A Study to Assess Career Choice Certainty Among Community College Students

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A STUDY TO ASSESS CAREER CHOICE CERTAINTY
AMONG COMMUNITY COLLEGE STUDENTS

by

James E. Murray

A Dissertation Submitted to the Faculty of the Graduate School
of Loyola University in Partial Fulfillment of
the Requirements for the Degree of
Doctor of Education
June
1976
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VITA

The author, James E. Murray, is the father of Kathleen, Karen, Patti, Peggy and Colleen Murray.

His elementary education was obtained in the Catholic parochial schools of Chicago, Illinois, and his secondary education at Lane Technical High School where he was graduated in 1948.

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In 1961, the author organized and directed the first tutorial program sponsored by the Chicago Boys Clubs. In 1963, he was featured in articles published in the Reader's Digest and Kiwanis magazines describing the activities of the program. In 1965, he published an article, "What's Happening To Leroy Sims," in Viewpoint. In 1966, the author was a guest on "Fact Of The Matter," broadcast on WTTW-TV. In the same year, he published a training manual, "Training and Technical Assistance," and became Director of Training for the Governor's Office of Human Resources, a position in which he served two governors.

The author has taught elementary school, high school and college and served as a consultant for Health, Education and Welfare and the Department of Labor, training staff and boards of directors of community action agencies in Washington, D.C.,
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His education has included group work experience under the National Training Laboratory. In 1967, he was awarded the Master of Arts degree in Guidance and Counseling from Loyola University. In 1972, he began his work on the doctoral degree.

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CHAPTER I

INTRODUCTION: A PROSPECTUS

There is often a lack of decisiveness in career selection among entering community college students.¹ Many students who enroll in the community college are relatively uninformed about the critical process of vocational selection and subsequent career development procedures. An estimated 2.5 million students leave formal education each year without finalizing a career choice.²

A career represents a person's life purpose or purposes. Strengthening a person's "own presence" in his career constitutes the most elusive of career education goals. The needed developmental processes include physical, perceptual, developmental, psychological, and educational elements. Parents, educators, social agencies, and colleges are influential forces. Career development models and programs, student self-assessment, and affective as well as cognitive learning are useful in the pursuit


of career education.3

"Goal-oriented effort and the pursuit of an appropriate substitute goal" should prove useful throughout life.4 Marshall studied the relationship between the ability to "crystallize a choice" and college performance and found that the "undecided group" had the poorest grades.5

Community colleges have discovered that career decision-making occupies a prominent position among the concerns and adjustment problems of the incoming student.6 On most campuses there is help for the student who is uncertain about his career plans.7 Unattended, the problem of career choice uncertainty tends to persist.8 There are those who remain uncertain or whose career choice certainty erodes. Community colleges are offering a wide variety of career selection and development courses as well as related personal and social adjustment

3Walter Wernick, David V. Tiedeman, John Eddy, and Betty J. Bodeell, Career Primer For Educators (Information Series No. 4 ERIC Clearinghouse in Career Education, Northern Illinois University, September, 1975), pp. 3-37.


6Edward E. Johnson, "Some Adjustment Problems of College Freshmen," College and University 34 No. 8 (Spring, 1959): 305-308.


Yet, evidence indicates that those most in need of career and vocational guidance and other student personnel, career related services are, in fact, those "least likely to seek them."\(^9\)

The early and accurate identification of students needing career selection and development assistance is essential. It is toward the investigation of a possible means for making such an identification that the study is directed. Attention to explicit detail will focus upon the implications of the research findings for the community college.

In this chapter, the basic problem is presented, the overall purpose is discussed, general procedures are outlined, and an explanation of commonly used terms is provided. Each of the succeeding chapters will be an elaboration of the direction indicated in this chapter.

Before procedural techniques and research methodology are discussed, it is essential that the problem for which an answer is sought be clearly delineated.

A. Statement of the Problem and Objectives of the Study

The basic problem for which this study seeks an answer is this: how can the community college accurately identify either

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a significant absence of career choice certainty within a student or a student whose level of career choice certainty can be expected to become less certain over time? Related to the identification of this problem is the extent to which (1) one's personal orientation to the completion of tasks and (2) socioeconomic factors are either indicators of the existence of a particular level or degree of career choice certainty or predictors of change in such levels.

There should be concern and responsibility within the community college for providing career guidance and related learning plus personal adjustment experiences. Early and accurate identification of the population most in need of such supportive services is essential if this is to occur. Orientation, educational planning, counseling and guidance, and personal growth experiences emphasizing goal setting, problem solving, and self-actualization are offered on many community college campuses. Yet, the undecided, uninformed student is not always known to student personnel staff.

It is the general aim of this study to add to the body of facts which serve as a guide in identifying existing or potentially existing career choice uncertainty. (An attempt is made to provide community colleges with a means of isolating that proportion of the entering community college population whose low or declining level of career certainty suggests the need for career development assistance.)

This study is designed to discover answers to the following questions:
1. What are the levels of career choice certainty among a selected group of community college students?

2. What is the relationship between a student's personal orientation to the completion of tasks and existing levels of career choice certainty?

3. Is there a relationship between a student's socio-economic background and the existence of and change in career choice certainty?

4. Is there a relationship between a student's personal orientation to the completion of tasks and his socioeconomic milieu?

5. Can a means be devised by which those students most in need of career selection assistance are identified early in their community college experience?

B. Significance of the Study

It is of utmost importance that community college personnel intervene positively on some level with those students whose career choices are uncertain. There is often a lack of decisiveness in career selection among community college students. Perennial problems related to career selection include a skilled and timely application of the processes of decision making, problem solving, and attitudinal development. Community colleges are developing many teaching-learning experiences to meet student needs, but early identification of those most in need of special
career development assistance is an elusive and much needed technique.

Hopefully, the young adult entering college will select, pursue, and achieve a career objective. Yet, student personnel staff encounter a large number of students whose career plans are uncertain. Many are relatively uninformed about the initial process of vocational selection and are even less informed about alternative career choices and career planning procedures. This lack of information and uncertainty undermines the commitment necessary to achieve academic and career success, limits subsequent curriculum and career change, spawns failure experiences, and contributes to the rate of attrition.

C. Uniqueness of the Study

There is no study now known by the author which is specifically addressed to the issue of accurately determining the need for career development assistance, early in the community college experience of entering freshmen. This study replicates no other study in its overall intent to establish a method whereby those students who are most uncertain of a career choice, those most likely to remain uncertain, or those most likely to decline in their career choice certainty are identified.

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An extensive review of texts, journals, monographs, doctoral dissertations, and position papers establishes the originality of this proposed research study. The review produced considerable information concerning (1) personal and situational conditions influencing career selection, (2) theories of vocational decision making, (3) problems encountered by students related to the choice of a career, (4) programs and models employed in assisting students toward career selections, and (5) workshops, seminars, and vocational planning sessions intended to develop greater skill in problem solving and decision making. Opinions and approaches, supported by research findings, regarding the role and responsibility of student personnel workers in fostering accurate and decisive career choices have been documented.\textsuperscript{12}

Although there are a number of concepts, theories, and assumptions related to the career selection and development process, the problem proposed in this study, to date, remains unresolved.\textsuperscript{13}

D. Glossary of Research Terminology

An understanding of terms used throughout the research study will facilitate an accurate comprehension of the procedures

\textsuperscript{12}For a further discussion of this, see Chapter 2.

and conclusions.

1. Data Collection: The retrieval of information from responses provided by subjects on three instruments: Orientation Inventory, Career Choice Certainty, and Background Information.

2. Orientation Inventory (O.I.): A 27 item self-administered instrument on which the subject's responses reveal a personal orientation classified as either task (t), self (s), or interaction (i).

3. Task-Orientation (t): A score on the O. I. instrument reflecting a subject's concern with task completion, problem solving, and high performance.

4. Self-Orientation (s): A score on the O. I. instrument reflecting the extent to which a subject expects direct rewards irrespective of his quality of performance or effect upon others.

5. Interaction-Orientation (i): A score on the O. I. instrument reflecting the subject's concern with maintaining harmonious relationships in a superficial manner at the expense of completing the task.

6. Career Choice Certainty (CCC): A 7 item self-administered instrument on which the subject's responses reveal a level of career choice certainty classified
as either very high, moderately high, somewhat low, or very low.

7. **Background Information (B.I.):** A self-administered questionnaire on which subjects provide socioeconomic information.

8. **Subjects:** Approximately 300 entering community college students contacted by mail and during classroom visits to whom the O.I., CCC, and B.I. are to be administered.

9. **Statistical Procedures:** Analysis of variance, discriminate analysis and multiple regression are to be employed in determining with what significance relationships exist.

10. **Socioeconomic:** A particular status which is either achieved, assumed, or ascribed to which is related particular educational levels, occupations, and values endemic to an individual, group, community, or culture.

11. **Occupational Categories:** Jobs or occupations reported on the Background Information questionnaire are to be classified as "professional," "skilled," or "unskilled occupations." Classifications are to be determined by establishing the extent to which a job or occupation agrees with the definitions provided in this section.\(^{14}\)

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12. **Professional Occupation:** An occupation in which training, formal preparation, and/or education are needed prior to and in preparation for the performance and on-going application of particular skills requiring specific knowledge, understanding, problem solving ability, sound judgement, and physical and emotional health. Some examples are: Accountant (CPA, Auditor, etc.), Administrator (Institutional, Business, Industry), Airline Personnel (Pilot, Engineer), Management: Upper Level (Board Chairperson, Superintendent), Nurse, Physician (M.D., Osteopath, Chiropractor, Podiatrist), Salesperson (Technical, Industrial), Social Worker, and Teacher.

13. **Skilled Occupation:** An occupation which requires some but not extensive training and formal preparation as a prerequisite but do involve on-going application of skills often gained as a result of experience at various levels of the occupation or from on-the-job instruction. Some examples are: Administrative Assistant (Foreman, Plant Manager), Allied Health (Physical Therapist, Laboratory Technician), Artist, Chef, Draftsman, Entertainer, Licensed Practical Nurse, Maintenance (Machinery), Management: Middle (Traffic, Shipping and Receiving), Office Manager, Professional Assistant (Medical, Dental, Legal), Professional Athlete, Secretary, Stewardess, Teacher.
14. **Unskilled Occupation:** Any occupation not described as "professional" or "skilled". That is, semi-skilled and unskilled jobs which, for the most part, are entry level, require little or no prior training, and offer only minimal opportunity for upward mobility. Some examples are: Clerk (File, Billing), Cook, Laborer, Machine Operator, Management: Lower (Tool Room, Parking), Nurse Aid, Sales (Small Consumer Goods), and Service Employees (Waitress, Butler, Land Scaper, Custodian, Chauffer, Truck Driver, Watchman).

E. Limitations of the Study

There are four particularly difficult phases to be anticipated: (1) Although telephone contacts and personal visitations will be used to follow-up the subjects contacted by mail, an inordinately small number of responses could somewhat limit the conclusions drawn from the analysis of the data retrieved in this manner. (2) Locating those subjects remaining on campus in order to complete a second administration of one of the instruments may limit the progress desired in the conduct of the research. (3) Subjects who have enrolled in a career or personal development course or who have attended another institution of higher learning must be excluded from this study be-
cause of the possible influence of such experiences on their career selection ability. (4) It is imperative and, perhaps, difficult to employ the statistical treatments needed to establish clearly the type of personal orientation traits and socioeconomic profiles most indicative of students needing meaningful career development assistance.
CHAPTER II

THEORETICAL FOUNDATIONS: A REVIEW OF THE LITERATURE

It is the purpose of this chapter to present a review of literature related to the process and practice of career selection and development. Predisposing factors and underlying causes are discussed, as well as personal and situational conditions endemic to both the student decision-maker and the community college concerned with fostering appropriate career selection and development.

A. Career Decision-Making Models

Career decision-making may be explained and, hopefully, better understood when considered from a theoretical framework of concepts, principles, and developmental constructs. Such theories are in abundance. Degrees of difference vary from virtually imperceptible positions to those which are diametrically opposed. The writer is of the opinion that an endorsement of any theory is unnecessary. Rather, it is suggested that the contributions of each be considered as a means of more fully understanding the dynamics of the career selection process.
An examination of the literature reveals considerable variance in the positions taken regarding the credibility of theoretical explanations of career selection and vocational development. Forer in his research into the influence of personality factors on occupational selection determined that "impulsive, largely unconscious" choices are often made by individuals who "simply do not know why a particular selection is made."\(^1\) In marked contrast is the model of "vocational maturity" which equates the career decision making process with such personal qualities as consistency, realism, competency, and attitude.\(^2\)

Criticism is sometimes leveled not at the usefulness of theory per se but at the inadequacy of existing theories. Carkhuff and others contend that there is a conspicuous absence of "indispensable" inductive-deductive connections between career information and the laws and facts which characterize theoretical explanations of career selection and development. They suggest that a valid and usable theory can be created only if differential weights are assigned the "huge number" of


forces influencing vocational choice.  

