

AN ABSTRACT OF THE THESIS OF

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Title: The Relationship of Career Aspirations and Influencing Factors
to the Satisfaction of Choosing Secondary School Vocational
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Abstract approved:

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Purpose of the Study

The purpose of this study was to: (1) develop a model for predicting high school students' occupational choice satisfaction by measuring the impact of vocational education programs on career decisions, and (2) to examine the validity and the efficiency of the model by testing it on different samples.

Procedures

This study utilized eight variables which represented students' in-school characteristics. These categories included expectations, aspirations and influential factors pertinent to a model on occupational choice satisfaction. The population was made up of 417 vocational students enrolled in various vocational education programs in a metropolitan high school district.

The path analysis using multiple regression was used to determine which variables in combination with others were most predictable in choice satisfaction.

Findings

The students' choice satisfaction, the primary criterion variable, was found to be predictable with variables relating to influential factors and expectations. Career aspiration played a minor role. However, the aspiration variable such as GPA became important in the causal model when females and males were considered as separate groups. The most predictable variable in the model was vocational maturity.

Recommendations

This study should be replicated using a post-secondary school sample. Thus, a comparison can be made concerning high school and post-secondary students' occupational choice satisfaction. In view of the findings, it is also recommended that this study be replicated with another sample from a different school district or community. In this way, the validity of the model can be evaluated and substantiated.

The Relationship of Career Aspirations and
Influencing Factors to the Satisfaction of
Choosing Secondary School Vocational Programs

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THE RELATIONSHIP OF CAREER ASPIRATIONS AND
INFLUENCING FACTORS TO THE SATISFACTION OF
CHOOSING SECONDARY SCHOOL VOCATIONAL PROGRAMS

Chapter I

INTRODUCTION

Every day, millions of American go to work. Are they working at jobs they dreamed of? How closely do their realities match their career aspirations when as children they were asked, "What are you going to be when you grow up?"

Even in childhood, certain occupations such as physician, police officer, professional athlete, and nurse stand out as desirable for various reasons. The occupational aspirations of children can, and often do, change between when they enter and leave school and enter the world of work.

Work affects every aspect of adult lives but as young people initiate decisions vital to their livelihoods and self-perceptions about what kind of work they wish to pursue, they are making decisions which affect their future. These decisions are often irreversible, making decision-making a tremendous responsibility. Do students make good decisions about their occupational choices? This study measured the impact of vocational education programs in high school on career decisions, using the following eight variables which fall into three basic categories:

1. Influential factors
 - A. Parents' or guardians' socioeconomic status.
 - B. Sex.

- C. Significant others (educational personnel, peers and co-workers, family members, neighbors, or any other person admired either for job skills or material success).
 - D. Media (including newspapers, television, radio, magazines, etc.).
2. Expectations (what students look forward to in the real world of work, such as occupational values, income, interest and satisfaction in the work itself, job security and stability, prestige in the community).
3. Aspirations
- A. Vocational maturity (awareness of desired occupation and the drive to achieve the goal as related to the work world).
 - B. Students' performance (GPA).

Statement of the Problem

This study explored the vocational development and career choice of vocational education students enrolled in various vocational education programs by investigating eight specific variables (Sex, Occupational Values, Socioeconomic Status (SES), Significant Others, Media, GPA, Vocational Maturity and Students' Choice Satisfaction).

Super (1969) points out that the Lattice Theory, Markor Chain Theory and Path Analysis are the three new methodologies which may prove useful in developing models. This study utilized Path Analysis for the purpose of building a model for predicting vocational high school students' satisfaction of occupational choice.

Specifically, the purpose of the study was to:

- (1) Develop a model for predicting vocational high school students' occupational choice satisfaction based upon a review of previous research, and
- (2) Examine the validity of the proposed model in a metropolitan area having a cross section of socioeconomic status (SES) in other variables identified above.

Rationale for the Study

Most Americans believe that work and education are related. A survey sponsored by the National Institute of Education (Hill, 1973) showed that preparation for work, economic success and better jobs were considered among the more important reasons for why people go to school.

Society has often expected institutions of formal education to provide training that will lead to the success of an individual. However, evidence indicates that many young people who leave school are often not prepared for adult life or the world of work (Super, 1960; Gibbons, 1969).

The ability of individuals to make the "right" decisions in choosing an occupation and to achieve success in their choices is necessary if vocational education is to continue to assume the responsibility for training people for work. Student achievement and program success thus becomes the concern of vocational educators. Since high school represents for some students the last extended experience with formal education before entering the world of work, consideration must be given to the in-school student characteristics for predicting students'

occupational success. It is with these variables that the schools are able to deal with, which will offer promise of encouragement to students and promote change and adjustment in vocational education programs in relationship to the growth potential of the individuals and their usefulness to the society.

Definitions of Terms

To promote understanding, the following are defined in terms of their specific connotations applicable to this study.

Aptitude - Specific capacities and abilities required of an individual in order to learn or perform adequately a task or job duty (Dictionary of Occupational Titles, 1965, p. 653).

Direct effect - The amount of deviation in the dependent variable which is directly attributable to fluctuation in the independent variable (Enderlein, 1974).

Indirect effect - The amount of variability in the dependent variable which is attributable to fluctuation in one independent variable causing fluctuation in a related independent variable (Land, 1971).

Educational level - "The amount of formal schooling an individual has completed" (Kapes, 1971, p. 17).

Endogenous variables - The variables to be explained by the theory under consideration (Blalock, 1968). Variables which have predecessors in the model that may be used as both dependent and independent variables.

Exogenous variables - The variables in the model without predecessors. "Variables which are assumed to be predetermined, the total

variation of which is assumed to be caused by variables outside the set under consideration" (Land, 1971, p. 6).

Intervening variable - A variable which tempers or modifies the effect of one variable on another.

Occupational values - The aspects of an occupation deemed important by an individual in evaluating that occupation (Kapes, 1971, p. 17).

Residual variables - "A variable assumed to be uncorrelated with the set of variables immediately determining the variable under consideration and to have a mean value of zero is introduced to account for the variance of the endogenous variable not explained by measured variables" (Land, 1971, p. 6).

Standardized path coefficient - The mathematical value which "measures the fraction of the standard deviation of the endogenous variable for which the designated variable is directly responsible in the sense of the fraction which would be found if this factor varies to the same extent as in the observed data while all other variables (including the residual variables) are constant" (Land, 1971, p. 9).

Total effect - "The concept of the total effect is merely an indication of the aggregate effect of an exogenous variable on an endogenous variable through all possible direct and indirect paths" (Land, 1971, p. 17).

Total indirect effect - The sum of all the indirect effects of an exogenous variable through all of the other exogenous variables upon an endogenous variable (Land, 1971). Mathematically, it is the difference between the total effect and the direct effect.

Vocational maturity - "The place reached on the continuum of

vocational development from exploration to decline" (Super, 1955, p. 152). "Refers to the maturity of an individual's vocational behavior as indicated by the similarity between his behavior and that of the oldest individuals in his vocational life stage" (Crites, 1961, p. 256).

Chapter II

REVIEW OF RELATED LITERATURE

Introduction

Since vocational education is assumed to be responsible for providing job training, it must be concerned with the vocational development of students' success as related to vocational choice. Many theorists who have investigated the process of vocational development have different views about the process. There are those who view it as a process that cannot be controlled. On the other hand, other theorists maintain that it is not only a process which can be learned but one which can be encouraged and enhanced. One of the best known theorists in vocational development is Donald Super. Super et al. (1957) conducted a Career Pattern Study. They proposed two major constructs: vocational maturity and self-concept.

Although Super proposed that vocational development can be thought of in terms of various life stages, his idea was not unique even at that time. Super drew from and adapted the earlier work of Buehler (1933) and Ginsberg et al. (1950) in delineating his life stages.

Buehler (1933) proposed the stages of life as growth, exploration, establishment and maintenance. Ginzberg et al. (1951) identified stages of life as fantasy, tentative and realistic. Each of these stages were in turn broken into substages. For example, the tentative period is divided into interest, capacity, value and transition substages which emerge sequentially. Super also proposed these same stages.

Super (1957) viewed the vocational development process as being a continuous and irreversible one and predictable. These statements are compatible with those made by Ginzberg et al. (1951) relating to their earlier work. Of specific importance to this study is the concept of vocational development as a continuous and predictable process. When viewed in the light of Super's two main constructs of vocational maturity and self-concept, these concepts provide the theoretical basis for this study.

Vocational Maturity

"Vocational maturity" is viewed as an indicator of "readiness" for career planning. Furthermore, students will plan more effectively for their careers when they are ready to do so than when they are not (Super and Overstreet, 1960). The validity of vocational maturity construct as pointed out by Super appears to become more valid as time progresses (O'Reilly, 1973).

Vocational maturity is closely related to the concepts of vocational choice and competencies with the primary as "orientation toward planning for the future" (Crites 1969a). A secondary dimension of competence is "anticipation of immediate, intermediate and remote vocational developmental tasks" (Crites, 1969, p. 575).

Crites (1961) developed a model based on vocational concepts of life stages and developmental tasks as defined by Super et al. (1957). Crites (1961) said that vocational maturity can be measured in terms of two factors: (1) the degree of vocational development and (2) the rate of development. He further stated that the absolute degree of

vocational maturity can be found by: (1) comparison of a person's vocational behavior with those that are typical of different life stages, and (2) a statement about which life stage that person most closely resembles. Crites defined the degree of vocational maturity by comparing each individual's vocational life stage to chronological age, expected life stage and behavior of others (Crites, 1961, p. 256).

