
Self-Acceptance, Sense of Well-being,
Achievement via Conformance,
Achievement via Independence and Intellectual
Efficiency Subscales

LPW

Sa		Wb		Ac		Ai		Ie	
Raw	Stan.	Raw	Stan.	Raw	Stan.	Raw	Stan.	Raw	Stan.
20	50	31	45	19	29	19	50	34	40
22	55	29	29	23	40	14	39	32	34
23	56	27	25	24	41	16	41	39	50
29	75	31	35	28	50	15	40	31	34
17	41	29	30	22	35	17	44	32	35
25	66	29	29	26	46	15	41	36	42
18	48	38	51	28	51	16	43	36	43
18	48	24	17	18	29	12	34	26	21
12	28	29	30	20	31	14	37	27	26
15	39	38	51	25	44	20	52	33	36
23	56	40	56	38	72	23	60	38	49
25	64	32	36	25	42	12	32	35	41

SDS + Coun.

38	95	25	19	24	42	20	52	39	50
26	67	33	40	27	46	20	52	40	52
18	44	23	17	20	31	13	35	31	35
23	55	33	40	29	52	14	38	32	36
25	65	33	35	26	45	23	60	32	34
19	49	16	0	20	32	15	41	30	30
18	48	24	12	24	42	14	39	27	23
26	67	22	15	24	41	16	42	31	33
30	43	26	21	28	51	17	45	35	41
25	35	26	24	24	41	17	45	24	19
21	27	28	28	23	37	11	30	29	30
20	53	33	35	26	45	15	41	33	35

SDS

24	63	39	54	32	60	19	51	42	55
26	67	24	17	22	38	15	42	29	28
25	64	32	37	29	52	19	50	32	35
17	42	30	34	25	44	12	33	25	21
22	53	28	28	24	42	14	38	29	30
16	41	21	9	16	23	10	28	25	19
21	51	28	28	19	29	15	40	27	37
37	95	27	24	28	51	14	39	33	36
20	50	23	18	23	38	13	35	17	5
22	53	28	28	26	44	19	50	41	55
28	72	40	56	32	59	18	49	41	55
25	64	30	33	25	44	16	43	32	36

Control Group

22	53	30	33	20	31	14	38	32	36
17	42	31	34	17	24	14	38	21	13
24	61	35	44	21	34	18	48	29	30
27	70	40	56	25	44	18	48	39	50
22	58	35	44	19	31	19	51	36	43
21	55	34	42	25	44	14	38	30	30
19	49	20	16	20	33	14	38	28	26
26	68	31	32	19	31	17	46	36	42
20	50	30	31	18	29	11	32	26	21
25	66	39	54	25	44	13	37	35	41
28	74	35	44	27	49	19	51	32	35
17	44	36	46	28	51	25	65	36	43

Appendix H

Career Maturity Inventory Attitude Scale and
Competence Test Male-Female Raw Scores

<u>Male</u>		<u>Female</u>	
CMI-A	CMI-C	CMI-A	CMI-C
40	80	38	70
42	79	41	58
43	70	38	63
36	81	40	82
42	80	37	66
36	73	42	70
37	79	34	54
38	65	36	79
34	70	38	80
40	72	38	65
38	65	37	74
36	63	40	74
25	70	39	75
41	84	39	83
43	80	35	62
34	56	37	71
34	70	40	86
42	87	39	70
42	83	39	84
42	80	43	80
35	64	42	79
40	82	43	79

Appendix I
Satisfaction With Treatment
Raw Scores

LPW	SDS + Coun.	SDS
4	5	5
5	5	4
5	5	5
4	4	5
4	4	4
5	4	3
4	4	4
5	4	5
5	5	4
4	4	4
5	5	5
3	4	4

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ABSTRACT

A STUDY OF THE DIFFERENTIAL EFFECTS OF THREE CAREER COUNSELING TECHNIQUES ON CAREER-RELATED ACTIVITIES AND ATTITUDES OF BLACK COLLEGE FRESHMEN.

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The primary purpose of this investigation was to assess the differential effects a group procedure, the completion of the Self Directed Search (SDS, Holland, 1970) and the Self Directed Search plus individual counseling had on the career maturity, vocational undecidedness and vocational information-seeking behavior of a select group of Black college students. A secondary purpose was to discover the relationship between career maturity and certain personality variables.

The all-Black research sample consisted of 48 second semester freshmen enrolled in Hampton Institute, Hampton, Virginia. The subjects (23 males and 25 females) were randomly divided into four groups of equal size; the groups were then randomly assigned to three treatment conditions and one control group. Group I participated in the Life Planning Workshop, a six-hour structured group experience; Group II was administered the Self Directed Search and given two individual interviews with faculty advisors; Group III completed the Self Directed Search but received no further treatment; Group IV (no treatment) as a control group.

A Posttest-Only Control Group Experimental Design was used for the study. Two weeks after exposure to the treatment, posttesting of the subjects determined indices of career maturity, using the Career Maturity Inventory (CMI, Crites, 1973); vocational undecidedness, using the Scale of Vocational Indecision (SVI, Osipow and Carney, 1975); and the frequency of vocationally-related activity, using the Vocational Information-Seeking Behavior Checklist (VC, Krivatsy and Magoon, 1976). In addition, the California Psychological Inventory (CPI, Gough, 1975) was administered in order to assess personality characteristics relevant to the study.

Statistical procedures used for analyzing the data consisted of the following: t tests of significance to determine whether significant differences existed between experimental groups and the control group in regard to subjects' scores on the CMI, the SVI and the VC; one-way ANOVA's, to determine the significant differences existing among treatment groups in regard to subjects' scores on the CMI, the SVI and the VC; and Pearson correlations to define what relationships existed between scores on the CMI and CPI subscales. All hypotheses were tested at the .05 level of significance.

Major findings included the following:

1. A statistically significant difference was observed between experimental groups and the control group on the Attitude Scale of the

CMI, the SVI, and the VC with the treated subjects scoring higher in each case.

2. No statistically significant differences were found to exist among the experimental groups on the criterion measures of career maturity, vocational undecidedness or vocational information-seeking behavior.

3. Correlation coefficients significant at the .05 level and in the positive direction were detected when the Attitude Scale of the CMI was paired with the CPI subscales of achievement via conformance, achievement via independence and intellectual efficiency. CPI subscales of self-acceptance, achievement via independence and intellectual efficiency correlated statistically (and in the positive direction) with the Competence Test of the CMI.

Additional analyses of the study indicated that 1) no statistically significant differences existed among the experimental groups in regard to satisfaction with treatment, and 2) a statistically significant inverse relationship was found to exist between vocational undecidedness and frequency of vocational information-seeking behavior among the experimental groups.

In essence, the results of this investigation support the contention that career-related attitudes and activities of Black students may be influenced by various vocational counseling techniques.

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