Another criticism is found in the evaluation of various "theoretical models" used in describing how individuals typically emerge in what Hilton describes as an "imperfect process." He directs his attention to the "Attribute Matching Model" which involves an inventory of personal attributes, often identified through the use of psychometric tests. This model suggests that a vocational choice ultimately occurs when the person selects an occupation requiring attributes closely matching those he possesses. "The Probable Gain Model" presumes that a choice follows a careful consideration of vocational alternatives which promise the most reward. "The Social Structure Model" is one which relates one's values to the selection of a career promising the most status irrespective of other vocational and personal considerations. "The Complex Information Processing Model" describes career selection as the outcome of a consideration of occupations which offer the "greatest promise" of providing the maximum number of behavioral outcomes valued by the person. In his criticism of these theories, Hilton questions the volume of knowledge and insight needed for career decisions to be made in the manner suggested by these theoretical models. Often, he feels, the amount necessary exceeds that which is available to the person attempting such decisions.

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3 Robert R. Carkhuff, Max Alexils, Suron Anderson, "Do We Have a Theory of Vocational Choice?" In Robert M. Roth, David B. Hershenson, Thomas Hillard (Eds.), The Psychology of Vocational Development (Boston: Allyn and Bacon, Inc. 1970), pp. 28-44.

Although Hilton's criticism was also directed toward "The Need-Reduction Model" which suggests that individuals gravitate to those occupations which satisfy their needs, Isaacson points out that this model and similar theoretical positions are somewhat popular.\(^5\) Hoppock and Roe, for example, describe vocational choices as those which the individual believes will gratify needs "fixed by childhood experiences."\(^6\) Roe speaks of the intensity and organization of existing needs as major influences on the motivation of those who consider career decisions.\(^7\)

Within the literature, we find considerable agreement regarding the importance of adolescence and early adulthood as critical periods. Hewer's study (1966) revealed a relationship between the stability of career decisions made in adolescence and later career involvement. Over sixty-six percent of the adolescents studied were in occupations of the same type and level as those selected by them seven to eight years earlier.\(^8\)

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In another study, Gribbons and Lohnes investigated the readiness of adolescents to make vocational choices. Although many of the subjects were reported to have had "unrealistically high" goals and aspirations, on the whole, the level of readiness to make vocational choices was found to be quite high with little difference between the sexes. The authors reported a significant relationship between readiness to make vocational choices and such factors as: (1) the accuracy of self-ratings, (2) interests, (3) values, and (4) independence of choice. It has also been said that the adolescents' "sense of personal identity" gives rise to a "need for competency" and a selection of occupational commitments.

Some mention must be made of the positions set forth by John L. Holland, Eli Ginzberg, Donald E. Super, and Anne Roe. Their theories focus upon the dynamics and underlying causes of career selection and vocational development. Holland has developed a theory of vocational choice which holds that there are clusters of "personality traits" which can be identified and related to one's vocational selection. He describes (1) the person who deals with his environment in an objective and concrete manner as "Realistic;" (2) the "Intellectual Type"

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is one who favors the manipulation of words, ideas, and symbols; (3) the "Social Type" is one who relates well to others; (4) the "Conventional Type" is thought to be one who chooses activities that carry social approval; (5) the "Enterprising Type" elects those activities that permit him to dominate; and (6) the "Artistic Type" reveals a preference for creative undertakings.11

Holland theorizes that an individual expresses his personality through the choice of a vocation and that vocational satisfaction, stability, and achievement depend upon the extent to which the individual's personality and work environment are complementary.12

Ginzberg and his associates describe the vocational selection process as one covering three periods: (1) a "fantasy" period of early childhood preceding any serious vocational choices, (2) the "tentative" period during which a child begins to value certain activities more than others and begins to perceive his interests and abilities, and (3) the "realistic" period during which exploration and finally the implementation of tentative choices occurs. Ginzberg suggests that four variables influence vocational choices: (1) a reality factor accounting for one's response to environmental "pressures," (2) educational ex-

11 Brown, Students' Vocational Choices: A Review and Critique, p. 44.
periences which limit the range of choices, (3) emotional factors which constitute the personality, and (4) personal values influencing what is selected.\textsuperscript{13}

Super's theory of vocational development features ten propositions. In essence, these allude to the differences in ability, interests, and personality traits which qualify individuals for occupations requiring such traits. Choice and adjustment, Super contends, are continual processes changing with the self-concept of the individual. A "career pattern" is guided by maturation of ability, reality testing, and changes in the self-concept. Vocational development, therefore, is equated with the development of the self-concept.\textsuperscript{14}

The propositions found in Roe's theory of career choice describe the process as one influenced by hereditary predisposition for personal development. The development of one's interests, she adds, is a function of one's life experience and cultural background. Roe contends that the "focus of one's psychic energy" tends to precipitate particular interests and needs. The intensity of such needs, she maintains, is a major determinant of the degree of motivation that "reaches expression in accomplishment."\textsuperscript{15}

\footnotesize
\textsuperscript{13}Ibid., pp. 41-44.
\textsuperscript{14}Ibid., pp. 46-54.
\textsuperscript{15}Ibid., pp. 37-41.
B. Sociological Foundations

Other authors stress the influence of one's family—parents and siblings—and the influence of various interpersonal factors on one's motivation toward an ultimate career choice. These and other sociological considerations found in the literature are reviewed in the following paragraphs.

An examination of underlying causes and predisposing factors offers an insight into both intrinsic and extrinsic conditions influencing the process of decision-making and career selection. Such information enables those involved to better understand, predict and, hopefully, influence the behavior of those whom we hope to engage in the process of vocational selection and development.

It has been said that the skill of decision making must begin with a "stimulation of self-awareness" in the individual. To that end, it is recommended that awareness and knowledge of one's environment be followed by an examination of one's values. Leona Tyler describes the person who makes "successful choices" as one who tends to be active, realistic, and a person who

16 Ibid., pp. 37-41.
understands people without trying to change them. This person, she says, is also characterized by an avoidance of routine work and tasks for which he has no talent and a value system which includes sports, travel, and intellectual stimulation.\textsuperscript{18}

Reichman is among a host of resource people who have documented the existence of a significant relationship between intelligence and behavior described as "vocationally mature."\textsuperscript{19} In a study of 1,003 college freshmen, those of high tested intelligence were found to be more concerned with problems related to career decisions than were subjects of low tested intelligence.\textsuperscript{20}

A research investigation was conducted into the stereotypic perceptions of men and women regarding members of the same and opposite sex. A "motive to avoid success" was found to be more prevalent among females. More female than male research subjects were of the opinion that females were not success oriented. Furthermore, the predictions elicited indicated that both males and females were more confident of a successful or "good" life for male figures involved in the research.\textsuperscript{21}

\textsuperscript{18}Leona E. Tyler, "Research Explorations In The Realm Of Choice," In Robert M. Roth, David B. Hershenson, Thomas Hillard (Eds.), The Psychology of Vocational Development (Boston: Allyn and Bacon, Inc., 1970), pp. 409-418.


\textsuperscript{20}Johnson, "Some Adjustment Problems of College Freshmen," pp. 305-308.

\textsuperscript{21}Linda Z. Solomon, "Perceptions of a Successful Person of the Same or the Opposite Sex," The Journal of Social Psychology 95 (1975): 133-134.
There is some apparent relationship between one's self-concept and the occupation or career one enters. In a study by Hunt, which examined vocational choices in relationship to the self-concept, members of a particular vocational group perceived themselves more like members of that group than any other. Lipsett points out that it is impossible to predict individual behavior without knowledge of the individual's "reference group" and the strength of his "ties" to such groups. The research of Gribbons and Lohnes, cited earlier, revealed that such reference groups might be found in one's socioeconomic level. The authors associate the subjects' socioeconomic groups with their occupational preferences and their readiness for vocational planning. Somewhat related to this view is the feeling that vocational choices occur as a result of "economic socialization" which occurs, in part, as a result of the economic life style of friends and family members, parents who represent "economic role-models."

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24 Gribbons, "Predicting Five Years of Development In Adolescents," pp. 245-250.

Eli Ginzberg found that the vocational choices of children of low income families tended toward occupations which would pay more than their fathers earned while the children of high income families tended to make choices limited to the professions. Ginzberg interprets such evidence to suggest that the environment of low income individuals "obscures the appropriate translation of interests and capabilities" into occupational choices.²⁶

There is some indication that parental encouragement tends to have the greatest effect on the college plans of males and females from families of high socioeconomic positions.²⁷ An exploration of parental attitudes regarding vocational choices and career goals reveals a relationship between the parents' attitudes and the career choices made by their children.²⁸ Positive and negative attitudes tend to be transferred from the parents to the children, although they lack the same intensity. Other research findings reveal a limited interest in upward mobility among most social classes.²⁹


²⁹Ruth Sampson, Bufford Stefflre, "Like Father...Like Son?" In Robert M. Roth, David B. Hershenson, Thomas Hilliard (Eds.), The Psychology of Vocational Development (Boston: Allyn and Bacon, Inc., 1970), pp. 409-418.
C. Vocational Guidance and Intervention Techniques

Those concerned with assisting the community college student in the selection and development of a career, view the aforementioned theoretical and sociological information as indispensable to the understanding of the influencing dynamics.30

A review of the literature reveals various intervention techniques useful in addressing problems related to career decision-making. The purpose of this study is not to identify remedial or preventive measures but rather to identify those entering community college students most in need of career selection and development assistance. However, some mention must be made of what might be accomplished through the utilization of individual and group-oriented approaches to career selection. Many career selection and development experiences are currently available for use with those requiring assistance.

Career education is a "commitment to the proposition that a first priority in education is to prepare people for useful and productive employment" and the preparation 'for all mean-

30Lipsett, loc. cit.
ingful and productive activity, at work or at leisure, ... or in the family.\textsuperscript{31,32} The research of Hoffnung and Mills supports the fact that career counseling is a vital part of vocational development. Their study disclosed a relationship between the intensity of career counseling and improvement in job performance and adjustment.\textsuperscript{33}

Career guidance services require leadership that will stimulate interest in such services while promoting the exploration of alternative career choices.\textsuperscript{34} This is particularly true in light of evidence reflecting the fact that self-referrals are less in evidence among lower socioeconomic groups, the members of which are, traditionally, the least concerned with career selection and development. Consequently, we have come to realize that counselors and others that collaborate with students in planning and developing a career may often be in contact with those who need assistance least.\textsuperscript{35}


\textsuperscript{32}Wernick et al, Career Primer For Educators, p. 5.


One approach recommended for those who hope to actualize a career program is the use of a two-dimensional, six-stage model. The model is based on the premise that career development is a life-long process, "not an instantaneous accomplishment" — a belief shared by Vern Jensen, Eli Ginzberg and others. The model suggests that the process move from the general and theoretical and extend to the specific and practical. Each stage of development is associated with particular developmental needs, each of which suggests the application of appropriate guidance and other educational activities. The educational activities focus on the assimilation of vocational information, the improvement of self-knowledge, the development of confidence, and the benefits of experience.

Perhaps, the most common approach in assisting with career selection, is one that utilizes existing records such as psychological evaluations, achievement profiles, and other records. This approach advocates the use of the recorded information within a structured framework consistent with popular theories of vocational development.

Kemp considers an "existential" orientation to the decision-making process. An awareness of one's self, freedom to choose.

---


37 Wernick et al, Career Primer For Educators, p. 3.


and responsibility for choices made, he says, are vital to an effective counseling relationship and to the decision-making process. To this end, he recommends that the individual be encouraged to consider all of the forces acting upon him and that his subjective impressions of these forces be a prelude to making a choice. He feels such choices should be accepted without reservation and the person made aware that the responsibility for his decisions accompanies the freedom he enjoys in making them.

John Holland states that the most favorable setting for career counseling is a group structure. Holland expresses his disenchanted with "interview-oriented" methods which he feels "do not meet the need." Career counseling, he states, to be effective must take place in a group. Sherrell advocates the use of a group approach in disseminating career information, something he feels should occur during junior and senior high school.\(^40\),\(^41\).

An earlier reference to the fact that a relationship exists between one's self-concept and career decisions is reinforced by the findings of Oppenheimer. His remarks include the fact that (1) people prefer occupations congruent with their self-concept and (2) self-esteem is related to the degree of agreement


between the self-concept and one's vocational preferences. This would seem to support the use of group training and personal growth activities directed toward the improvement of the self-concept which are now available on many community college campuses. In addition to the self-concept, such learning experiences also address other career selection related areas such as problem solving, planning, social skill development, personal adjustment, and the assimilation of knowledge regarding one's self and one's environment.

Against the background provided in chapters one and two, the research study proceeds to the developmental stage in which there is provided a record of the procedures and methodologies employed in planning and implementing the investigation (see Chapter III).

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CHAPTER III

PROCEDURE AND METHODOLOGY

In this chapter, the writer is focusing upon the scope and direction of the study. This occurs primarily through a discussion of the experimental procedures followed in the testing of the research hypotheses. Included are a review of the events related to the identification of relevant variables; the construction of a research design; the selection and control of a suitable sample population; the development of useful measuring instruments; and the application of appropriate analytical techniques.