Self-Concept

The second major construct which weaves through the research and theory of Super is the importance of the development and implementation of self-concept through one's vocation. They say that as individuals mature vocationally, they pass through a series of stages. During these stages their self-concepts are continually developing and being clarified. A self-concept is defined as how persons describe themselves in terms of interests, aptitudes, aspirations, and values toward work and work preference (Enderlein, 1974).

The way individuals perceive themselves will have a profound effect on the way they react in any situation. Super et al. (1963) stated that the vocational self-concept is a collection of self-concepts individuals have about their interests, aptitudes, work values and other attributes they deem vocationally relevant.

Occupational self-concept differs from vocational self-concept. Occupational self-concept is defined as how individuals identify their views with the occupation they comprehend. Vocational self-concept is defined as a collection of all the attributes the individual perceives as vocationally relevant.

In order to provide information which will give support for the rationale and the procedure used in this study, the following categories were selected for specific classification of this literature:

- (1) Studies and publications reflecting selected theories of vocational choice.
- (2) Studies and publications reflecting the variables included in the proposed model.

Studies and Publications Reflecting
Selected Theories of Vocational Choice

Because this study's primary concern was to predict the satisfaction of students' career choices, it was important to review literature concerning theories of how individuals arrive at their vocational choices. In recent years, there has been a major concern about how students make occupational choices. This concern is not without justification due to the nature of the irreversibility of occupational choices (Super, 1960). Gribbon (1963) pointed out that:

When one appreciates the fact that the average person is likely to work for approximately 40 hours a week, 50 weeks a year, 45 years of his life time, a total of 90,000 hours ... the matter of vocational choice is crucial indeed.
(p. 207)

Roe

Roe (1956), recognizing the lack of developmental perspective on vocational choice, developed a theory composed of three major factors. She stated that: (1) early childhood experiences influence vocational choice; (2) individuals have needs which they seek to satisfy through occupation, and (3) individual's genetic makeup influences both their

occupational choice, the hierarchy of need, or value orientation developed.

Roe's theory has two levels. The first level includes general statements which are very difficult to test. Osipow (1968) described her second level in terms of three propositions: (1) satisfied needs do not become unconscious motivators, (2) higher-order needs that are really satisfied disappear while lower needs will become dominant motivators, and (3) needs that are satisfied only after delay will become unconscious motivators in some instances.

Roe also stated that there are four basic patterns in child rearing. These, she said, are overprotective parent, overdemanding parent, rejecting parent and accepting parent. She hypothesized that a child reared under different patterns will develop different hierarchies due to complete, partial or delayed needs for gratification. She emphasized that in choosing specific occupations individuals are attempting to satisfy the need hierarchy they have developed.

Roe thought that while the need hierarchy determines the occupation chosen, genetic influences such as mental ability and manual dexterity, determine the occupation level the individual will choose. It would follow that the knowledge of an individual's early childhood and their abilities and aptitudes would make it possible to predict the general occupational class they will choose. Roe's theory, according to Osipow (1968) has few crucial features concerning vocational development. Crites (1969) also pointed out that Roe's theory has had shortcomings and research provides very little support for her hypotheses.

Tiedeman

Tiedeman (1961), drawing from Ginzberg and Super's work of developmental life stages to career development, attempted to clarify self-concept and assessment of the decision-making stage of occupational choice. He divided his analysis of the decision-making process into four stages: (1) exploration stage (consideration and familiarity with alternatives), (2) crystallization stage (acceptance and rejection of alternatives), (3) the choice stage (deciding upon alternatives to follow and readiness to act upon decisions), and (4) implementation stage (working out details of implementation).

Tiedeman's second level of theory is the implementation and adjustment period after the decision is made. He pointed out that this level involved: (1) induction (the person is accepted), (2) transition (the person asserts), and (3) maintenance (the person is considered successful).

Tiedeman and O'Hara (1963) pointed out that differentiation and integration are processes by which individuals move through these many steps. Differentiation was defined as discrimination among the events which surround the individual, including a person's own thoughts, and ideas as well as external events. Integration involves the separation of each part from the whole. Tiedeman and O'Hara saw the self-concept process in terms of vocational development as a process which is continual and revised by experiences.

Holland

Holland (1959), in proposing his theory classified all personalities and environments into six categories: realistic, intellectual, social, conventional, enterprising, and artistic. Holland's theory is primarily concerned with the phenomenon of occupational choice. He pointed out that during the developmental stage the individuals will develop an orientation toward one of the categories and this orientation will have a direct effect upon a person's choice. In explaining his theory further, Holland viewed the matching of personality and environment as the main factor in the process of an occupational choice. For example, should the factors such as economic conditions make it impossible for individuals to match their primary orientations with work environments, they will revert to the second strongest orientation. In such situations, Holland recognized the effect of environment over which the individual has no control. If lack of knowledge, self or occupation causes mismatches individuals vacillate until occupational choices are satisfied. Once congruences are attained they must then determine the levels of the work environment at which they can perform competently.

Holland pointed out that the maximum level at which the individual can operate is largely dictated by the person's ability and aptitudes and other personal characteristics. Therefore, the knowledge of one's self and the knowledge of occupations plays a major role in determining the proficiency of the matching process. Holland's theory is complicated when one considers the number of unique orientation patterns which can be generated from the six personal categories.

There has been no major research to substantiate the validity of Holland's theory except work done by himself. This further complicates matters because his further work gives no indication as to viable patterns or of the effect of specific patterns (O'Reilly, 1973).

Hilton

Hilton (1962) proposed a construct known as the "Complex Information Process Model." Hilton's decision-model is based upon the concept of cognitive dissonance as proposed by Festinger (1957). Hilton's major premise is that the individuals are faced with multitudinous behavioral alternatives and that limited capacities to handle information about themselves decreases the rationality of decision-making.

Hilton proposed that the decision-making process is initiated in an effort to reduce cognitive dissonance. Cognitive dissonance occurs when individuals beliefs and expectations about the environment and themselves are not compatible with the actual environment (Hilton, 1962).

When this situation occurs, the individuals have to examine their premise and attempt to create new premises which are compatible with the actual environment. If it is impossible to change these premises, then individuals will search for alternative environments compatible with their premise. In the case of occupational choice, persons will choose alternative occupations. Changing premises or searching for alternatives must continue until the level of dissonance has been reduced to where it can be tolerated of any approach taken.

Hilton (1962) pointed out two conditions which can occur during the decision-making process:

- (1) High difficulty continued unsuccessful attempts to reduce cognitive dissonance, and
- (2) Problem of identifying short-term and long-term effects of different strategies.

Hilton (1962) hypothesized some factors which will raise cognitive dissonance to an intolerable level. Among these were:

- (1) Nearness in time to culturally determine point at which decision must be made.
- (2) A high number of perceived occupational alternatives.
- (3) High heterogeneity among perceived alternatives.
- (4) Exposure to malevolent environment.
- (5) Social pressure not to postpone a decision (p. 296-297).

It can be recognized that some factors which create dissonance are more enduring than others. Dissonance caused by some factors can be eliminated simply by making any decision. Hilton, recognizing the difficulty of understanding the process of occupational choice, stated that "Career decision-making is an imperfect process at its best" (Hilton, 1962, p. 291).

Studies and Publications Reflecting Variables Included in the Proposed Model

The variables included in the proposed model used in this study are socioeconomic status (SES), significant others (educational personnel, peer group, worker), media, occupational values (income, interest and satisfaction, job security, job prestige), grade point average, sex and student choice satisfaction.

Socioeconomic Status

One of the most important factors in the vocational development of an individual is the family. It is believed that the social class to which an individual belongs affects one's attitude toward occupations, value systems and the pattern of behavior.

The term socioeconomic status has evolved to incorporate the concept of social and economic status (Lipset and Bendix, 1959; Lungstrum, 1974). This differentiation of social or class status is described by sociologists as a "functional imperative" of the society (Kahl and Davies, 1955).

Socioeconomic status has been associated with the level of student education and occupational aspirations (Bailey and Stadt, 1973) with students' knowledge of the world of work, (Evans and Galloway, 1973) and with their choice of curriculum (Parnes, 1970; Solomon and Pendleton, 1971). Researchers and writers on socioeconomic status or stratification acknowledge the many components of social status, and most of them have given support to the use of occupation as the sole index or a heavily weighted component of a multifactor index. Of the most well known is the Duncan SES index (Appendix B). Duncan (1961) developed a continuous socioeconomic status index based on the list of occupations from the 1950 census. Duncan developed his scale by using multiple regression equation. The regression equation yielded the estimated prestige rating function of the two predictors. The equation is as follows: $\hat{X}_1 = 0.59X_2 + 0.55H_3 - 6.0$, where X_2 is the percentage of males in 1950 civilian labor force with income of \$3,500 or more in 1949, adjusted for age, and X_3 is the percentage of those same males

who had graduated from high school, also adjusted for age (Duncan, 1961b). The equation shows the near equal emphasis on the two predictor variables. The resultant occupations range from 01 through 96 (Lungstrum, 1974). A transformed NORC scale (U.S. Bureau of Census, 1970) based on the 1963 Occupational Census has SES ratings of 01 to 99.