A. Variables

This research study addressed the problem of identifying and predicting unstable and low levels of career choice certainty among entering community college freshmen. "Career-choice-certainty" is most often the dependent variable the study measures and relates to predictor or independent variables. The variables most often considered as independent or predictor variables, task-orientation(t), self-orientation(s),
and interaction-orientation(i), are three kinds of mutually exclusive personal orientation traits measured and used in classifying subjects. This three-fold classification is drawn from a theory of interpersonal behavior which relates one's attitudes to one's effective performance in problem solving situations.1

Socioeconomic factors are also considered for their influence upon t, s, and i traits and changes in career choice certainty. These data are examined in terms of their relationship to dominant personal or attitudinal orientations, either t, s, or i, and for their usefulness in predicting the need for career development assistance. The relationship of socioeconomic data to one's interest in and attitude toward problem solving, coupled with other career selection and development matters, has received considerable attention. For example, attitudes and values related to career selection matters tend to vary between socioeconomic classes.

B. Research Hypotheses

The research hypotheses state the expectations of this project. Each has been developed so as to allow the investi-

gation to identify any variables which can be advanced to account for or predict the problem of career choice uncertainty. The existence or absence of a statistically significant relationship between the variables cited in each hypothesis will be the basis for the conclusions and recommendations to be made regarding the problem.

It is hypothesized that there is no significant relationship between either a dominant task-orientation, self-orientation, or interaction-orientation trait and

1. a change in career choice certainty levels.
   a. advancement toward a greater degree of career choice certainty,
      or
   b. a decline in the level of career choice certainty.

It is hypothesized that there is no significant relationship between socioeconomic factors and

2. the prediction of dominant task-orientation(t),
   self-orientation(s), or interaction-orientation(i) traits.

3. a change in career choice certainty levels.

C. The Population

This study utilizes beginning, full-time community college students. The Orientation Inventory(O.I.), Career Choice Cer-
tainty (CCC) and Background Information (B.I.) instruments were presented to 297 or 39 percent of the 760 students entering Oakton Community College, Morton Grove, Illinois, Fall Semester, 1975.

Students who had attended another college where career education might have occurred were excluded from the sample. Also excluded were students who had enrolled in a career or personal development course which could influence their interest in and ability to make career decisions.

D. Sample Selection

Stratified Random Sampling. The total full-time freshmen population from which the sample was drawn numbered 760. Three hundred ninety-six (approximately 52 percent) were males. Ages ranged from 16 to 56 years, with a mean age just under 23 years. Less than 10 percent were married. An effort was made to draw a stratified random sample such that the 297 sampled reflected similar proportions of these diverse elements.

Sample Size. Since the standard error of measurement varies with the size of the sample, an attempt was made to determine the size of the sample needed to assure specified reliability. The sample size statistic is crucial to the validity of the result of any statistical treatment. ²

A mean score for the pilot study distribution, discussed in this chapter, was calculated to be 6.3 and the sum of the squared deviations from the mean was found to be 7317.8. The sum of the squared deviations from the mean (7318) divided by the number of subjects (297) produced a variance quotient of 24.6. Extracting the square root of the quotient produced a standard deviation of 4.95, treated as a standard deviation of 5 when computing the anticipated sample size.

The size of the sample was determined by first assuming that a sample was preferred so that 95% of the time the interval one unit below and one unit above the sample mean would include the population mean. The symmetrical 95% confidence limits are \( \pm 1.96 \). Assuming the standard deviation of 5 is equal to the standard deviation of the sampled population, the size of the sample is determined by the formula,

\[
1.96 = \frac{1}{5 \sqrt{N-1}}
\]

so that the value of \( N \), in round numbers, is 97.

A median score of the pilot study group was computed to be 5.4 which suggests a somewhat positively skewed distribution when considered in relationship to the mean score of 6.3. The small differences in the mean and median scores, however, indicates a distribution approximating that of normality, a fact supported by the proportions of career choice certainty classifications among the pilot study group (see section F of this chapter). Therefore, in anticipating a similar distribution.
among the freshmen population and in order that similar proportions could be anticipated, a minimum number of 60 completed and useable questionnaires from the sample population was sought. This "60-or-more" figure minimizes the standard error of measurement and represents a sample size at which the normal probability scale can be expected to produce the exactness desired.\(^3\)

At the conclusion of the data retrieval, useable data had been provided by 102 or approximately thirty-four percent of the sampled population of 297, satisfying both the number calculated(97) and the 60-or-more criterion. The mean age of respondents was 22 years; 54 percent were females; and about 10 percent were married. These statistics favorably approximate the characteristics of the total population from which the sample was drawn.

E. Instruments

The Orientation Inventory(O.I.), Career Choice Certainty (CCC), and Background Information(B.I.) instruments were used in documenting the subjects' characteristics.

The O.I. was selected because it lends itself particularly to the measurement of attitudes or personal orientation to the

\(^3\)Tate, *Loc cit.*
solution of problems and completion of tasks. The self-administered instrument can be completed in 20-25 minutes. The subjects respond to the 27 statements by choosing both the most and least preferred of three choices. A subject's score on the O.I. reveals a dominant trait of either task-orientation (t), self-orientation (s), or interaction-orientation (i). The study investigates the relationship among these traits and the problem of career selection and development. The test-retest reliabilities for the three scores are: \( t = .75 \); \( s = .73 \); and \( i = .76 \). Concurrent validity studies have shown that persons judged as "successful" in completing their job responsibilities often manifest a dominant task-orientation trait, while "less successful" individuals tend to be self-oriented.

The CCC instrument, developed by the writer in collaboration with academicians experienced in test construction and research methodology, was designed to reveal the subjects' degree of career choice certainty. It was refined, and validity and reliability examined as part of a pilot study, discussed in this section. The CCC was used in establishing levels of career-choice-certainty at the outset of the research and again after approximately one semester of community college attendance.

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The CCC can be completed in 7-10 minutes. Responses to each of the questionnaire items are numerically weighed and totals computed on the completed instruments. Each total falls within a range of values equated with a classification of career choice certainty. Ranges and classifications are as follows:

10-12 ................. very high
7-9 .................... moderately high
4-6 ..................... somewhat low
1-3 ..................... very low

The B.I. questionnaire was designed by the writer as a self-administering instrument to be completed in 4-6 minutes. The responses provided relate to the subjects' sex, age, marital status, and family composition as well as the educational level and occupation of parents. Responses to the B.I. were studied to ascertain any relationship between these data and the O.I. scores and/or career choice certainty levels.

F. Pilot Study

A pilot study was conducted at the Wilbur Wright campus of the Chicago City Colleges between February and July of 1974 to finalize the development of a test which would discriminate between various levels of existing career choice certainty. Attention was given to establishing the validity and reliability of
the instrument.

The first phase in the development of this instrument included an extensive review of books and periodical literature relative to the career selection process, test construction, and research methodology. Ten instruments used in various data collection projects among community college populations were reviewed. This was followed by a lengthy discussion with four academicians experienced in research techniques, test construction and administration, and guidance procedures. Suggestions were solicited from them regarding (1) the type of questionnaire needed to document the certainty of a student's career choice; (2) the number and kind of items needed; (3) the type of questionnaire item most useful to this undertaking; and (4) the specific content of the items. This information was applied to the development of the first questionnaire, a 15 item instrument which included multiple-choice and short-answer items. Another contact was made with my colleagues and, as a group, we evaluated the instrument in terms of overall length, the construction and length of each item, organization, syntax, and clarity. At this time, suggestions were received from the Director of Institutional Research at a community college and from an associate who holds a Ph. D. in Statistics.

The instrument was revised to ten items and administered to two classes. Twenty-eight freshmen students in one class
and six in another completed the questionnaire. In subsequent group discussions held with each of the two classes, the students' criticism was solicited. The literature was again consulted and the instrument further revised, at this time reducing it to seven multiple choice items.

The seven item questionnaire was administered to 20 students, randomly selected from among those with whom contact was routinely made. The readability and overall clarity of the instrument was discussed with each of the students immediately following the administration. After notating the remarks made, each student was asked to declare a level of career choice certainty. Their responses ranged in varying degrees from an indication of absolute certainty to totally undecided. Questionnaires were then grouped accordingly and weights assigned to the responses in an initial effort to equate a level or category of career choice certainty with a numerical range. The values assigned each response were reviewed by two of the academicians contacted at the outset of the study. The weights to be assigned questionnaire responses and the numerical range to be equated with the classifications of career choice certainty were then finalized.

As part of the pilot project, the instrument was administered to more than 300 entering community college freshmen of Wilbur Wright College. The following distribution resulted:
Very High ................. 20%
Moderately High ............ 24%
Somewhat Low ............... 36%
Very Low ................... 19%

Criterion-related/Concurrent Validity. In person or by phone, 58 of the group tested were contacted. Eighteen had been classified as "very high;" 15 as "moderately high;" 20 as "somewhat low;" and 5 as "very low." The subjects were asked to reflect on the extent to which the classification, as revealed by the CCC instrument, was consistent with their self-assessment of their career certainty: twenty-seven, approximately 80% of the group classified as either "moderately high" or "somewhat low," were in agreement with the classification. Twelve or about 65% of those classified as "very high" agreed with the classification. Four of the five people classified as "very low" stated that this classification was consistent with their self-assessment. Overall, approximately 75% of those contacted were in agreement with the accuracy of the Career Choice Certainty (CCC) instrument. (Three of the fifty-eight contacted were unable to provide an opinion.)

Test-retest Reliability. In a follow-up contact, the 7 item CCC was administered to 25 of the 58 students previously contacted, to establish the reliability of the test. A comparison was made between the career choice certainty classifications attained in this administration and those documented
in the first administration for the same subjects. Only in the case of three of the students was there a change from the original classification.

G. Procedures

The Orientation Inventory (O.I.), Career Choice Certainty (CCC), and Background Information (B.I.) instruments were administered to 297 first semester community college freshmen; by mail (255) and during classroom visitations (42). After approximately one semester, the CCC was administered again.

Responses to the O.I. produce a predominant trait of either task-orientation (t), self-orientation (s), or interaction-orientation (i) with which each respondent is to be classified accordingly. The CCC questionnaire establishes a level of career certainty ranging from "very high" to "very low." In addition to sex, age, and marital status of the respondents, the B.I. data includes the educational level and occupation of parents, number of parents and siblings in the family, respondents' rank among siblings, the involvement of any siblings in higher education, and those with whom respondents reside.

Contrasting the degree of career choice certainty revealed on the first administration of the CCC with that of the second administration disclosed:
1. Students whose selection of a career goal remained stable and high;
2. Students who advanced toward greater career choice certainty;
3. Students whose selection of a career goal remained stable but low; and
4. Students who declined in their level of career choice certainty.

The results were analyzed to determine:

1. The relationship of scores on the O.I. to the degree of stability or change in career choice certainty reflected in the comparison of the two administrations of the CCC.
2. The relationship of B.I. data to O.I. scores and career choice certainty levels.
3. A means for predicting the existence or potential existence of a career selection and development problem.

H. Research Design

There are three functional categories of experimental design taken in the approach to the problem:
1. Correlational;  
2. Causal-comparative; and  
3. Action.

The correlational research approach was an investigation of the extent to which variations in career choice certainty levels corresponded to (1) variations in personal orientation traits and/or (2) socioeconomic information.

The causal-comparative research approach was used to identify socioeconomic factors related to the problem of career choice uncertainty. Plausible cause-and-effect relationships will be sought between (1) socioeconomic data and a dominant trait of task-orientation, self-orientation, or interaction-orientation and/or (2) career choice certainty levels.

The action research approach was reflected in the effort of the investigation to seek a method for identifying personal orientation traits indicative of a need to assist entering community college students in selecting a career.

I. Analysis of Data

In this study, three sets of measurements were obtained: task-orientation (t), the tendency for a person to be concerned with high performance and task completion; self-orientation (s), reflecting a person's expectation of direct rewards
irrespective of the quality of performance; and interaction-orientation (i), a person's concern for maintaining harmonious relations at the expense of task completion. Each measurement was obtained on the same experimental variable, career choice certainty, each with its own set of conditions. For the most part, t, s and i measurements were treated as independent/predictor variables. Career choice certainty was considered as the dependent/criterion variable.

The computerized programs used in the data analysis included (1) analysis of variance, (2) discriminate analysis, and (3) multiple regression techniques.

Analysis of Variance. This technique explored the possible fixed effects of a single factor such as a t, s, or i trait on career choice certainty. The observed frequencies and changes in career choice certainty levels corresponding to the t, s, or i group into which respondents were classified was documented. An F test determined the ratio of between group variations to variations within the group. When existing F distribution table values proved to be greater than the obtained value, it is inferred that the data does not provide enough evidence of the existence of mean differences among the tested subjects at the level of significance at which the F table values are found, and, therefore, an hypothesis is not rejected.

Discriminate Analysis. This technique discriminated between t, s, and i traits, which were viewed as dependent vari-
ables. This discrimination was based on eighteen discriminating functions or independent variables, considered as characteristics on which t, s, and i groups could differ. The objective was to weight and linearly combine the discriminating variables so that the groups were distinctly identifiable or could be predicted in terms of such variables.

Multiple Regression. This technique treated ten groups, classified by a level of career choice certainty which had remained stable, declined, or advanced, as dependent variables. The relationship between these groups and eighteen socioeconomic, independent variables were analyzed. The purpose was to produce a description of the extent to which the independent variables account for variance in the dependent variable.
CHAPTER IV

PRESENTATION AND DISCUSSION OF RESULTS

It has been the writer's objective in this research to accomplish the following:

1. to measure task-orientation, self-orientation, and interaction-orientation traits; career choice certainty levels; and socioeconomic factors among a selected group of community college students;

2. to determine the relationship between a student's dominant personal orientation trait and (a) existing levels of career choice certainty and (b) changes in career choice certainty;

3. to identify socioeconomic factors related to a student's personal orientation to task completion, career choice certainty levels, and changes in career choice certainty;

4. to develop a profile of student characteristics indicative of and with which task-, self-, and interaction-orientation traits and changes in career choice certainty can be equated; and

5. to explore and present a possible means, as sug-
gested by the results of this research, for identi-
fying potentially unstable and/or low levels of
career choice certainty.

To this end, three research hypotheses have been investigated. The resulting data are presented and discussed in relationship to the aforementioned objectives.

The 297 subjects sampled were asked to complete the Orientation Inventory (O.I.), Career Choice Certainty (CCC) and Background Information (B.I.) questionnaires. Of the 102 who returned useable questionnaires, 61 (60 percent) had been contacted and returned the information by mail. Questionnaires were retrieved from the remaining 41 during classroom visitations. Only the CCC was administered a second time.

The data retrieved were compiled, placed on I.B.M. tabulating cards and computer programs utilized in generating the research findings presented and discussed in this chapter.

The distribution of task-oriented, self-oriented and interaction-oriented traits as measured with the Orientation Inventory is shown in Table 1.

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>39</td>
<td>38.2%</td>
</tr>
<tr>
<td>Self</td>
<td>24</td>
<td>23.5%</td>
</tr>
<tr>
<td>Interaction</td>
<td>39</td>
<td>38.2%</td>
</tr>
</tbody>
</table>

N = 102
Table 2 presents a distribution of these orientations in relation to career choice certainty measured at the outset and at the conclusion of the 102 subjects' first semester of attendance in the community college. Raw scores on the Career Choice Certainty instrument were converted to categories of "very low," "somewhat low," "moderately high," and "very high."

**TABLE 2**

**CAREER CHOICE CERTAINTY**

**FIRST AND FINAL MEASUREMENTS**

**First Measurement**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Very Low</th>
<th>Somewhat Low</th>
<th>Mod. High</th>
<th>Very High</th>
<th>Raw Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>0</td>
<td>10</td>
<td>11</td>
<td>18</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>25.6%</td>
<td>28.2%</td>
<td>46.2%</td>
<td>100%</td>
</tr>
<tr>
<td>Self</td>
<td>3</td>
<td>4</td>
<td>7</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>12.5%</td>
<td>16.7%</td>
<td>29.1%</td>
<td>41.7%</td>
<td>100%</td>
</tr>
<tr>
<td>Interaction</td>
<td>2</td>
<td>13</td>
<td>14</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>5.1%</td>
<td>33.3%</td>
<td>35.9%</td>
<td>25.6%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Final Measurement**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Very Low</th>
<th>Somewhat Low</th>
<th>Mod. High</th>
<th>Very High</th>
<th>Raw Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>2</td>
<td>7</td>
<td>16</td>
<td>14</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>5.1%</td>
<td>17.9%</td>
<td>41.0%</td>
<td>36.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Self</td>
<td>2</td>
<td>7</td>
<td>6</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>8.3%</td>
<td>29.2%</td>
<td>25.0%</td>
<td>37.5%</td>
<td>100%</td>
</tr>
<tr>
<td>Interaction</td>
<td>3</td>
<td>9</td>
<td>15</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>7.7%</td>
<td>23.1%</td>
<td>38.5%</td>
<td>30.8%</td>
<td>100%</td>
</tr>
</tbody>
</table>
The mean score of the data in Table 2 is 8.46, a career choice certainty level of moderately high, and the median score is 9.20, also a moderately high level of career choice certainty.

The mean and median scores in Table 2 reflect a somewhat negatively skewed distribution with the bulk of the scores near the upper level of career choice certainty measurements. The column percentages do not reveal an appreciable change in the overall number of subjects in each of the categories from the time of the first to the second and final administration of the CCC. However, a relatively large number of career choice certainty measurements appear to be moderately high or very high: 76 percent of the task-oriented group; 67 percent of those categorized as self-oriented; and 65 percent of the interaction-oriented subjects. At these upper levels, advancement is limited. The proportions in each cell indicate a greater overall possibility for stability or decline in career choice certainty since, in general, comparatively smaller numbers are at the lower levels of the career choice certainty scale.

In Table 3, task-orientation, self-orientation, and interaction-orientation are categorized by career choice certainty measurements which remained stable, declined, and advanced. Stable career choice certainty occurred most often among the self-oriented subjects. A decline was most common within the task- and interaction-oriented groups; although, only 23.1 percent declined. The
lowest percentage of decline among the subjects classified as moderately high or very high is represented within the self-oriented group. Career choice certainty advanced among 30.8 percent of the interaction-oriented subjects, a greater improvement than that of either task- or self-oriented classifications.

TABLE 3
CAREER CHOICE CERTAINTY VARIATIONS:
A COMPARISON OF THE FIRST AND FINAL MEASUREMENTS

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Stable/No Change</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Low</td>
<td>Somewhat Low</td>
<td>Mod. High</td>
<td>Very High</td>
<td>Raw Total</td>
</tr>
<tr>
<td>Task</td>
<td>0</td>
<td>4</td>
<td>6</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>N=39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>18</td>
</tr>
<tr>
<td>N=24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>N=39</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Decline</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Somewhat Low</td>
<td>Mod. High</td>
<td>Very High</td>
<td>Raw Total</td>
<td></td>
</tr>
<tr>
<td>Task</td>
<td>1</td>
<td>2</td>
<td>6</td>
<td>9</td>
<td>23.1%</td>
</tr>
<tr>
<td>N=39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>12.5%</td>
</tr>
<tr>
<td>N=24</td>
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<td></td>
</tr>
<tr>
<td>Interaction</td>
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<td>N=39</td>
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</tr>
</tbody>
</table>
TABLE 3 - CONTINUED

**ADVANCE**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Very Low</th>
<th>Somewhat Low</th>
<th>Mod. High</th>
<th>Raw Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>N=39</td>
<td></td>
<td></td>
<td></td>
<td>20.5%</td>
</tr>
<tr>
<td>Self</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>N=24</td>
<td></td>
<td></td>
<td></td>
<td>12.5%</td>
</tr>
<tr>
<td>Interaction</td>
<td>0</td>
<td>9</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>N=39</td>
<td></td>
<td></td>
<td></td>
<td>30.8%</td>
</tr>
</tbody>
</table>

A. Hypothesis 1: Results and Discussion

Hypothesis 1: There is no significant relationship between either a dominant task-orientation, self-orientation, or interaction-orientation trait and a change in career choice certainty.

The hypothesis was tested using the one-way analysis of variance computer program from the University of Chicago, Statistical Package for the Social Sciences (SPSS). In the analysis, three treatment groups, task-orientation, self-orientation, and interaction-orientation, were regarded as the source of variance or predictor/independent variables (A). The levels and variations of career choice certainty among the 102 respondents (N) were treated as the criterion-dependent variables (Y).
The analysis of data disclosed the fact that the association between the subjects' orientation traits and career choice certainty was not significant at the .05 level. Only when changes in career choice certainty, such as a decline or an advancement, are considered does the alpha level approach .05. A dominant orientation trait, therefore, is considered more of a valid predictor of a variation in an individual's career choice certainty, over time, than an indicator of any fixed level of career choice certainty development.

Table 4 indicates the fixed effects of the treatments on career choice certainty measured (1) first, at the outset of the research; (2) a second and final time at the conclusion of the data collection; and (3) in a comparison of the results of the first and second measurements.

TABLE 4
CAREER CHOICE CERTAINTY:
ONE-WAY ANALYSIS OF VARIANCE - FIXED EFFECTS

FIRST MEASUREMENT

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2.888</td>
<td>2</td>
<td>1.444</td>
<td>1.741</td>
<td>0.179</td>
</tr>
<tr>
<td>Within Groups</td>
<td>82.102</td>
<td>99</td>
<td>0.829</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>84.990</td>
<td>101</td>
<td>0.841</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 4 - CONTINUED

FINAL MEASUREMENT

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>0.589</td>
<td>2</td>
<td>0.294</td>
<td>0.342</td>
<td>0.999</td>
</tr>
<tr>
<td>Within Groups</td>
<td>85.371</td>
<td>99</td>
<td>0.862</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>85.960</td>
<td>101</td>
<td>0.851</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CHANGE (NONE, DECLINE, AND ADVANCE)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig. of F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>32.528</td>
<td>2</td>
<td>16.264</td>
<td>2.379</td>
<td>0.096</td>
</tr>
<tr>
<td>Within Groups</td>
<td>676.925</td>
<td>99</td>
<td>6.838</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>709.454</td>
<td>101</td>
<td>7.024</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The F Table values at 2 and 99 degrees of freedom: 3.09 at an alpha level of .05; 3.84 at an alpha level of .025; and 4.82 at the .01 alpha level are, as indicated in Table 4, less than the obtained values of F at all levels of significance. Only when changes in career choice certainty are considered does the significance approach the alpha level of .05. Therefore, it is inferred that there is not enough evidence to warrant a conclusion that mean differences or treatment effects existed in career
choice certainty categories as a result of the influence of the treatment groups. The hypothesis is not rejected. We assume, therefore, that no significant relationship exists between orientation traits and career choice certainty.

An estimate of the variance in the dependent variable, career choice certainty, accounted for by the independent variables, task-, self-, and interaction-orientation and the intra-class correlation coefficients are seen in Table 5. A very weak association exists. Only about 2.5 percent of the variance in career choice certainty can be accounted for by the orientation traits of the subjects tested. Less than two percent of the career choice certainty levels at both the first and second measurements appear to have a relationship to orientation traits. The intra-class correlation coefficients suggest a weak association between the orientation traits and the dependent variable, career choice certainty variation.

**TABLE 5**

**VARIANCE AND INTRA-CLASS CORRELATIONS**

<table>
<thead>
<tr>
<th>Career Choice Certainty</th>
<th>Estimated Variance In (Y) Due To (A)</th>
<th>Intra-Class Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Measurement</td>
<td>0.014</td>
<td>0.17</td>
</tr>
<tr>
<td>Final Measurement</td>
<td>0.013</td>
<td>0.10</td>
</tr>
<tr>
<td>Change From First To Final</td>
<td>0.025</td>
<td>0.44</td>
</tr>
</tbody>
</table>
Because of the insignificant result and very weak association of the treatment source to the dependent variable, the hypothesis cannot be rejected. We infer, therefore, that task-, self-, and interaction-orientations do not significantly influence career choice certainty. It should be noted, however, that this research focused primarily on causal factors related to changes in career choice certainty. The greatest significance, 0.096, was obtained on this measure as was the largest estimate in variance. It can be inferred, therefore, that dominant orientation traits, while not statistically significant at commonly used critical levels, have relatively more influence on career choice variations in which decline occurs most often among task- and interaction-oriented individuals and advancement among those who are interaction-oriented.

B. Hypothesis 2: Results and Discussion

Hypothesis 2: There is no significant relationship between socioeconomic factors and prediction of dominant task-orientation, self-orientation, or interaction-orientation traits.

The second hypothesis was tested using a discriminate analysis computer program from the University of Chicago, Statistical Package for the Social Sciences (SPSS).

The statistical analysis disclosed that some socioeconomic
variables, when acting independently, are reliable factors in distinguishing between the three orientation groups. When the 14 socioeconomic variables are considered as one function, they are less reliable as a means of distinguishing between orientation groups. Most of the variables have a very small or negative influence on the discriminating accuracy of all other variables.

In Table 6 (see Appendix F, Page 110), socioeconomic data provided on the Background Information questionnaire, are described. The mean age of the respondents is 22 years and the median, 20 years. About 10 percent were married and slightly more than one-half were females. These statistics compare favorably with the characteristics of the total population from which the sample was drawn.

Over one-half of the respondents' fathers had attended or graduated from a college or university and 71 percent were engaged in skilled or professional occupations. In marked contrast were the mothers' educational levels and occupations. Over 63 percent were working at unskilled jobs, a category which includes that of "housewife." Approximately 53 percent had not gone beyond a high school education with only 21 percent having had some contact with higher education.

Almost 60 percent of the subjects reported one or two siblings in the home, most of whom had attended but not graduated from a college or university. The number living within a conventional family structure of a mother and father or husband or wife
and siblings represented 61 percent of the respondents.

After treating task-, self-, and interaction-orientation traits as independent variables in testing Hypothesis 1, this analysis considered these three groups as dependent variables. Fourteen socioeconomic variables/discriminating functions were loaded on the orientation groups and then scanned to determine their accuracy in predicting orientation group membership. The socioeconomic data were treated as discriminating characteristics on which the groups might differ.

Table 7 reveals the discriminating power of the functions, the number of which was set at two, one less than the number of orientation groups. The functions represent the overall predictive value of each of the 14 variables or the contribution each variable makes to the overall value of all of the variables as a whole function to identify or discriminate between orientation groups.