Sex

The sex variable was included in this study to determine whether males would differ from females in terms of predicting students' occupational choice satisfaction. Crites' research (1965) in developing his Vocational Development Inventory provided data which indicated that there were really few differences between males and females in terms of their vocational maturity as measured by attitudes and concepts of self-assessment. The vocational differences associated with sex are typical based upon choices made by individuals which reveal sex-stereotyped occupation (Powell, 1973; Lungstrum, 1974). As the occupational opportunities broadened for females and males in most sex dominated occupations, both sexes would feel freer to choose from the broadened opportunities, which will change the realistic index and attain equilibrium or come in line with each other.

Significant Others

Numerous studies (such as Picou and Walker, 1972; Sowell, 1960; Lungstrum, 1974) have revealed that the parents are the primary sources of helpful occupational information and influence on students' occupational preference, but other researchers believe peers, workers.

and educational personnel have an equal share of the percentage of influence on students' occupational choices.

Sowell et al. (1960) revealed that significant others, such as teachers, educational personnel, peer groups, and workers which were used in this study as predictor variables have an influence on students' occupational choice. Thus they must be considered as an important source or variable in the prediction of students' educational and occupational aspirations as well as early occupational achievement.

Significant others are individuals in a person's social environment who influence attitudes and behavior. The specific mechanism by which interpersonal influence is exerted by significant others may serve as role models (Haller and Woelfel, 1968); may define expectation of the ego (Brookover and Gottlier, 1964); or may reward or furnish ego behavior (Shibutani, 1961).

Duncan et al. (1968) stated that it is apparent among adolescents that the peer group provides an influence for the development of career orientation and choice. Lungstrum (1974) researched the factors related to occupational preferences of metropolitan senior high school students in the mid-United States. Her findings support the validity of including in this study the following variables: educational personnel, peer group, workers and media.

Educational Personnel. Lungstrum's (1974) study showed that the primary school-based sources of occupational information and influence on student occupational preference have differing effects on various groups of students. Teachers provide helpful occupational information to most students, but they influence the occupational preference of

very few students with the exception of those in their own curriculum (Picou, 1970, Lungstrum, 1973).

Peer Group. Friends provide helpful occupational information to most students and influence half the occupation preference of their friends. However, this author indicated there is slightly less influence upon non-white students in vocational programs (Lungstrum, 1974).

Workers. Many studies identify parents as the primary source of helpful information and influence a student's occupational preference. Lungstrum's studies revealed workers as an equally and helpful source for students making occupational decisions (Lungstrum, 1974).

Media

The effectiveness of media as sources of occupational information differs effectively among different groups of students. Books and pamphlets provide occupational information to the majority of students but television, radio and computer-based sources provide less than one-half of the occupational information to white students and about three-fourths to non-whites (Katz, 1963).

Overall rankings indicated that pamphlets are particularly helpful to students in lower SES levels, to women students and to non-white students. There were preceded in importance only by parents, workers, books, friends and educational personnel (Katz, 1963; Thompson, 1966; Lungstrum, 1974).

Occupational Values: Income, Interest and Satisfaction, Job Security and Prestige

Occupational values seem to be well formed by the ninth grade and seem to remain relatively stable throughout the secondary school years. Gibbons and Lohnes (1969) point out that the value hierarchies of adolescents "... reveal aspects of their self-concept systems which are crucial in determining occupational preferences" (p. 251).

Dipboye and Anderson (1959) conducted a study of high school freshmen and seniors to determine if there was a difference in their rankings of occupational values. While the rankings were found to be highly similar regardless of sex, there were differences in terms of individual values. Two values, interest in work and security, were ranked first and second respectively by all groups. Thus, these two values would seem to play an important role in any occupational choice process.

The value of prestige was found to be useful by Kapes (1972) in distinguishing between students who would enroll in a vocational curriculum as opposed to an academic program. Furthermore, the importance that the value of prestige had for the student was found to be useful in differentiating among successful and unsuccessful vocational students and successful and unsuccessful academic students. The unsuccessful academic students were found to closely resemble successful vocational students in the cognitive-socioeconomic domain but the unsuccessful academic students held a higher value for prestige.

Miller (1956) found values to be important in distinguishing between those students who had made vocational choices and those who

had not. Specifically, the importance the student placed on the value of security was significantly different between these groups. Additionally, the importance of social rewards such as helping people, congenial working associates, and contact with varied and stimulating people may be useful in distinguishing between choice versus no choice.

Rosenberg (1954) conducted a study of values. He found that, contrary to what has often been believed, the values of security and salary are closely related, not mutually exclusive. He also developed three major value-complexes: the self-expressive value complex, the external-reward value complex, and the interpersonal value complex. Thus, people who were classified in a given complex could be expected to choose a particular type of occupation. It was observed that those who were compatible with the major value orientation of their occupational choice were less likely to change their choice than those who did not accept such a value hierarchy. Furthermore, "People tended to switch to occupations which were consistent with their value systems" (p. 237). Finally, it was determined that those individuals concerned primarily with monetary success almost invariably chose occupations which provided possibilities for large earnings.

Rosenberg (1955) addressed the factors influencing change of occupational choice. Two major statements about the role of occupational values in the change process were: First, "Occupational values do influence change of occupational choice but this influence is exercised in terms of the norms of the group, not in terms of specific values" (p. 253). Secondly, people tend to become more psychologically consistent; that is, their values tend to become more consistent with

the norms of their occupational group over time. This is a result of either a change of occupational choice or a change in values.

Schwarzweiler (1959, 1960) published two of his major findings of values. He stated, "The status position of a young person in society and school, and his IQ level, influence his value orientations" (p. 254). Values play an important part in the process of making a vocational choice. Furthermore, "... the influence of values on choice decreases as freedom of opportunity is restricted by the bonds of the social structure" (p. 246). He further hypothesized that the value orientations of girls and boys are different.

Singer and Steffle (1954) found the value self-expression to be more important to those with high-level aspirations than those with low-level aspirations. In comparing the values selected by adolescent and adult groups they found that age differences existed. Thus, values change over time. Specifically, the adult group selected the values of "self-expression" and "independence" most often while the adolescent group favored "self-expression" and "interest." Moreover, the values of "power and fame" were selected least often by adolescents. Thompson (1966) found the values expressed by students as sophomores are consistent with their value expressions as freshmen. It was surmised that value orientations are relatively well formed before the ninth grade. He stated:

Judged important by over 80 percent of the statements were the occupational characteristics of an interesting job, the opportunity for self-expression, a secure position, and the opportunity to help others. (p. 850)

Of moderate importance were the opportunities to gain esteem, to obtain prominence and recognition, to be independent, and to receive high pay.

Of little importance were the opportunities to be a leader and the boss. Students of this sample felt security to be extremely important, but high pay only moderately important.

Vocational Maturity

Selecting an occupation is related to the knowledge and information on individual processes about the work world. It is a fact that success in an occupation is related to the relationship one has with the work environment. The more individuals know about the world of work, the better the occupational choices they will make. The pioneering work of the vocational maturity concept was introduced by Super (1955). This construct was used to denote the degree of vocational development an individual possesses through various developmental stages. Super identified the two stages of vocational maturity as follows:

Vocational Maturity I focuses on life stages and is indicated by the actual life stages of individuals in relation to their expected life stage (based on chronological age).

Vocational Maturity II focuses on the developmental tasks and is represented by the behavior of the individual in handling the developmental task with which he is coping. (Super et al., 1957, p. 57)

Crites (1961) defined vocational maturity, as measured by the Vocational Development Inventory (VDI), as the construct which "... refers to the maturity of an individual's vocational behavior, indicated by the similarity between behavior and that of the oldest individuals in his vocational life stage" (p. 256). The VDI also measures the effective elements of vocational maturity and therefore deals with vocational maturity in the same manner as Super's Vocational Maturity II.

Grade Point Average (GPA)

Because success in school is measured by grades, it seemed logical that the students whose occupational choices are undermined by low grades will be more inclined to change their occupational choices than students whose achievements have reinforced their occupational choices. For this reason it was decided to include grade point average in the model as a measure of school success.

O'Reilly (1972) conducted a study of a sample of vocational-technical students. He found that GPA was a measure of achievement in the total school environment. He also found that students' levels of achievement in specific vocational service areas will most likely be accurately reflected by their levels of achievement in the total school experience.

Super and Overstreet (1960) found that school grades are highly related to "Concern of Choice" and "Acceptance of Responsibility for Choice and Planning." Leonard and Wallace (1971) studied grade point averages of high school students. They found that the academic average was significantly related to occupational aspiration. Their studies further revealed that information concerning the students' achievement records was useful to teachers and counselors because of the relationship between success in school and occupational aspirations.

Student Choice Satisfaction

"Occupational choice satisfaction" is defined as degree of success which an individual has achieved in a vocational school program. O'Hare (1966) has demonstrated that self-concept relates not only to

occupational choice but also to high school achievement and success. He further emphasized that students who persist in school are those who can find meaning in what they are learning or the skills they are acquiring in relation to the way they view themselves and their goals. Those who do not find such conditions in school act up or drop out.

The need to investigate student choice satisfaction was pointed out by Zaccaria (1970) and Zytowski (1970). They said that many students do not have the skills to make realistic occupational decisions. By exploring the characteristics of students' occupational choice satisfaction a decision-making skill and better training methods that are important to employability and vocational adjustment can be developed.

Summary

Super (1957) views vocational development as a continuous and irreversible process which is predictable. The two main factors in his theory of vocational development are vocational maturity and self-concept.

Literature which relates to the utilization of the variables in relation to predicting student occupational choice satisfaction indicates that socioeconomic status is an important factor in occupational choice investigations.

Since Hollingshead (1949) first used socioeconomic status in his investigation, the variable has been used as an independent variable in numerous investigations. Materials reviewed seemed to indicate that a relationship exists between family background and perception of the work world.

The literature also indicated that significant others plays an important part in occupational choices. Zytowski (1970) revealed that individuals tend to model after their idols. Friends, educational personnel and the media also provide occupational information to students and are therefore a source of influence.

Occupational values were found to be values which serve as motivators to individuals aspiring for success. The literature also revealed that GPA and students' self appraisal of academic performance appeared to be valid measures of achievement. GPA and its supporting variables appeared to be related to aspiration.

Hypothesis

Figure 1 shows the causal model used in investigating both the direct and indirect relationship of exogenous and endogenous variables in predicting student choice satisfaction.

The Model

The model led to the testing of the following equations.

$$X_8 = P_{78}X_7 + P_{75}X_5 + P_{74}X_4 + P_{43}X_3 + P_{42}X_2 + P_{41}X_1 + E_8$$

$$X_7 = P_{75}X_5 + P_{53}X_3 + P_{43}X_3 + P_{42}X_2 + P_{41}X_1 + E_7$$

$$X_6 = P_{65}X_5 + P_{64}X_4 + P_{43}X_3 + P_{42}X_2 + P_{41}X_1 + E_6$$

$$X_5 = P_{53}X_3 + E_5$$

$$X_4 = P_{43}X_3 + P_{42}X_2 + P_{41}X_1 + E_6$$

$$X_3 = E_3$$

$$X_2 = E_2$$

$$X_1 = E_1$$

Where:

$$X_1 = \text{Sex}$$

$$X_2 = \text{Occupational Values}$$

$$X_3 = \text{Socioeconomic Status}$$

$$X_4 = \text{Significant Others}$$

$$X_5 = \text{Media}$$

$$X_6 = \text{Vocational Maturity}$$

$$X_7 = \text{Grade Point Average}$$

$$X_8 = \text{Student Choice Satisfaction}$$

$$P = \text{Paths Leading to Variables}$$

and (partials):

$$r_{87.654321} = B_6x_6 + B_5x_5 + B_4x_4 + B_3x_3 + B_2x_2 + B_1x_1$$

$$r_{86.754321} = B_7x_7 + B_5x_5 + B_4x_4 + B_3x_3 + B_2x_2 + B_1x_1$$

$$r_{67.854321} = B_8x_8 + B_5x_5 + B_4x_4 + B_3x_3 + B_2x_2 + B_1x_1$$

$$r_{74.65321} = B_6x_6 + B_5x_5 + B_3x_3 + B_2x_2 + B_1x_1$$

$$r_{75.64321} = B_6x_6 + B_4x_4 + B_3x_3 + B_2x_2 + B_1x_1$$

$$r_{65.4321} = B_4x_4 + B_3x_3 + B_2x_2 + B_1x_1$$

$$r_{43.21} = B_2x_2 + B_1x_1$$

$$r_{24.31} = B_3x_3 + B_1x_1$$

$$r_{14.32} = B_3x_3 + B_2x_2$$

Residuals:

$$P_{8U8}^2 = 1 - (P_{87}r_{87}) + (P_{86}r_{86})$$

$$P_{7U7}^2 = 1 - (P_{75}r_{75}) + (P_{74}r_{74})$$

$$P_{6U6}^2 = 1 - (P_{67}r_{67}) + (P_{65}r_{65}) + (P_{64}r_{64})$$

$$P_{5U5}^2 = 1 - (P_{53}r_{53})$$

$$P_{4U4}^2 = 1 - (P_{43}r_{43}) + (P_{42}r_{42}) + (P_{41}r_{41})$$

Where:

P^2 = Path Coefficients Squared

U = The residual associated with each variable

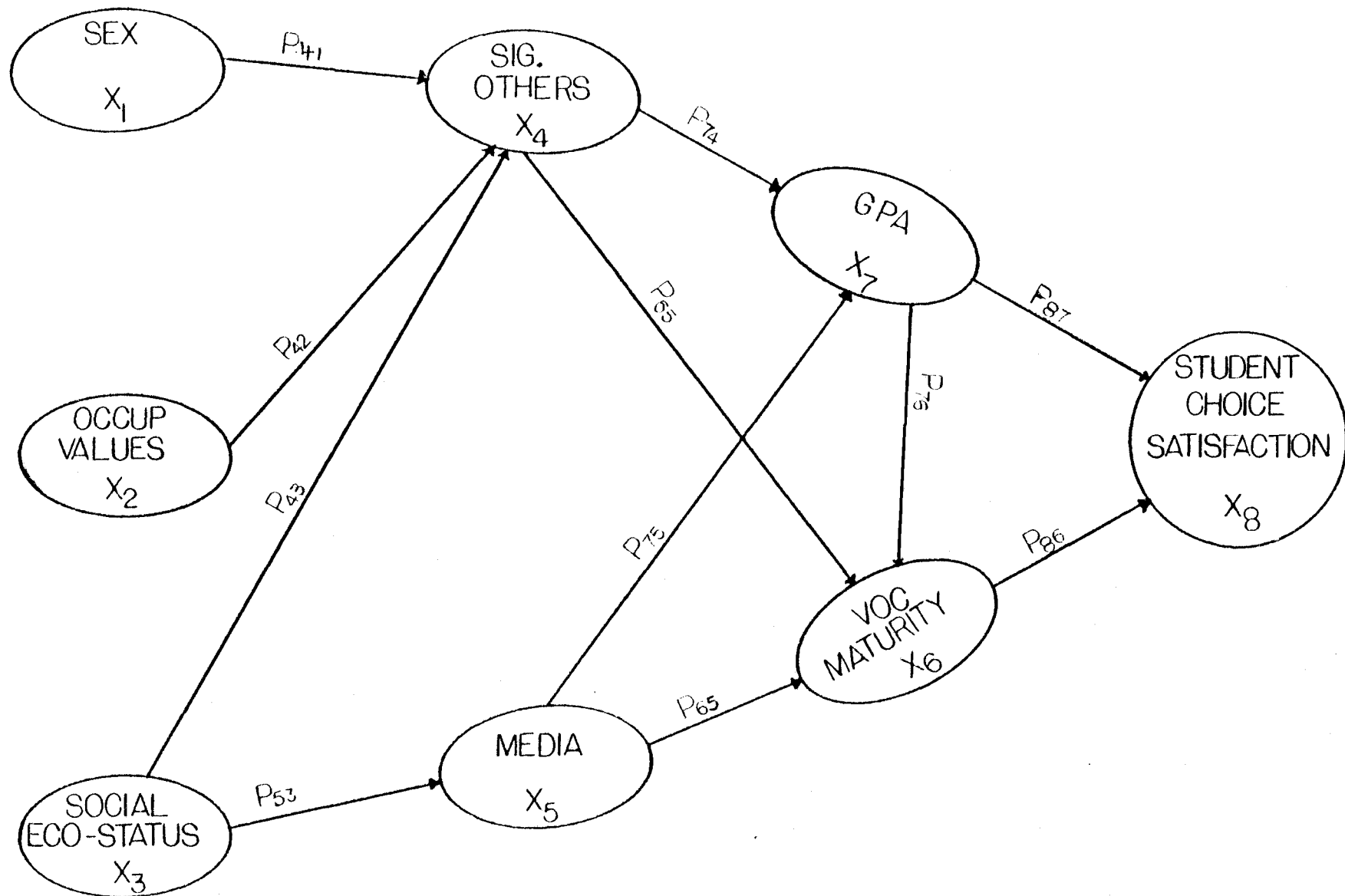


FIGURE 1. THE MODEL

Chapter III

METHODOLOGY

Population and Sample

The population from which the sample was drawn for this study involved students from School District II of the city of Portland, Oregon, school system. The size of the sample was 417 students who were registered in approved vocational programs.

The Portland school system serves about 120,000 students. The school district expenditure per pupil for the 1978-79 school year exceeded the state average by approximately five percent.

The Portland metropolitan area is the largest in the state of Oregon with a population of approximately 1.48 million. The city of Portland is a marketing and wholesale center and seaport of the Pacific Northwest regional trade area, comprising the states of Oregon, Washington, Idaho and Montana.

As a jobbing and manufacturing center of Oregon, the city's population consists of people from various groups both racially and socio-economically. The school district thus serves students from many ethnic and socioeconomic backgrounds.

Essential Data

To minimize error and establish the efficiency of the proposed model, the following variables were selected and included in the study.

Socioeconomic Status

Information concerning the variable "socioeconomic status" was obtained from student biographical questions contained in the OCSQ Form (Appendix A). The data about parents' or guardians' socioeconomic status were obtained by asking the students to identify the major wage earner in their families and their occupations. The data were coded based on 1970 census of occupational classification system and the compilation of codes used for each occupation including the Duncan SES Index and the Census SES Index (U.S. Bureau of Census Population, 1970).

Occupational Values

Occupational values have been extensively studied and many instruments have been developed to assess value hierarchies. The instrument selected to use in this study was the "Occupational Values Inventory" (OVI) that was developed by Impellitteri and Kapes (1971). The instrument was constructed in an ipsative format and assesses seven occupational values. For the purpose of this study, only four of the seven were included. They are defined by Impellitteri and Kapes (1971) as follows:

- (1) Interest and Satisfaction: One likes the work; enjoys it; is happy at it; fulfills one's self by doing it.
- (2) Income: One perceives the financial return resulting from the work; can make a good living at it; sees it as opportunity for a satisfactory income.