**TABLE 7**

**DISCRIMINATING POWER OF FUNCTIONS**

<table>
<thead>
<tr>
<th>Discriminant Function</th>
<th>Eigenvalue</th>
<th>Canonical Correlation</th>
<th>Wilks' Lambda</th>
<th>df</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.34000</td>
<td>0.504</td>
<td>0.6855</td>
<td>28</td>
<td>0.172</td>
</tr>
<tr>
<td>2</td>
<td>0.08858</td>
<td>0.285</td>
<td>0.9186</td>
<td>13</td>
<td>0.853</td>
</tr>
</tbody>
</table>
The small eigenvalues indicate that each function is limited in or has a low level of ability to separate the orientation groups. This fact is further supported by the very low canonical correlation coefficients, indicative of a weak association between the discriminant function and the dummy variables, sex and marital status, as well as the orientation groups.

The relatively small eigenvalue and canonical correlation coefficient of Function 2 suggests a pronounced absence of power in this function to discriminate between the interaction-oriented group and the task- and self-oriented groups. The lambda value of 0.9186 indicates almost no discriminating power in Function 2. The significance of 0.853 suggests an 85 percent chance that the lambda value occurred due to sampling even when no further information is accounted for in the population.

From the foregoing, it is inferred that discriminant functions 1 and 2, as a whole, are not reliable predictors of orientation group membership. Since Function 1 is somewhat stronger, it is inferred that the socioeconomic variables when loaded on the orientation groups, more reliably predicts membership in the self-oriented group or distinguishes between this and other groups. Function 1, which has the stronger discriminating power, was influenced most by the father's educational level which, as revealed in Table 8, is three times as important as the number of siblings who attended a college or university and approximately twenty times more of a contributor to this function than is the number of older
brothers and sisters. Such variables as the mother’s education, number of siblings who were attending a college or university, and the number of siblings in the family made negative contributions to the power of the function to discriminate between orientation groups.

<table>
<thead>
<tr>
<th>Discriminating Variable</th>
<th>Function 1</th>
<th>Function 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>0.22468</td>
<td>0.26429</td>
</tr>
<tr>
<td>Sex*</td>
<td>-0.17049</td>
<td>-0.29960</td>
</tr>
<tr>
<td>Marital Status*</td>
<td>-0.28932</td>
<td>0.09324</td>
</tr>
<tr>
<td>Father’s Occup.*</td>
<td>0.03523</td>
<td>0.09124</td>
</tr>
<tr>
<td>Father’s Educ.*</td>
<td>0.62474</td>
<td>-0.09243</td>
</tr>
<tr>
<td>Mother’s Occup.*</td>
<td>-0.08043</td>
<td>0.07790</td>
</tr>
<tr>
<td>Mother’s Educ.*</td>
<td>-0.28111</td>
<td>-0.16837</td>
</tr>
<tr>
<td>No. of Bros./Sist.</td>
<td>-0.19990</td>
<td>-0.11082</td>
</tr>
<tr>
<td>Older Bros./Sist.*</td>
<td>-0.03465</td>
<td>0.16394</td>
</tr>
<tr>
<td>Younger Bros./Sist.*</td>
<td>-0.09757</td>
<td>-0.25296</td>
</tr>
<tr>
<td>Siblings Attended College/University</td>
<td>0.19949</td>
<td>0.01530</td>
</tr>
<tr>
<td>Siblings Graduated College/University</td>
<td>0.05024</td>
<td>-0.44164</td>
</tr>
<tr>
<td>Siblings Currently Attend. Coll./Univ.</td>
<td>-0.23367</td>
<td>0.00773</td>
</tr>
<tr>
<td>Resides With</td>
<td>0.12210</td>
<td>-0.04741</td>
</tr>
</tbody>
</table>

*Dummy Variables

Table 9 (Appendix G) lists the discriminating variables ranked in the order of their accuracy in predicting orientation group classifications.
The educational levels of the parents, persons with whom the subjects reside and the number of younger brothers and sisters are the most accurate predictors of orientation group membership. The contact of siblings with higher education is the least useful variable in classifying orientation groups.

A summary of the most and least useful of the discriminating variables is provided in Table 10. The education of the respondents' mothers is the most accurate predictor of task-orientation. Father's occupation and education and the number of older brothers and sisters appear to be accurate predictors of task-orientation while the least accurate predictors of interaction-orientation. The marital status of the subjects most accurately predicts self-orientation group membership; but, like other discriminating variables such as the number of brothers and sisters, this variable is of no value in predicting membership in the interaction-oriented group. Age, sex, the number of younger siblings, and the number of siblings who attended an institution of high learning predict interaction-orientation but have no accuracy in predicting membership in the task-oriented group.

TABLE 10
ACCURACY OF DISCRIMINATING VARIABLES IN PREDICTING ORIENTATION GROUP MEMBERSHIP

<table>
<thead>
<tr>
<th>Discriminating Variable</th>
<th>Most Accurate Prediction</th>
<th>Least Accurate Prediction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Interaction(76.9%)</td>
<td>Task(0.0%)</td>
</tr>
<tr>
<td>Sex</td>
<td>Interaction(59.0%)</td>
<td>Task(0.0%)</td>
</tr>
</tbody>
</table>
TABLE 10 - CONTINUED

<table>
<thead>
<tr>
<th>Discriminating Variable</th>
<th>Most Accurate Prediction</th>
<th>Least Accurate Prediction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Status</td>
<td>Self(87.5%)</td>
<td>Interaction(0.0%)</td>
</tr>
<tr>
<td>Father's Occup.</td>
<td>Task(61.5%)</td>
<td>Interaction(0.0%)</td>
</tr>
<tr>
<td>Father's Educ.</td>
<td>Task(71.8%)</td>
<td>Interaction(0.0%)</td>
</tr>
<tr>
<td>Mother's Occup.</td>
<td>Interaction(69.2%)</td>
<td>Self(0.0%)</td>
</tr>
<tr>
<td>Mother's Educ.</td>
<td>Task(76.9%)</td>
<td>Self(0.0%)</td>
</tr>
<tr>
<td>No. of Bros./Sist.</td>
<td>Self(70.8%)</td>
<td>Interaction(0.0%)</td>
</tr>
<tr>
<td>Older Bros./Sist.</td>
<td>Task(74.4%)</td>
<td>Interaction(0.0%)</td>
</tr>
<tr>
<td>Younger Bros./Sist.</td>
<td>Interaction(66.7%)</td>
<td>Task(0.0%)</td>
</tr>
<tr>
<td>Siblings Attended</td>
<td>Interaction(75.0%)</td>
<td>Task(0.0%)</td>
</tr>
<tr>
<td>College/University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siblings Graduated</td>
<td>Self(76.9%)</td>
<td>Task(0.0%)</td>
</tr>
<tr>
<td>College/University</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siblings Currently</td>
<td>Self(66.7%)</td>
<td>Task(0.0%)</td>
</tr>
<tr>
<td>Attend. Coll./Univ.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resides With</td>
<td>Self(71.8%)</td>
<td>Interaction(0.0%)</td>
</tr>
</tbody>
</table>

C. Hypothesis 3: Results and Discussion

Hypothesis 3: There is no significant relationship between socioeconomic factors and a change in career choice certainty levels.

The hypothesis was tested using a step-wise multiple regres-
sion analysis computer program from the University of Chicago, Statistical Package for the Social Sciences (SPSS).

In the test of this hypothesis, a weak but positive relationship was established between socioeconomic data and variations in career choice certainty. Some socioeconomic factors contributed to the accuracy of predicted variations. Other factors reduced the accuracy with which career choice certainty variations could be predicted from such information. The variability of career choice certainty explained by socioeconomic factors is significant at the .01 level.

Change in career choice certainty was treated as the dependent variable. The analysis was made to determine the degree of linear dependence of this variable upon socioeconomic factors considered as independent variables. The independent variables were added to the regression equation in a step-wise manner, as indicated in Table 11 (see Appendix R, page 115), while the effects of the remaining variables were controlled statistically.

The combined effects of the socioeconomic variables is illustrated in Table 12. The Multiple R coefficient is an index of the strength and direction of the relationship of the variable(s) to changes in career choice certainty. R Squared indicates the proportion of variation in career choice certainty explained by the variables entered into the regression equation. The Standard Error of Measurement is an assessment of the predictive accuracy or the amount of prediction error associated with the predictions.
of changes in career choice certainty. It is the standard deviation of actual values of career choice certainty from predicted values.

The influence of each of the twelve combinations of variables on changes in career choice certainty is significant at the .01 level. Although the influence exists at this level of significance, it is rather weak. The maximum positive strength is found in step 12 when all of the socioeconomic items are combined. The variables account for less than 10 percent of the variations in career choice certainty. In assuming that the actual values of career choice certainty are normally distributed about the regression line, we also assume that 68 percent of the individuals will vary more than ±2.60 from a prediction of any of the 10 possible changes in career choice certainty (see Table 3.) It is inferred that a somewhat weak but positive relationship exists between career choice certainty variations and socioeconomic data. It must also be inferred that predicted career choice certainty changes for 68 percent of individuals could vary more than two levels from that which is predicted from socioeconomic facts. Such a variation could move a career choice change predicted to be within either a category of stable, decline, or advance into another of the categories.

TABLE 12

THE COMBINED EFFECTS OF SOCIOECONOMIC CONDITIONS ON CAREER CHOICE CERTAINTY VARIATIONS: STRENGTH AND DIRECTION

<table>
<thead>
<tr>
<th>*Step</th>
<th>Multiple R</th>
<th>R Squared</th>
<th>SEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.122</td>
<td>0.015</td>
<td>2.643</td>
</tr>
</tbody>
</table>
TABLE 12 - CONTINUED

<table>
<thead>
<tr>
<th>Step</th>
<th>Multiple R</th>
<th>R Squared</th>
<th>SEE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.160</td>
<td>0.025</td>
<td>2.642</td>
</tr>
<tr>
<td>3</td>
<td>0.183</td>
<td>0.033</td>
<td>2.645</td>
</tr>
<tr>
<td>4</td>
<td>0.206</td>
<td>0.042</td>
<td>2.646</td>
</tr>
<tr>
<td>5</td>
<td>0.220</td>
<td>0.048</td>
<td>2.651</td>
</tr>
<tr>
<td>6</td>
<td>0.236</td>
<td>0.055</td>
<td>2.655</td>
</tr>
<tr>
<td>7</td>
<td>0.246</td>
<td>0.060</td>
<td>2.662</td>
</tr>
<tr>
<td>8</td>
<td>0.254</td>
<td>0.064</td>
<td>2.671</td>
</tr>
<tr>
<td>9</td>
<td>0.260</td>
<td>0.068</td>
<td>2.680</td>
</tr>
<tr>
<td>10</td>
<td>0.265</td>
<td>0.070</td>
<td>2.691</td>
</tr>
<tr>
<td>11</td>
<td>0.270</td>
<td>0.073</td>
<td>2.702</td>
</tr>
<tr>
<td>12</td>
<td>0.273</td>
<td>0.074</td>
<td>2.716</td>
</tr>
</tbody>
</table>

*See Table 11 for variables entered

An analysis of variance is presented in Table 13. The sum of the squares reflects the variability of career choice certainty explained and that which is unexplained by the regression line. All of the obtained F values are significant at the .01 level. It is, therefore, inferred that career choice certainty changes are influenced by all of the socioeconomic factors with progressively more influence evidenced as the variables are added.
### TABLE 13

**ANALYSIS OF VARIANCE**

<table>
<thead>
<tr>
<th>*Step</th>
<th>df</th>
<th>SS</th>
<th><strong>F</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>10.652</td>
<td>1.524</td>
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<tr>
<td></td>
<td>100</td>
<td>698.808</td>
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<td>18.180</td>
<td>1.301</td>
</tr>
<tr>
<td></td>
<td>99</td>
<td>691.280</td>
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</tr>
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<td>3</td>
<td>3</td>
<td>23.837</td>
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</tr>
<tr>
<td></td>
<td>98</td>
<td>685.623</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>30.285</td>
<td>1.081</td>
</tr>
<tr>
<td></td>
<td>97</td>
<td>679.175</td>
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<td>5</td>
<td>34.405</td>
<td>0.978</td>
</tr>
<tr>
<td></td>
<td>96</td>
<td>675.055</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>39.541</td>
<td>0.934</td>
</tr>
<tr>
<td></td>
<td>95</td>
<td>669.919</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>43.156</td>
<td>0.869</td>
</tr>
<tr>
<td></td>
<td>94</td>
<td>666.304</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>45.864</td>
<td>0.803</td>
</tr>
<tr>
<td></td>
<td>93</td>
<td>663.596</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>48.261</td>
<td>0.746</td>
</tr>
<tr>
<td></td>
<td>92</td>
<td>661.119</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>50.115</td>
<td>0.691</td>
</tr>
<tr>
<td></td>
<td>91</td>
<td>659.345</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>11</td>
<td>52.051</td>
<td>0.647</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>657.408</td>
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</tr>
<tr>
<td>12</td>
<td>12</td>
<td>52.895</td>
<td>0.597</td>
</tr>
<tr>
<td></td>
<td>89</td>
<td>656.565</td>
<td></td>
</tr>
</tbody>
</table>

*See Table 11 for variables entered

**F** value significant at the .01 level
The B values given in Table 14 are partial regression coefficients which measure the influence of each independent variable upon changes in career choice certainty, with adjustments made for all other variables. The constant value, 7.811, represents a predicted score on career choice change when the value of each variable is set at zero. Predicted career choice change is said to increase by the value indicated for each variable for each unit increase in that variable. For example, the predicted score of 7.811 would decrease by 0.252 for each unit increase in age. The beta values represent the standard regression coefficients reflecting the standard deviation units for each standard deviation in age. Again, each F value is significant at the .01 level. From these data, it can be inferred that the positive and negative effects on career choice certainty represented by the B and beta coefficients are statistically significant indicators of career choice certainty changes.