- (3) Prestige: One is impressed by the respectability attached to work; can earn recognition from it; desires the feeling of importance that goes with it.
- (4) Security: One can obtain employment in this work; perceives that workers are needed in it; there will always be openings in it.

The internal consistency of OVI Scale was measured by the procedure recommended by Rabinowitz and Eikeland (1964). This procedure is an extension of Hoyt's (1941) method. Utilizing this method, the ranges of reliabilities over the seven scales for both male and female are from .72 for "personal goal" for male to .89 for salary for the female subjects (Enderlein, 1974).

Coefficient of concurrent validities of OVI Scales were computed by sex, college aspiration, GPA and choice of vocational course of study in high school (Enderlein, 1974, p. 77).

Kapes (1971) found the OVI to be a useful and valuable instrument for assessing occupational values. Kapes noted that it is important to use fewer than the total values, "because this instrument is ipsative it is necessary to include fewer than all values ... in order to allow the values to vary independently ..." (p. 72).

Vocational Maturity

The Vocational Development Inventory (VDI) developed by Crites (1965) was used to measure vocational maturity in this study. The VDI consists of 50 statements to which individuals respond to a true or false format. VDI is an inventory which measures students' maturity of career decision-making attitudes. The VDI can be administered in

approximately 20 minutes and the resulting scores yield indices of vocational maturity (Crites, 1965, 1973).

The VDI scores range from 0 to 50. Norms of the VDI attitudinal scale were established both cross-sectionally and longitudinally on samples of approximately 10,000 students. Normative data are available for grades 5 through 12, college freshmen to seniors, vocational technical schools, disadvantaged groups and others (Crites, 1971; Hamby, 1975).

In addition to studies conducted by Crites to validate VDI, Kapes (1971) has shown the usefulness of this instrument in studies involving vocational and technical schools.

Significant Others

Howell (1970) and his associates revealed that significant others influence is an important predictor of educational and occupational aspirations, as well as early education achievement. The data on significant others were obtained by asking students to select sources that were the greatest influence on their choices of occupation (Appendix A). The choices were: parents, peer group, educational personnel, workers and media. The choices were arranged in a pair comparison format.

Grade Point Average

The achievement variable used in this model was grade point average. The subjects were asked to report their GPA in terms of the type of student that they were perceived as (Appendix A).

Sex

The research studies reviewed indicated that the individual sex appeared to be related to occupational choice (Power and Bloom, 1962). Since males and females arrive at their occupational choices differently, and since vocational education seems to concentrate on males, this variable was included in the model to test the efficiency of the model for both sexes of students.

Students' Satisfaction of Choice

Choice satisfaction represents a congruent relationship among the reinforcers of an individual's need. Job selection requires individuals to choose an occupation in relation to data, people and things (Dictionary of Occupational Titles Vol. 1, 1965). The specific relationships to data, people and things can be arranged in hierarchy form to express an occupational relationship which identifies the highest appropriate function in each hierarchy to the job.

This identification and comparison is associated with occupational choice satisfaction. The satisfaction includes the overall satisfaction of an individual as well as satisfaction with particular aspects of the occupational environment. In other words, occupational satisfaction seems to be associated with salary, interests, prestige and the utilization of one's ability to climb to the top. In measuring occupational choice success (student's choice satisfaction), the main criterion in the study model, the Dictionary of Occupational Titles, Worker Trait Arrangement was used. Subjects were asked to check their

preference in relation to working with people, data or things. They were also asked if they prefer to work indoors or outdoors in relation to their preferred career choice (Appendix A). The choices were arranged in pair comparison format.

Analysis

The statistical methodology utilized in this study is path analysis. Path analysis was developed by Sewall Wright in the 1920s and used in genetic studies. It is based on the technique for examining interrelated variables in a causal model (Figure 1, p. 29). The analysis consists of computing path coefficients once correlations between variables are known and determining direct and indirect effect of the dependent variables to the independent variable (Wright, 1960). Multiple and partial regression analyses provide the underlying framework for path analysis.

The computer program used in this study was the Statistical Package for Social Sciences (SPSS). The program was run on Oregon State University's CDC Cyber 70 computer.

Chapter IV

ANALYSIS OF DATA

The findings presented in this chapter are based on the testing of the model for predicting students' choice satisfaction for the total sample population (male and female). In this chapter several figures and tables of statistical information are presented to the extent necessary to interpret the causal effects of the model.

The main objective of this study was to develop and test a causal model which may be used to predict choice satisfaction of vocational high school students. Figure 2 displays the causal model. Table 1 gives means and the standard deviations of male and female subjects in this study.

The Efficiency of the Model

Table 2 displays the zero order-correlation among all the variables in the model. Four of the variables under study were significantly correlated ($p < .05$) with choice satisfaction. The four variables are: sex, peer group, vocational maturity and GPA.

The first endogenous variable (X_4) in the prediction model was significant others (parents, peers, educational personnel and worker or family member). From Table 2 it can be seen that the X_4 variable did not correlate with any other variable in the model except one of the members within the same variable. The F-ratio of the least square regression of the three exogenous variables and the significant others variable was 3.57 at $p < .05$).

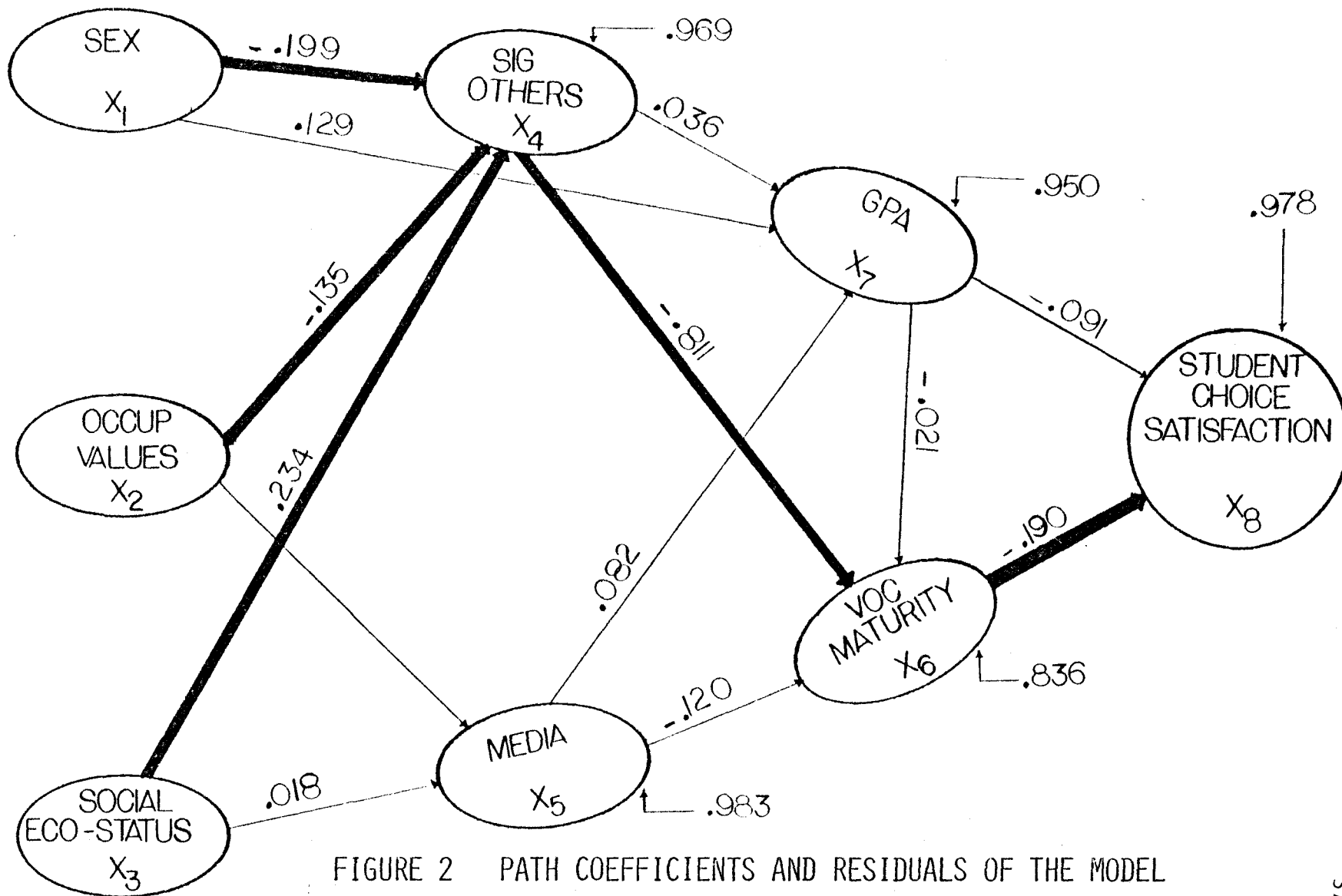


FIGURE 2 PATH COEFFICIENTS AND RESIDUALS OF THE MODEL FOR THE TOTAL SAMPLE (N = 417)

Table 1. Means and standard deviations for all variables in the model for each of the three samples: male and female sample, male sample and female sample.