**TABLE 14**

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Beta</th>
<th>Stnd. Error of B</th>
<th>*F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-0.252</td>
<td>-0.151</td>
<td>0.239</td>
<td>1.110</td>
</tr>
<tr>
<td>Resides With</td>
<td>-0.179</td>
<td>-0.144</td>
<td>0.157</td>
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<tr>
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<td>-0.651</td>
<td>-0.225</td>
<td>0.429</td>
<td>2.306</td>
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</tbody>
</table>
TABLE 14 - CONTINUED

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Beta</th>
<th>Std. Error of B</th>
<th>*F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father's Ed.</td>
<td>0.368</td>
<td>0.141</td>
<td>0.353</td>
<td>1.091</td>
</tr>
<tr>
<td>Sibl. Attend. Coll./Univ.</td>
<td>0.789</td>
<td>0.212</td>
<td>0.642</td>
<td>1.513</td>
</tr>
<tr>
<td>Older Bros./Sisters</td>
<td>-0.545</td>
<td>-0.168</td>
<td>0.538</td>
<td>1.027</td>
</tr>
<tr>
<td>No. of Bros./Sisters</td>
<td>0.264</td>
<td>0.084</td>
<td>0.450</td>
<td>0.345</td>
</tr>
<tr>
<td>Mother's Occu.</td>
<td>0.222</td>
<td>0.073</td>
<td>0.354</td>
<td>0.393</td>
</tr>
<tr>
<td>Sex</td>
<td>-0.296</td>
<td>-0.056</td>
<td>0.572</td>
<td>0.268</td>
</tr>
<tr>
<td>Marital Stat.</td>
<td>-0.508</td>
<td>-0.075</td>
<td>0.991</td>
<td>0.263</td>
</tr>
<tr>
<td>Sibl. Currently Attend. Coll./University</td>
<td>-0.362</td>
<td>-0.083</td>
<td>0.991</td>
<td>0.271</td>
</tr>
<tr>
<td>Father's Occu.</td>
<td>-0.119</td>
<td>-0.040</td>
<td>0.353</td>
<td>0.114</td>
</tr>
<tr>
<td>(Constant)</td>
<td>7.811</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Significant at the .01 level
CHAPTER V

SUMMARY, CONCLUSIONS, APPLICATION AND RECOMMENDATIONS

A. Summary

The investigation proceeded toward the identification of underlying causes and predisposing factors indicative of indecisive and/or underdeveloped career choice certainty. Career-choice-certainty, as a dynamic influencing the direction and success of the community college student, is the focal point of this study. Personal orientation traits and socioeconomic factors were studied to determine whether they were related to the selection and development of a career goal. The relationship between personal orientation traits and career choice certainty measures, which remained stable, declined, or improved, was analyzed. Socioeconomic factors were examined to determine the association of such data to both personal orientation traits and the levels of and changes in career choice certainty.

The review of the literature covered three major areas.
The first involved a review of behavioral dynamics and models of career and vocational selection, testing procedures, decision making, problem solving, and task completion. Three mutually exclusive personal orientations with which subjects could be classified were identified: task-orientation (t), self-orientation (s), and interaction-orientation (i). The task-oriented individual demonstrates a concern for task completion, problem solving, and high performance. The self-oriented person is one who expects direct rewards irrespective of his quality of performance or influence upon others. The interaction-oriented person demonstrates a concern for harmonious relationships at the expense of the completion of a task.

Such dynamics as values, status, individual needs, perception, motivation, maturation, and personal identity were reviewed. Authors varied widely in the qualitative and quantitative importance they assigned such dynamics in theoretically describing the career selection process.

"Models" of career decision making and the vocational selection process were studied. These ranged from positions stating that the career selection process is largely unconscious, sometimes impulsive act to those which describe career selection as a need reduction process or a systematic developmental process in which maturity and personality type are central concepts.
Research studies into career selection and development were reviewed. References to the self-concept, life experience, and cultural background were presented as significant considerations.

A second major area included in the review of the literature was the influence of socioeconomic variables upon the career selection process. Factors such as sex, age, intelligence, occupation, social class membership, family composition, parental attitudes, and influential reference groups were studied.

Finally, career education programs, counseling and vocational guidance techniques, information services, and personal growth experiences were investigated. These included short-term and long-term, group and individual efforts directed toward growth and development in areas related to career and vocational selection. Decision-making, goal setting, problem solving, communication and social skill development, personal adjustment, self-actualization, and the self-concept are addressed in these and other student personnel services available on some community college campuses.

Subject for the study were 102 full-time students entering their first semester at Oakton Community College, Morton Grove, Illinois, randomly selected in a stratified manner in the year 1975. Subjects were first contacted by mail and during classroom visitations at the beginning of their first semester and
asked to complete three research instruments. These instruments were the Orientation Inventory (O.I.), used to determine a dominant t, s, or i personal orientation trait; the Career Choice Certainty (CCC) instrument on which a level of career choice certainty was established; and the Background Information (B.I.) questionnaire on which subjects provided socioeconomic data. The CCC was administered a second time at the conclusion of the semester in order to identify any changes in career choice certainty. The O.I., CCC, and B.I. instruments can be used to (1) document the dominant orientation traits of entering freshmen, (2) establish the level of and changes in career choice certainty, and (3) identify conditions that constitute the students' socioeconomic milieu. O.I. classifications and/or socioeconomic data can be utilized to predict low and unchanging career choice certainty levels or potentially declining levels. An example of the specific implication of this type of intelligence for the community college is discussed in Section C of this chapter.

Data were analyzed using one-way analysis of variance, discriminate analysis, and step-wise multiple regression. The analysis of variance examined the fixed effects of a dominant t, s, or i orientation trait on the levels of and changes in career choice certainty. The value of this particular treatment is in establishing the extent to which a particular orientation
trait contributes to career choice developmental levels and variations. Discriminate analysis provides for an analysis of the relationship of socioeconomic factors to the prediction of a dominant t, s, or i orientation trait. Through this statistical method, socioeconomic variables which distinguish between manifested orientation traits are identified. A valuable method is provided for discriminating between orientation group classifications. The relative influence of the socioeconomic variables, acting independently and when they all load on the dependent variables, can be ascertained with this method. Multiple regression was used to determine significant relationships between socioeconomic data and changes in career choice certainty. The value of this test is in the extent to which it reveals changes in predicted levels of career choice certainty resulting from the influence of the independent socioeconomic variables. The test qualifies the extent to which variables add to or detract from the accuracy of predictions based on a linear relationship between the independent and dependent variables.

**Hypothesis 1:** When the first hypothesis was tested, dominant task-, self-, and interaction-orientation traits were treated as independent variables influencing career choice certainty, the dependent variable.

High and stable career choice certainty levels occurred most often among the task-oriented group. Low career choice certainty
levels which did not improve were more common among self-oriented subjects. A decline in career choice certainty, over time, is endemic to the task- and interaction-oriented classifications. Improvement in career choice certainty was more in evidence among interaction-oriented individuals than members of the other two groups.

The task-oriented trait, characterized by a concern for problem solving and high performance, occurred most frequently among unmarried female subjects between 18 and 20 years of age who had one or two older brothers and sisters who had attended but not graduated from a college or university. Parents of task-oriented subjects most often had attended high school. Typically, the father was employed in a skilled occupation while the mother worked at an unskilled job or was a housewife. The family with whom the subject lived was most often composed of both parents and the other siblings.

The self-oriented classification, characterized by pre-occupation with receiving direct rewards irrespective of performance, was more common among unmarried male subjects between 18 and 20 years of age who had one or two older brothers and sisters who had graduated from an institution of higher learning. The fathers of these subjects most often were college or university graduates who worked at skilled occupations while the mothers were high school graduates, working at unskilled jobs or in the home. Self-oriented subjects generally resided with
both parents and other family members.

Interaction-orientation, characterized by a concern for harmonious relations and little concern for task completion, was a dominant characteristic of subjects who, on the whole, were 18 to 20 year old unmarried females who had one or two brothers or sisters who were, in some cases, older, and in others, younger. Fathers were often college or university graduates while the mother's education was limited to high school. Older siblings had attended but not graduated from an institution of higher learning. Fathers were engaged in skilled occupations and mothers worked at unskilled jobs or in the role of housewife. The family was most often made up of both parents, the younger brothers and sisters, and some of the older siblings.

Significant relationships were not found to exist between a dominant orientation trait and Career Choice Certainty measurements taken at the beginning and at the end of a semester of college attendance. Furthermore, career choice certainty levels, which remained unchanged, worsened, or improved, were not found to be significantly related to a dominant t, s, or i orientation trait. Thus, the first hypothesis, which was not significant at common alpha levels, could not be rejected. However, the relationship between dominant t, s, and i traits and stability or changes in career choice certainty over time was much closer to the .05 alpha level than when the first and final
career choice certainty measurements were considered without regard to change. Task-, self-, and interaction-orientation traits, therefore, have relatively more influence on the changes that occur in career choice certainty over time.

**Hypothesis 2:** In the test of the second hypothesis, t, s, and i orientation groups were treated as dependent variables. Socioeconomic data represented 14 independent variables or discriminating characteristics on which the groups might differ. The ability of each of the 14 variables to identify or discriminate between t, s, and i orientation groups was considered (1) with each of the 14 variables acting independently and (2) in terms of the contribution each made to the total number, acting as one discriminating function. Small eigenvalues and canonical correlation coefficients revealed a weak association between the variables and the orientation groups. A very high lambda value indicated almost no power in the variables as a whole to discriminate between the interaction-oriented group and the task- and self-oriented groups.

The educational levels of the subjects' mothers, the fathers' occupation and education, and the number of older brothers and sisters are accurate predictors of task-oriented group membership. A subject's marital status, persons with whom he resides, and the number of siblings who have graduated from an institution of higher learning predict membership in the self-oriented group. Age, the number of siblings who had attended a college or university, and the
number of younger siblings were found to be the most accurate predictors of membership in the interaction-oriented group.

Many of the socioeconomic variables that predicted task- and self-orientation group membership were the least accurate predictors of interaction-orientation. Variables which most accurately discriminated between the interaction-oriented group and the others, were the least accurate in sorting out the task-oriented group members from other subjects.

**Hypothesis 3:** Analysis of the third hypothesis was done to determine the degree of linear dependence of career choice certainty changes on socioeconomic factors. A weak but positive influence of each of the variables on changes in career choice certainty was revealed. The analysis also indicated that career choice certainty changes could vary widely in a direction other than that predicted from socioeconomic information; although, the variability in career choice certainty explained by socioeconomic conditions was found to be significant at the .01 level.

**B. Conclusions**

1. Task-, self-, and interaction-oriented traits are not significantly related to either a particular career choice certainty level or a change in career choice certainty, over time.

2. Task-, self-, and interaction-orientation traits more closely approximate significance when related to a career choice certainty change than when related to a fixed level of career
3. Socioeconomic factors do significantly influence a change in career choice certainty.

4. Socioeconomic data are most reliable in predicting membership in the self-oriented group, a classification characterized by an expectation of direct rewards irrespective of the quality of performance or influence upon others.

5. Socioeconomic data are least reliable in predicting membership in the interaction-oriented group, a classification characterized by a demonstrable concern for harmonious relationships at the expense of task completion.

6. Socioeconomic data, which most accurately predicts membership in the interaction-oriented group, are least accurate in predicting membership in the task-oriented group, a classification characterized by a concern for task completion, problem solving, and high performance.

7. Socioeconomic data which most accurately predicts membership in the task- and self-oriented groups is least accurate in predicting interaction-orientation group membership.

8. Those potentially in need of career selection and development assistance are task-oriented students, whose career choice certainty levels tend to decline and self-oriented students, who exhibit a low and unchanging career choice certainty level.

9. Those least in need of career selection and development assistance are interaction-oriented students whose career choice
certainty levels tend to improve and some task-oriented students who exhibit a high and unchanging career choice certainty level.

10. Task-orientation occurs most frequently among unmarried female students between 18 and 20 years of age (a) whose parents attended high school; (b) whose father works at a skilled occupation; and (c) who have one or two older brothers or sisters who attended an institution of higher learning.

11. Self-orientation occurs most frequently among unmarried male students between 18 and 20 years of age (a) who reside with both parents; (b) who have one or two older brothers or sisters who graduated from a college or university; (c) whose father is a college graduate who works at a skilled occupation; and (d) whose mother attended high school and works at an unskilled occupation or in the home.

12. Interaction-orientation occurs most frequently among unmarried female students between 18 and 20 years of age (a) who have one or two siblings who currently attend a college or university and (b) who have one or two younger brothers or sisters.