| Variable number | Variable name | Female and Male sample (N = 417) | | Male Sample (N = 268) | | Female sample (N = 149) | |
|-----------------|--------------------------------------|----------------------------------|-------|-----------------------|-------|-------------------------|-------|
| | | \bar{X} | SD | \bar{X} | SD | \bar{X} | SD |
| 1 | Socioeconomic status | 57.2 | 33.03 | 53.2 | 33.1 | 47.5 | 32.06 |
| 2a | Value - Salary | 2.77 | 0.91 | 2.66 | 0.94 | 0.99 | 0.765 |
| 2b | Value - Job security | 2.87 | 0.93 | 2.33 | 0.98 | 0.56 | 0.779 |
| 2c | Value - Prestige | 3.34 | 0.88 | 3.29 | 0.91 | 1.67 | 0.830 |
| 2d | Value - Interest and satisfaction | 1.62 | 0.85 | 1.73 | 0.89 | 2.53 | 0.716 |
| 3 | Sex | | | | | | |
| 4a | Significant others - Parents | 2.37 | 1.31 | 2.31 | 1.29 | 2.48 | 1.330 |
| 4b | Significant others - Peers | 3.50 | 1.20 | 3.53 | 1.17 | 0.95 | 1.070 |
| 4c | Significant others - Educ. personnel | 2.71 | 1.36 | 2.72 | 1.34 | 2.07 | 1.441 |
| 4d | Significant others - Worker | 2.61 | 1.14 | 2.64 | 1.15 | 1.96 | 1.194 |
| 5 | Media | 3.78 | 1.22 | 3.71 | 1.56 | 3.68 | 1.056 |
| 6 | Grade point average | 2.88 | 0.71 | 2.01 | 0.759 | 2.50 | 0.662 |
| 7 | Vocational Maturity | 35.41 | 3.85 | 35.01 | 0.53 | 36.13 | 6.639 |
| 8 | Student choice satisfaction | 1.727 | 0.87 | 1.79 | 0.87 | 1.59 | 0.907 |

Table 2. Zero-order correlations among all variables in the model.

| Variable number | Variable names | 1 | 2a | 2b | 2c | 2d | 3 | 4a | 4b | 4c | 4d | 5 | 6 | 7 |
|-----------------|-----------------------|------|------|------|------|------|------|------|------|------|------|-----|------|-----|
| 1 | Sex | | | | | | | | | | | | | |
| | Value - | | | | | | | | | | | | | |
| 2a | Salary | .17 | | | | | | | | | | | | |
| 2b | Job security | .06 | -.35 | | | | | | | | | | | |
| 2c | Occup. prestige | .07 | .27 | -.36 | | | | | | | | | | |
| 2d | Int. & satisfac. | -.17 | -.28 | -.25 | -.28 | | | | | | | | | |
| 3 | Socioeconomic status | -.07 | -.00 | .03 | -.00 | -.07 | | | | | | | | |
| | Significant others - | | | | | | | | | | | | | |
| 4a | Parents | .05 | .02 | .08 | -.09 | -.05 | .04 | | | | | | | |
| 4b | Peers | -.02 | .02 | -.08 | .09 | .01 | -.01 | -.44 | | | | | | |
| 4c | Educ. personnel | -.00 | -.06 | .08 | -.03 | -.02 | -.05 | .05 | .23 | | | | | |
| 4d | Worker | -.03 | .03 | -.03 | -.03 | .06 | .01 | -.09 | -.22 | -.47 | | | | |
| 5 | Media | -.01 | -.02 | -.04 | .08 | .00 | -.06 | -.44 | -.02 | -.18 | -.17 | | | |
| 6 | Vocational maturity | .08 | .05 | -.02 | .08 | -.11 | .06 | .04 | -.01 | 0.05 | .01 | .00 | | |
| 7 | GPA | .19 | -.03 | .05 | -.05 | .07 | -.12 | .04 | -.13 | .10 | .05 | .02 | .20 | |
| 8 | Student choice satis. | -.12 | -.08 | -.02 | -.09 | -.02 | -.09 | -.01 | -.13 | .03 | .06 | .01 | -.15 | .15 |

$r \geq 0.06$, significant at .05 level.

The three exogenous variables had beta coefficients greater than twice the standard error. Since there was no intervening variable between the three exogenous and the endogenous variables there was no direct or indirect effect on computed value for the significant others variable.

Media was the second endogenous variable (X_3) in the model. Referring to Table 2, it correlated with three of the significant others variables: parents or guardian ($r = -.44$), educational personnel ($r = -.18$), and worker ($r = -.17$). The residual of this variable was equal to .99 and the F-ratio of the least square regression was 3.2 ($p > .05$). The .99 residual computed for this value indicated that only a small portion of the variance of this variable, .019, was explained by the three exogenous variables.

Vocational maturity, the sixth variable (X_6), was the next endogenous variable considered in this model. This variable correlated significantly ($p < .05$) with interest and satisfaction ($r = .11$, $F = 3.57$, $p < .05$).

Grade point average was the seventh variable (X_7) in the model. From Table 2 it can be seen that four of the variables correlated with grade point average. The variables are sex ($r = -1.2$), peer group ($r = .13$), socioeconomic status ($r = -.17$) and vocational maturity ($r = .20$). The coefficient of determination (R^2) was computed as 0.23, that is, only 2.3 percent of the total variance of the GPA variable was accounted for by the X_1 through X_6 variables in the model. The indirect effects upon this variable were too small to be reported. The residual for the GPA variable was equal to .98.

The main criterion variable (X_8), which is the final endogenous variable, was student choice satisfaction. This variable was expected to be the determinant for all other variables. The zero-order correlation of Table 2 indicates that the variables sex ($r = -.12$), job security ($r = -.13$), vocational maturity ($r = -.15$) and grade point average ($r = .15$) correlated significantly with the criterion variable. The R^2 was 0.150. The model thus revealed that about 15 percent of the total variance of the student choice satisfaction was explained by this model.

On further examination of Table 2 it can be observed that no other variable path coefficient was significantly different from zero. Therefore, indirect effects were negligible in this model; that is, the greatest total effect upon student choice satisfaction was accounted for by direct effect or the path coefficients. To distinguish between path coefficients which were significant and those that were not in the model, heavier lines were used to indicate significant path coefficients in Figure 2. The residuals for each variable calculated are also shown in Figure 2.

The Efficiency of the Model for the Female Sample

The study was concerned with the efficiency of the predicting model. Thus, this section is devoted to testing the efficiency of the female components of the sample. Table 3 displays the zero order correlations among all variables. The path coefficients of the model are also shown in Figure 3.

The first endogenous variable (X_4) in the model was significant

Table 3. Zero order correlation among all variables in the model for the female subjects (N = 149).

| Variable number | Variable names | 2a | 2b | 2c | 2d | 3 | 4a | 4b | 4c | 4d | 5 | 6 | 7 |
|-----------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|-----|
| | Value - | | | | | | | | | | | | |
| 2a | Salary | | | | | | | | | | | | |
| 2b | Job security | -.15 | | | | | | | | | | | |
| 2c | Prestige | -.29 | -.32 | | | | | | | | | | |
| 2d | Interest & Satisfaction | -.27 | -.42 | -.22 | | | | | | | | | |
| 3 | Socioeconomic status | .07 | -.15 | -.03 | .12 | | | | | | | | |
| | Significant others - | | | | | | | | | | | | |
| 4a | Parents | -.15 | -.03 | .16 | .00 | -.12 | | | | | | | |
| 4b | Peers | .08 | .03 | -.17 | -.03 | -.07 | -.41 | | | | | | |
| 4c | Educational personnel | .03 | .16 | -.19 | -.03 | .11 | -.18 | -.30 | | | | | |
| 4d | Workers | -.01 | -.04 | .11 | .00 | .06 | -.07 | -.20 | -.45 | | | | |
| 5 | Media | -.15 | -.03 | .16 | .00 | -.12 | -.42 | .03 | -.22 | -.12 | | | |
| 6 | Vocational maturity | .06 | -.02 | -.00 | .02 | .07 | .00 | -.03 | -.06 | -.02 | .13 | | |
| 7 | GPA | .01 | .04 | .03 | -.00 | -.00 | .17 | -.22 | .25 | -.15 | -.10 | -.18 | |
| 8 | Student choice satisfaction | -.07 | -.03 | .26 | -.08 | -.03 | .03 | -.02 | -.01 | .04 | -.07 | -.07 | .18 |

$r \geq 0.130$, significant at .05 level.