The conclusions outlined in the preceding twelve points reflect the significant insights revealed in this study. In addition to these points and the interpretation of these data presented in Chapter IV, additional evaluative remarks are in order. It is intended that this evaluation facilitate the reader's interpretation of the findings and understanding of the recommendations made in Section D.
Over two-thirds of the subjects revealed a very high or moderately high career choice certainty level on both the first and final measurement. Advancement is, of course, not possible or is limited for those students, already at the upper limits. This fact may, in part, account for the relatively large proportions of career choice certainty levels which remained stable or declined.

If the test scores obtained by different individuals are to be comparable, testing conditions must be the same for all.\(^1\) The three research instruments were self-administered. Although a covering letter included detailed directions (see Appendixes D and E), rigid control of conditions which could influence scores was impossible. The time devoted to responding to each instrument, respondents' attitudes and comprehension as well as their intellectual and emotional readiness, fatigue and other conditions present during the time responses were made introduces another possible source of variation in responses.\(^2\)

Owing to the form in which the multiple-choice responses to the self-administered CCC are expressed, subjects may respond in a particular manner, limited by the clarity, concreteness, and specificity they perceive in the items. Other respondents may

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\(^2\) Ibid., pp. 61-66.
need more aids to recall, such as recalling information in temporal sequence: from the most recent to the past or from the past to the present.\(^3\)

The Career Choice Certainty (CCC) instrument was carefully validated in a pilot study (see Section F, Chapter III.) Variations of every kind were in evidence among the pilot study group. Yet, the career choice certainty measurements of approximately 60 percent of the subjects of this research remained unchanged. The author recognizes the possibility that the unchanging measurements may accurately reflect the degree of stability existing among the 102 subjects. However, consideration must also be given to the fact that multiple-choice items, such as those featured on the CCC, might lack the sensitivity to detect all but the most dramatic variations. Such items may not offer a sufficient number or degree of variation to precisely reflect the exact response each subject seeks to provide, particularly when a short form of an instrument is developed.\(^4\)

The B.I. instrument solicited information of a somewhat private and, perhaps, for some, embarrassing nature. Questions regarding parents' educational levels and occupations as well as respondents' ages and marital status may have introduced emotional

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\(^4\)Ibid., pp. 556-557.
influences. Such items can disturb a respondent in such a way as to cause him to distort or falsify his answer, thereby biasing the data and undermining the intent of the instrument.  

The distribution of subjects provided a sizeable representation of each of the three orientation categories. About 24 percent of the 102 subjects were classified as self-oriented and 38 percent fell into the task- and interaction-oriented categories. The concurrent validity information described in Buros assures the user of the O.I. of a dependable measure of task-, self-, and interaction-orientation traits. The test manual equates the task-oriented trait with "success" and refers to the self-oriented person as one inclined to be "less successful." These facts appear to be supported by this research in which a large number of task-oriented subjects manifested a high and stable career choice certainty level while self-oriented students were found to have predominantly low and unchanging levels of career choice certainty. The conditions surrounding the use of the CCC, as outlined in the preceding paragraphs, raises a question about the absolute accuracy of the relationships established between orientation traits and the obtained measures of career choice certainty.

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5Ibid., pp. 61-66.
6Chapter V, Table 1.
8Bass, The Orientation Inventory, pp. 3-5.
Because the Background Information questionnaire did provide clearly delineated information regarding 22 socioeconomic factors, such data can be viewed as useful to a study such as this one. The writer must add, however, that other socioeconomic variables and background information, that this study did not investigate, might influence career selection and development and could be explored in another study.

Because of the validity and reliability data mentioned in Chapter III regarding the O.I. and the fact that the B.I. requires little interpretive or subjective information, measures obtained on these two instruments are somewhat more dependable than those obtained on the CCC, an instrument requiring subjective impressions. If this is the case the relationship between the orientation group classifications and socioeconomic data can be accepted with relative confidence. The author is somewhat more cautious, given the possible limitations of the CCC described in this chapter, when accepting the relationships between career choice certainty measures and either the O.I. or B.I. data.

The socioeconomic variables considered in this study were shown to have a significant relationship to orientation traits. Career choice certainty changes appeared to be sensitive to the existence of a dominant orientation trait. But, a prediction of career choice certainty levels of variations from either socioeconomic facts or orientation traits should be made within the context of the preceding discussion.
The objectives of this research as stated in Chapter IV, have been fulfilled. Personal orientation traits, career choice certainty levels, and socioeconomic factors were measured among a selected group of 102 community college students.

Valuable information was retrieved regarding the influence of one's orientation to task completion and socioeconomic milieu on the selection and development of career goals. The relationship between the orientation traits and career choice certainty levels and variations was established. Those orientation traits and socioeconomic factors most indicative of underdeveloped or declining career choice certainty levels were determined. This data is emphasized in suggesting the role of a Student Personnel Staff in identifying and aiding those entering community college students most in need of career selection and development assistance. An example of this type of assistance is discussed in Section C of this chapter.

C. Research Findings: Recommended Application

The matriculation of incoming community college freshmen typically includes orientation to the college community and the services available, curriculum selection, program planning, and testing. Group and individual settings are used to engage the student in these activities. It is in these initial contacts that those students most in need can be identified and directed
toward experiences intended to remediate or develop their expertise and effectiveness in the area of career selection.

The Orientation Inventory instrument and Background Information questionnaire should be administered and scored at the time of matriculation. The results can be used as a basis for recruiting and selecting those whose dominant orientation trait and/or socioeconomic profile or "predicts" as underdeveloped potentially declining career choice certainty level.

Ideally, students who reveal a need, will become involved in counseling and guidance services, career education programs, vocational and educational planning sessions, or personal growth seminars. The inclusion of such experiences should occur with the intention of fostering career selection and providing needed behavioral goals.

Upon completion of the O.I., students classified as task-oriented should be considered as those whose career choice certainty level may decline. Self-oriented students should be perceived as those most likely to have low, indecisive and unchanging career choices.

The B.I. questionnaire can be used in place of or in conjunction with the O.I. When data on the B.I. is compiled, unmarried female students, 18 to 20 years of age (1) whose parents attended high school; (2) whose father works at a skilled occupation; and (3) who have older siblings, should be considered as those potentially susceptible to a declining career choice cer-
tainty level. Unmarried male students between 18 and 20 years of age who (1) reside with both parents and (2) have one or two older siblings who have graduated from an institution of higher learning, should be equated with low and unchanging levels of career choice certainty.

The O.I. and B.I. can be used to classify those students most in need. Following this identification, early involvement in relevant experiences can follow. In other words, those students whose scores on the O.I. and/or B.I. reveal a need for career selection and development assistance should be engaged by Student Personnel Staff in remedial or developmental career courses and programs.

The O.I. and B.I. instruments can be administered and interpreted by examiners from the Counseling and Guidance Department. Those students whose scores reveal a need for career selection and development assistance can be contacted and invited to a career and personal orientation session. If time permits, individual rather than group sessions may be held since, at this point, the semester will have begun and scheduling of large groups may be difficult.

The career and personal orientation session should focus on the interpretation of the O.I. and B.I. test results. The implications of the test data for career planning, curriculum and course selection, and goal directedness should be reviewed. Student self-assessment should begin. The counselor-student inter-
action should include input from the student, corroborating or raising a question about the student's perception of and attitude about his level and potential for career selection and development.

The guidance counselor offers his assistance as a collaborator and leader. He discusses various career opportunities and assists the student in the selection of career development experience(s) compatible with his needs, interests, past experience, and any future plans. The counselor also aids in formulating an action plan for pursuing career selection and development.

Intervention begins at the point that the student is offered the opportunity to choose a career development related experience. Regularly scheduled career counseling sessions can be the focal point of the intervention or an adjunct to other forms of individual or group guidance.

In his supportive and collaborative role, the guidance counselor interprets all interest, aptitude, personality, and intelligence test data. The student's past experience in high school, employment history, avocational interests, academic achievement, response to any career development related courses, and aspirations would be explored. Tentative goals would be established. Students would be encouraged to select and pursue a career goal with both tentativeness and commitment. Information would be provided. Alternative careers would be examined. Sources of additional information would be suggested and additional research undertaken, supervised by the guidance counselor.
The guidance counselor can begin to integrate such skills as self-evaluation, decision-making, problem solving, goal setting, and career planning into the student's action plan. Motivation, self-actualization, and the self-concept should also be placed into perspective. Human Potential Seminars, Transactional-Analysis sessions, problem solving exercises, assertiveness training laboratories, and career discussion groups can be offered as intervention techniques. The effectiveness of such treatments can be determined through the use of control and experimental groups matched in terms of numbers involved, age, marital status, sex, curriculum choices, socioeconomic background, and career choice certainty levels. The Career Choice Certainty (CCC) instrument would first be administered to both groups at the outset of the treatment to establish the levels of career choice certainty. Subjects in the experimental groups would be exposed to one of the treatment experiences on a scheduled basis for a designated period of time. At the conclusion of the treatment period, the CCC would again be administered to both groups and the results compared to the first measurement of career choice certainty. At that time, an analysis of the data could be conducted to ascertain the relationship between statistically significant changes in career choice certainty and the particular intervention technique. Treatment effects could then be inferred from this information.

Representatives of business and industry and experienced members of the teaching faculty can be invited to address groups of
students. These resource people may lead discussions and offer information regarding current and projected employment opportunities and job market conditions. Films illustrating the preparation for and experience in different occupations can be viewed. Cooperative education programs conducted in conjunction with business, industry and commerce might be explored. Statistics from the U.S. Department of Labor and the State Employment Service would be distributed and reviewed. Students would be encouraged to seek part-time positions in vocational areas and to share their experience with the guidance counselor and other students. On-going self-assessment and continued exploration and tentative career selection would be advocated. The student's needs and his perceptions of himself in relation to various occupations would be evaluated. Progress in achieving career goals might be reviewed for the influence of the students self-image on his behavior in implementing his efforts.7

Ideally, the student's knowledge of career opportunities and himself would advance; his personal growth improved; and his career choice alternatives progressively narrow. The guidance counselor would continue to engage the student in responsible problem solving, decision making, and career selection activities. Personal counseling would be made available and the student's adjustment to college and career selection attended to.

A final and decisive selection of a career goal is assumed to be emerging when the student (1) possesses adequate and accurate information concerning the preparation for and benefits of a particular career; (2) accurately perceives his strengths, weaknesses, and needs in relationship to an occupation; (3) invests his interest and effort in a committed effort to achieve a particular career goal; (4) assumes an increasing degree of responsibility for the choice of his career and the implementation of necessary efforts; and (5) behaves in a manner more consistent with interaction-oriented and task-oriented individuals rather than self-oriented persons.

In summary, the following bar graph illustrates the O.I. scores/orientation traits and the expected levels and changes in career choice certainty measures among selected students. These measures suggest the particular student toward whom career selection and development efforts would be directed.

<table>
<thead>
<tr>
<th>Expected Level And Change In</th>
<th>Task-Dominant Orientation Traits</th>
<th>Self-Dominant Orientation Traits</th>
<th>Interaction-Dominant Orientation Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>High/Decline</td>
<td>High/No Change</td>
<td>Low/Improvement</td>
<td>Low/No Change</td>
</tr>
<tr>
<td>Low/Improvement</td>
<td>Low/No Change</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
The task-oriented student illustrated by the graph on the preceding page is that student whose career choice certainty would be measured at a high but potentially declining level. A prediction of an erosion in career choice certainty development would be further strengthened by a socioeconomic profile which revealed an unmarried female student between 18 and 20 years of age whose family included (1) a father who had attended high school and worked at a skilled occupation and (2) one or two older brothers or sisters who attended a college or university. Career education directed toward the prevention of a decline in career choice certainty would be initiated soon after the existence of the task-oriented trait had been established.

The self-oriented student could be expected to possess a low and unchanging level of career choice certainty. This undeveloped condition could further be anticipated if such a student were an unmarried male between 18 and 20 years of age (1) who resided with both parents and (2) who had one or two older brothers or sisters who had graduated from an institution of higher learning. Career education efforts would focus upon the development and elevation of the student's level of career choice certainty.

The graph also reveals the fact that those students manifesting a dominant interaction-orientation trait could be expected to advance from an initially low level of career choice certainty without the benefit of career education. For this
reason, the use of career education as a means of elevating the interaction-oriented student's career choice certainty could be considered as less imperative than in the case of the task- and self-oriented students.

D. Recommendations

1. In order to generalize the conclusions that socioeconomic factors are more significantly related to changes in career choice certainty than dominant orientation traits, replication of this study using other sample populations is recommended. Such sample populations might include: a population identical to the one sampled in this study; inner-city entering community college freshmen; students attending other suburban community colleges; students enrolling in the non-credit division of a community college; college age persons not attending a community college; and students attending vocational or post-secondary schools.

2. The selection and use of other research instruments could be further explored. This could provide information regarding the use of more sensitive and comprehensive measures of orientation traits, career choice certainty levels, and socioeconomic conditions.

3. To further generalize the conclusions that some orientation traits and certain socioeconomic factors more accurately predict levels of and changes in career choice certainty, it is recommended
that large homogeneous community college populations be studied. Such populations could be composed of: students with one particular orientation trait; students with low career choice certainty levels; students with high career choice certainty levels; and students from identical socioeconomic environments.

4. Some effort should be made to determine the relationship of the level and change in career choice certainty to performance on other instruments. To this end, it is recommended that the Kuder Preference Record, Strong Vocational Interest Blank, Flanagan Aptitude Classification Test, and the School and College Aptitude Test (SCAT) be administered. The agreement between the interests, aptitudes, and intelligence scores on these tests and the levels considered necessary for various occupations should be compared to (a) measured levels of career choice certainty and (b) dominant orientation traits.

5. Other factors could be researched for what influence or predictive value they may have in determining career choice certainty. Such factors might include: motivational levels; self-concept measures; high school achievement records; scores on the American College Testing and Scholastic Aptitude Test instruments; intelligence, aptitude, interest, and personality measurements; and adjustment to college life.

6. Effort should be directed toward a further investigation of the period over which career choice certainty measures are taken. The one semester period in this study could be varied to
determine whether shorter and longer periods qualitatively and quantitatively influence career choice certainty changes.

7. It is important that further study attempt to ascertain the influence of intervention measures on career choice certainty. Control and experimental groups, matched in terms of underdeveloped and potentially declining levels of career choice certainty, should be established. The treatment(s) of the experimental group(s) might include various student personnel services or other vocational selection and development programs. A longitudinal study of the subjects might reveal the relative effectiveness of assistance methods as well as the influence of such assistance on career selection and development compared to control group changes.

8. Other measures, which go beyond the intent of this study, include a recommendation that community colleges intensify their efforts to: (a) identify those incoming students most in need of career development assistance; (b) plan and develop techniques for effectively assisting students to select and pursue career goals; and (c) recruit those students most in need of career development assistance into those programs and course-offerings intended to provide relevant remedial and developmental support.
BIBLIOGRAPHY


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The ORIENTATION INVENTORY
by
Bernard M. Bass, Ph. D.

DIRECTIONS

This test consists of 27 statements of opinions and attitudes. For each statement please indicate in the answer blocks which of the three alternatives, A, B, or C, is most true, or most preferred, or most important to you by writing A, B, or C in the MOST column.

Then choose the least true or least preferred of the three alternatives and write its letter in the LEAST column.

For every statement, be sure you mark one alternative in each column. If A is entered under Most, then either B or C should be marked under Least, and so on.

Do not debate too long over any one statement; your first reaction is desired.

TURN THE SHEET OVER AND BEGIN
(Do not unfold)
1. One of the greatest satisfactions in life is:
   A Recognition for your efforts.
   B The feeling of a job well done.
   C The fun of being with friends.

2. If I played football, I would like to be:
   A The coach whose planning pays off in victory.
   B The star quarterback.
   C Elected captain of the team.

3. The best instructors are those who:
   A Give you individual help and seem interested in you.
   B Make a field of study interesting, so you will want to know more about it.
   C Make the class a friendly group where you feel free to express an opinion.

4. Students downgrade instructors who:
   A Are sarcastic and seem to take a dislike to certain people.
   B Make everyone compete with each other.
   C Simply can't get an idea across and don't seem interested in their subject.

5. I like my friends to:
   A Want to help others whenever possible.
   B Be loyal at all times.
   C Be intelligent and interested in a number of things.

6. My best friends:
   A Are easy to get along with.
   B Know more than I do.
   C Are loyal to me.

7. I would like to be known as:
   A A successful person.
   B An efficient person.
   C A friendly person.

8. If I had my choice, I would like to be:
   A A research scientist.
   B A good salesman.
   C A test pilot.

9. As a youngster I enjoyed:
   A Just being with the gang.
   B The feeling of accomplishment I had after I did something well.
   C Being praised for some achievement.

10. Schools could do a better job if they:
    A Taught children to follow through on a job.
    B Encouraged independence and ability in children.
    C Put less emphasis on competition and more on getting along with others.

11. The trouble with organizations like the Army or Navy is:
    A The rank system is undemocratic.
    B The individual gets lost in the organization.
    C You can never get anything done with all the red tape.

12. If I had more time, I would like to:
    A Make more friends.
    B Work at my hobby or learning something new and interesting.
    C Just take it easy, without any pressure.

13. I think I do my best when:
    A I work with a group of people who are congenial.
    B I have a job that is in my line.
    C My efforts are rewarded.

Open this flap and continue with question 14.
14. I like:
A Being appreciated by others.
B Being satisfied personally with my performance.
C Being with friends with whom I can have a good time.

15. I would like to see a story about myself in the newspaper:
A Describing a project I had completed.
B Citing the value of my actions.
C Announcing my election to a fraternal organization.

16. I learn best when my instructor:
A Provides me with individual attention.
B Stimulates me into working harder by arousing my curiosity.
C Makes it easy to discuss matters with him and with others.

17. Nothing is worse than:
A Having your self-esteem damaged.
B Failure on an important task.
C Losing your friends.

18. I like:
A Personal praise.
B Cooperative effort.
C Wisdom.

19. I am considerably disturbed by:
A Hostile arguments.
B Rigidity and refusal to see the value of new ways.
C Persons who degrade themselves.

20. I would like to:
A Be accepted as a friend by others.
B Help others complete a mutual task.
C Be admired by others.

21. I like a leader who:
A Gets the job done.
B Makes himself respected by his followers.
C Makes himself easy to talk to.

22. I would like to:
A Have a committee meeting to decide what the problem is.
B Work out by myself the correct solution to the problem.
C Be valued by my boss.

23. Which type of book would you like to read?
A A book on getting along with people.
B An historical romance.
C A how-to-do-it book.

24. Which would you prefer?
A Teach pupils how to play the violin.
B Play violin solos in concerts.
C Write violin concertos.

25. Which leisure time activity is satisfying to you?
A Watching westerns on TV.
B Chatting with acquaintances.
C Keeping busy with interesting hobbies.

26. Which would you prefer, assuming the same amount of money was involved?
A Plan a successful contest.
B Win a contest.
C Advertise the contest and get others to participate.

27. Which is important to you?
A To know what you want to do.
B To know how to do what you want.
C To know how to help others to do what they want.
**APPENDIX A - CONTINUED**

Name (Please Print):

<table>
<thead>
<tr>
<th>Last</th>
<th>First</th>
<th>Initial</th>
</tr>
</thead>
</table>

Age  
Circle Sex: **M**  **F**

6 7 8 9 10 11 12 13 14 15 16  
Circle Highest School Grade Completed

Current Job:

(If a student, major field of study)

(Do not write below this line)

<table>
<thead>
<tr>
<th>M</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>s</td>
<td>i</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Standard Scores or Percentiles:  
(Circle One)

| s | i | t |

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APPENDIX B

CAREER CHOICE CERTAINTY (CCC)

College ___________________________ Date ___________ 1975

Date of Birth (mo.) (day) (yr.) Sex M F (circle one)

Marital Status Married Single (circle one) Have you attended another college?

Yes No

1. At this time, which of the following best describes your plans regarding a career? Check Only One Response!

____ Completing a 2 year degree program at this college and transferring to a 4 year college or university.

____ Transferring to a 4 year college or university before completing a 2 year degree program at this college.

____ Completing a 2 year degree program at this college and going to work.

____ Going to work before completing a 2 year degree program at this college.

____ Undecided about a specific career plan at this time.

____ Other ____________________________ (please explain)

2. Is there a particular curriculum or program of study you have decided to follow while attending this college? Check Only One Answer!

____ Yes ____________________________ No ______ Not sure at this time

(name of curriculum or program of study)

3. At this time in your life, how would you describe your future career plans. Check Only One Response!

____ Very definite plans. I know specifically what I want to be.

____ There is at least one field in which I am interested, but I may change my mind.

____ I have no definite career plans at this time.
APPENDIX B - CONTINUED

4. At this time is the selection of a career something you can do or you have done with reasonable certainty that your choice is the correct one?

____ Yes  _____ No  _____ I don't know

5. What/who has influenced your thinking about a career?

Check More Than One Response If Necessary.

____ Parents or other family members
____ Friends
____ Counselors-High School
____ Teachers-High School
____ Work experience I have had
____ Observation of people working at the career
____ Nothing I can think of has influenced my thinking about a career
____ Other ________________________ (please explain)

6. At what type of occupation or career do you feel you may someday work?

Check Only One Response!

____ "Whitecollar" or mainly indoor work of an intellectual kind
____ "Bluecollar" or mainly outdoor work of a physical kind
____ A combination of "whitecollar" and "bluecollar" work
____ It doesn't matter
____ I don't really know at this time
7. Do you feel a need for additional assistance in identifying the type of career for which you can prepare?

Check Only One Response!

___ Yes—I can use some help.

___ No—I am quite certain of what I want to do and how I am to prepare for it.

___ Possibly—but I'm not sure if additional assistance is needed.

DO NOT WRITE BELOW THIS LINE

CCC:  _VH_  _MH_  _SL_  _VL_
APPENDIX C

BACKGROUND INFORMATION

College ___________________________ Date (mo.) (day) 1975

Date of Birth ________________________ (mo.) (day) (yr.) Sex M F (circle one)

Marital Status ________________________ Married Single (circle one)

Father's Occupation ________________________ (Job Title)

Education of Father (Check One)

___ Attended elementary school

___ Attended high school

___ Attended college or university

___ Graduated from a college or university

___ None of the above

Mother's Occupation ________________________ (Job Title)

Education of Mother (Check One)

___ Attended elementary school

___ Attended high school

___ Attended college or university

___ Graduated from a college or university

___ None of the above

Number of Brothers ______ Number of Sisters ______

Ages of Any Brothers ______ ______ ______ ______ ______

Ages of Any Sisters ______ ______ ______ ______ ______
APPENDIX C - CONTINUED

How many of your brothers or sisters have attended a college or university? _____

How many of your brothers or sisters have graduated from a college or university? _____

How many of your brothers or sisters are currently attending a college or university? _____

With whom do you now reside? (Check All Applicable Answers)

_____ Husband  _____ Wife  _____ Father  _____ Mother

_____ Brothers  _____ Sisters  _____ Other (Specify)
APPENDIX D

FIRST COVER LETTER TO STUDENTS

(Administration of O.I., CCC, and B.I.)

Dear Student,

Congratulations on entering Oakton Community College. My best wishes for a productive and satisfying experience.

Thank you for your assistance with this effort to aid students like yourself in selecting and completing their career goals.

Please complete the three (3) questionnaires and return them in the stamped enclosed envelope. Each will take only a few minutes.

1. ORIENTATION INVENTORY

After reading the directions on the cover sheet, complete the 27 items. You are to indicate which of the statements in each of the items you prefer most or consider most important; and which you least prefer or consider least important.

2. CAREER CHOICE CERTAINTY

Please note as you complete the seven items, that only item number 5 has more than one possible answer.

3. BACKGROUND INFORMATION

Upon completion of the Orientation Inventory and Career Choice Certainty questionnaires, please complete this 1 page form answering each item on the lines provided.

Please return the completed questionnaires in the enclosed stamped envelope.

Thank you for your interest and cooperation.

Sincerely yours,

James E. Murray
Psychology Instructor
APPENDIX E
SECOND COVER LETTER TO STUDENTS

Dear :

Thank you for your response to my request for information earlier in the semester.

In order that we may complete our efforts to assist students such as yourself in the selection and development of a career, the Career Choice Certainty questionnaire must be completed again.

Please take a few minutes to enter your responses to each of the seven (7) items. Return the completed questionnaire in the enclosed self-addressed stamped envelope. These must be mailed before December 15, 1975.

If your questionnaire is not received, I will phone you to assist with any questions you may have.

Sincerely,

James E. Murray
Psychology Instructor
APPENDIX F

TABLE 6
SOCIOECONOMIC CHARACTERISTICS OF THE SAMPLED POPULATION

\( N = 102 \)

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**APPENDIX G**

**TABLE 9**

**ORIENTATION GROUPS CORRECTLY CLASSIFIED**

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APPENDIX H

TABLE 11

STEP-WISE ADDITION OF INDEPENDENT VARIABLES

TO THE REGRESSION EQUATION

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### TABLE 11 - CONTINUED

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<tr>
<td>11</td>
<td>Age, Resides With, Mother's Educ., Father's Educ., Siblings Attended College/Univ., Older Bros./Sist., No. of Bros./Sist., Mother's Occupation, Sex, Marital Status, &amp; Siblings Currently Attending College/University</td>
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<tr>
<td>12</td>
<td>Age, Resides With, Mother's Educ., Father's Educ., Siblings Attended College/Univ., Older Bros./Sist., No. of Bros./Sist., Mother's Occupation, Sex, Marital Status, Siblings Currently Attending College/University, &amp; Father's Occupation</td>
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<td>13</td>
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<td>14</td>
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</table>

* The number of younger brothers and sisters and the number of siblings who graduated from a college or university were not entered because of an F level too insufficient for further computation.
This dissertation submitted by James E. Murray has been read and approved by the members of the Department of Guidance and Counseling, Loyola University, Chicago, Illinois.

The final copies have been examined by the director of the dissertation. The signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Education.

May 3, 1976

Date

John P. Eddy, Ph.D.
Dissertation Director