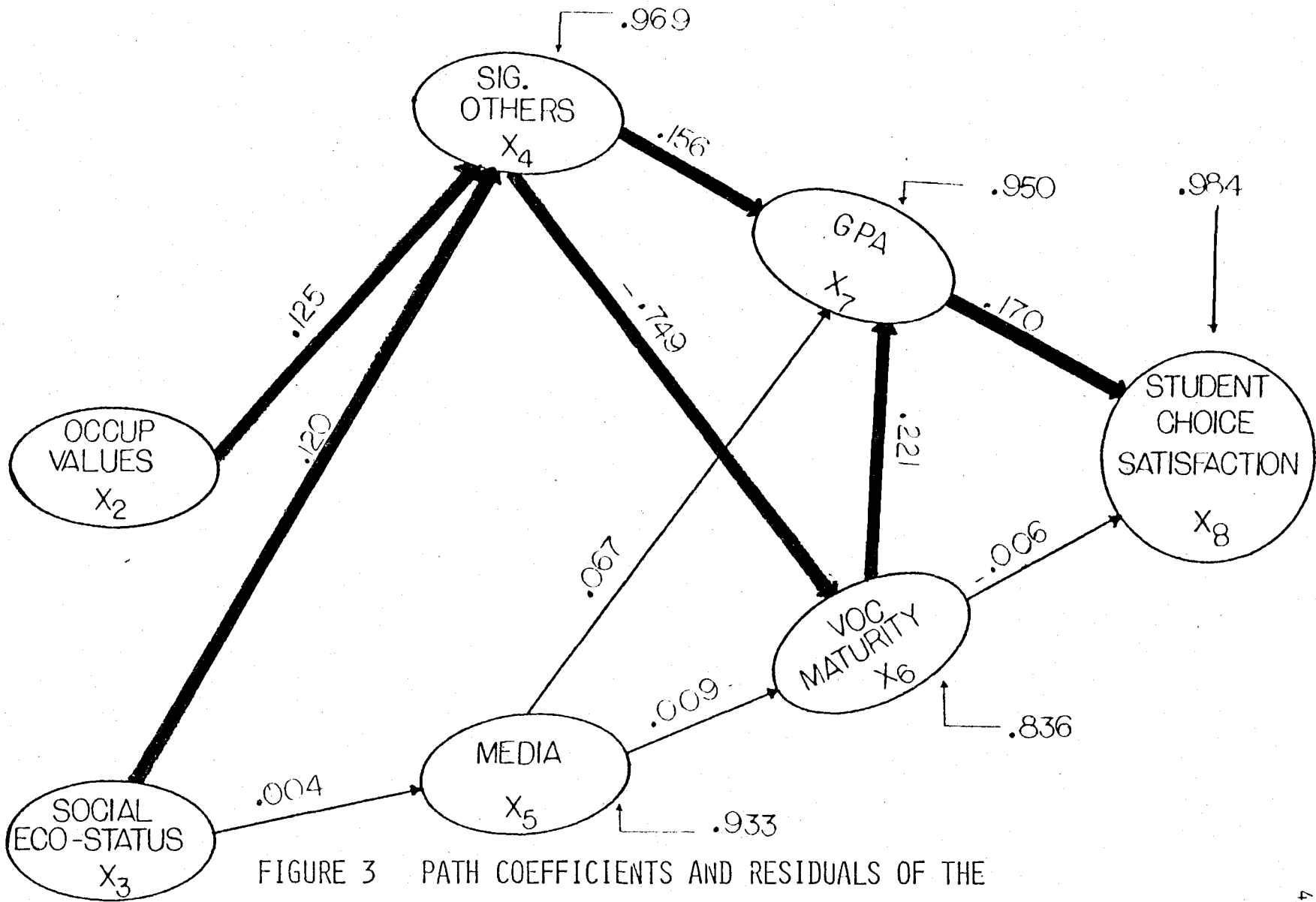


FIGURE 3 PATH COEFFICIENTS AND RESIDUALS OF THE FEMALE SAMPLE (N = 149)

others (parents, peers, educational personnel and worker). From Table 3 it can be seen that only educational personnel and the peer group correlated with other variables in the model. Peer group correlated with prestige in the occupational value family. Educational personnel correlated with job security and prestige in the occupation value family. The F-ratio calculated to test the path coefficients was equal to 3.79.

Media, the second endogenous variable (X_5), correlated with two family members each in both the occupational and significant others variables. Those variables were salary and prestige in the occupational values variable, and parents and educational personnel in the significant others variable. The computed F-ratio was 2.18 and was found to be significant at the .05 level.

Vocational maturity (X_6) was the next endogenous variable. From the correlation matrix vocational maturity correlated with GPA. The F-ratio calculated from regression analysis was equal to 4.85 and was found to be significant at the .05 level.

GPA, the fourth endogenous variable (X_7) in the model, correlated with vocational maturity and three significant others variables. They were parents, educational personnel and worker. The R^2 of this variable was .21. In Figure 3 the heavier lines show that the two variables whose path coefficients were significantly related to the GPA variable were vocational maturity and significant others (parents, educational personnel and worker). The GPA variable was accounted for in direct effect component only of the path coefficient. Thus, there were no indirect effects.

The final variable considered in this model was the criterion variable (X_8), student choice satisfaction. The zero order correlations (Table 3) reveal that two variables, GPA ($r = .18$) and prestige ($r = .16$), correlated significantly ($p < .05$) with the criterion variable. The computed F-ratio for the least square regression was 2.97.

Efficiency of the Male Sample of the Model

The male subjects followed the pattern of the total sample (males and females) except that media (X_5), the second endogenous variable, became a predictor, as the heavier lines show in Figure 4.

Table 4 gives the zero order correlation among all the variables. It can be seen that the criterion variable student choice satisfaction (X_8) correlated with socioeconomic status (X_3), significant others (educational personnel) (X_4) and vocational maturity (X_6). The least square regression F-ratio was computed at 3.49 and was significant at the .05 level. The R^2 was 0.14. This means the variable accounted for about 14 percent of the total variance in combination with other variables in the model upon the criterion variable. In this sample vocational maturity was the major predictor variable accounting for about 20 percent of the total variance.

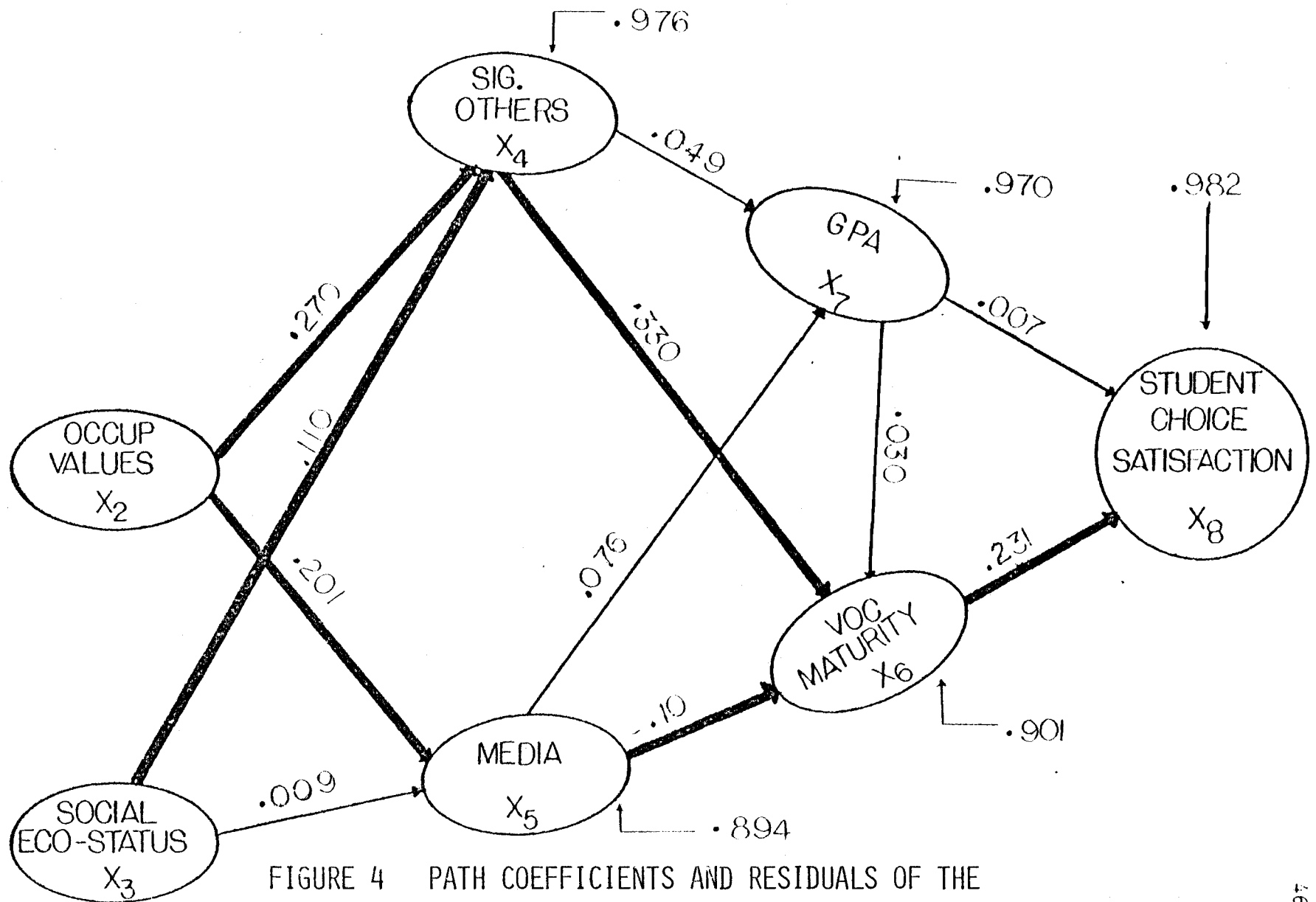


FIGURE 4 PATH COEFFICIENTS AND RESIDUALS OF THE MALE SAMPLE (N = 268)

Table 4. Zero order correlation among all variables in the model for the male sample (N = 268).

| Variable number | Variable names | 2a | 2b | 2c | 2d | 3 | 4a | 4b | 4c | 4d | 5 | 6 | 7 |
|-----------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|-----|
| | Value - | | | | | | | | | | | | |
| 2a | Salary | | | | | | | | | | | | |
| 2b | Job security | -.31 | | | | | | | | | | | |
| 2c | Prestige | -.24 | -.39 | | | | | | | | | | |
| 2d | Interest & satisfaction | -.27 | -.25 | -.31 | | | | | | | | | |
| 3 | Socioeconomic status | -.02 | .10 | .01 | -.17 | | | | | | | | |
| | Significant others - | | | | | | | | | | | | |
| 4a | Parents | -.02 | .11 | -.06 | -.05 | -.07 | | | | | | | |
| 4b | Peers | -.03 | .07 | .06 | .01 | .05 | -.26 | | | | | | |
| 4c | Educational personnel | -.11 | .05 | .04 | -.02 | -.02 | -.46 | -.26 | | | | | |
| 4d | Workers | .06 | -.02 | -.10 | .07 | -.02 | .04 | -.24 | -.46 | | | | |
| 5 | Media | .03 | -.05 | .05 | -.00 | -.03 | -.45 | -.05 | -.17 | -.20 | | | |
| 6 | Vocational maturity | .02 | -.01 | .12 | -.17 | .07 | .05 | .00 | -.44 | .04 | -.05 | | |
| 7 | GPA | -.01 | .04 | -.08 | .07 | -.22 | -.01 | -.07 | .01 | -.00 | .08 | -.22 | |
| 8 | Student choice satisfaction | -.06 | .05 | .01 | .05 | -.15 | .00 | -.21 | .05 | .00 | .06 | -.15 | .10 |

$r \geq 0.08$, significant at .05 level.

Chapter V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The Problem Restated

The research conducted and reported herein was an attempt to explore vocational development and career choice of high school vocational education students. The purpose of this study was to build a model for predicting high school students' occupational choice satisfaction.

Methodology

The sample used in this study consisted of 417 vocational students of the Portland School District II. The statistical methodology used was path analysis along with multiple regression analysis. Path analysis is a technique for examining interrelated variables in a causal model for which exogenous variables can be assumed to determine endogenous variables.

The model consisted of seven variables and a criterion variable, student choice satisfaction. Evaluation of the model was an attempt to uncover paths, both direct and indirect, which related to the student choice satisfaction.

Discussion

Examination of Figure 2 indicates that all the variables chosen for this model were useful in predicting one to four endogenous variables

and they were related to the criterion variable. The first endogenous variable in the prediction model is significantly related to the three exogenous variables. The path coefficients from one of the exogenous variables, occupational values, was negative. This implies that the greater the value one places on an interesting aspect of the job the more likely one will be satisfied with the choice. When this explanation is interpreted with salary (a family member of occupational value) it implies that the value placed upon a huge salary is played down compared with other aspects of job satisfaction.

The second endogenous variable in the prediction model related only to the exogenous variable of occupational value. Media was not a factor in the prediction model even though the variables were associated with other variables in the prediction model. It had the lowest \bar{R}^2 value, accounting for only three percent of the combination of variables in the sample.

Vocational maturity was the third of the endogenous variables in the model and was the most predictable variable when combining variables of the total sample. The variables which predicted vocational maturity across the sample were: socioeconomic status, significant others and GPA and all three exogenous variables. All the path coefficients for this variable were positive except occupational value which was explained previously.

GPA was not a strong predictor in the total model (male and female). Its path coefficient was also negative. This implies that in terms of making an occupational choice, the in-school characteristic is not an important factor in choosing occupations. The influence which was

exerted on individuals and their awareness of the occupational benefits are more important than grade point average indicator. However, in the female sample model GPA was found to be a strong predictor. Most of the females who registered in vocational programs had an average GPA of 2.5 compared to the males who had 2.01 ($F = 4.85$, $ndf = 12, 133$, $p < .05$).

The last endogenous variable, student choice satisfaction, was the main criterion variable considered in the analysis of the model. Student choice satisfaction was predictable by five independent variables. The variables were vocational maturity, significant others, socioeconomic status and occupational values.

The criterion variable was predictable with GPA in the female sample model. This shows that perhaps the school district is offering a program which interests females and in which training was more easily transferred to an actual job and does not require an additional on-the-job training, compared with courses for their male counterparts.

In summary, student choice satisfaction was found to be predictable with variables related to influential factors and expectations, and the aspiration factors played a minor role. However, aspiration factors became important in the prediction model when males and females were considered separately. In this study GPA was a predictor for female subjects only.

Students whose socioeconomic background fell below the mean SES (57) on the Duncan SES scale or 1963 SES ratings (see Appendix B) rated salary and prestige higher in the occupational value ratings. Female subjects rated interest and satisfaction higher above salary, prestige

and job security. The R^2 values (coefficient of determination) and other summary data are presented in table form for the total sample, the male and the female samples (Appendix C).

Conclusions

Based upon the results of this study two major conclusions were drawn. First, the variables used in the prediction model held. Although not all variables contributed equally in the empirical and statistical analysis to unveil direct and indirect paths in the model they lent a prediction support to the model. Second, there was a significant difference in the prediction of occupational choice satisfaction when male and female subjects were considered as separate groups.

Recommendations

Students choice satisfaction relates highly on influencing variables and effective domain variables. These variables are significant others (parents, worker), occupational values (salary, interest and satisfaction, job security), and vocational maturity. School administrators, career coordinators and teachers should place emphasis on the affective domain in their planning and development of courses. If students are advised so that they can identify the components of the affective domain, their occupational choices and realistic approach to the world of work will be more rewarding.

An alternative method of helping students to become aware and knowing about their occupational choice preference is to establish a

career development center at the school district to serve as a career resource center. Students could learn about occupations before a choice is made. Teaching students to make satisfying occupational decisions would prepare them for the world of work and for life.

In spite of efforts of many schools to bridge the gap between male and female students in vocational programs the majority of the female respondents indicated their occupational preference as secretaries in the legal, medical or clerical fields. Women ranked interest and satisfaction higher than salary, prestige and job security. This implies that women prefer to work in an environment which has high interpersonal social relationships.

One way to interest males and females in vocational programs is to establish a comprehensive career guidance program to involve influential components (people and media) which students can respond to when seeking information. This will benefit potential female participants. Students of non-white group who depend more on school based influential sources than their white counterparts would benefit from such programs.

This study should be replicated using another sample from a different school district or community. In this way the validity of the model can be evaluated and the reliability can be substantiated. A separate investigation focusing on non-vocational and vocational students should be conducted using a model which includes variables in cognitive and affective domains. A longitudinal study should also be conducted.

It is also recommended that this study be replicated using post-secondary school data. In this way a comparison can be made concerning high school and post-secondary students' occupational choice satisfaction.

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APPENDICES

APPENDIX A

CMI FORM

Please answer the following questions by checking T (true) or F (false).

- | | T | F |
|--|---|---|
| 1. Once you choose a job, you can't choose another one. | — | — |
| 2. In order to choose a job, you need to know what kind of person you are. | — | — |
| 3. I plan to follow the line of work my parents suggest. | — | — |
| 4. I guess everybody has to go to work sooner or later, but I don't look forward to it. | — | — |
| 5. A person can do any kind of work he wants as long as he tries hard. | — | — |
| 6. I'm not going to worry about choosing an occupation until I'm out of school. | — | — |
| 7. Your job is important because it determines how much you can earn. | — | — |
| 8. Work is worthwhile mainly because it lets you buy the things you want. | — | — |
| 9. The greatest appeal of a job to me is the opportunity it provides for getting ahead. | — | — |
| 10. I often daydream about what I want to be, but I really haven't chosen a line of work yet. | — | — |
| 11. Knowing what you are good at is more important than knowing what you like in choosing an occupation. | — | — |
| 12. Your parents probably know better than anybody else which occupations you should enter. | — | — |
| 13. If I can just help others in my work, I'll be happy. | — | — |
| 14. Work is dull and unpleasant. | — | — |
| 15. Everyone seems to tell me something different; as a result, I don't know which kind of work to choose. | — | — |
| 16. I don't know how to go about getting into the kind of work I want to do. | — | — |

17. There is no point deciding on a job when the future is so uncertain. - -
18. I spend a lot of time wishing I could do work I know I can never do. - -
19. I don't know what courses I should take in school. - -
20. It's probably just as easy to be successful in one occupation as it is in another. - -
21. By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter. - -
22. There are so many things to consider in choosing an occupation, it is hard to make a decision. - -
23. I seldom think about the job I want to enter. - -
24. It doesn't matter which job you choose as long as it pays well. - -
25. You can't go very far wrong by following your parents' advice about which job to choose. - -
26. Working is much like going to school. - -
27. I am having difficulty in preparing myself for the work I want to do. - -
28. I know very little about the requirements of jobs. - -
29. The job I choose has to give me plenty of freedom to do what I want. - -
30. The best thing to do is to try out several jobs, then choose the one you like best. - -
31. There is only one occupation for each person. - -
32. Whether you are interested in a particular kind of work is not as important as whether you can do it. - -
33. I can't understand how some people can be so certain about what they want to do. - -
34. As long as I can remember, I've known what kind of work I want to do. - -
35. I want to really accomplish something in my work--to make a great discovery or earn a lot of money or help a great number of people. - -

36. You get into an occupation mostly by chance. — —
37. It's who you know, not what you know, that's important in a job. — —
38. When it comes to choosing a job, I'll make up my own mind. — —
39. You should choose an occupation which gives you a chance to help others. — —
40. When I am trying to study, I often find myself day-dreaming about what it will be like when I start working. — —
41. I have little or no idea of what working will be like. — —
42. You should choose an occupation, then plan how to enter it. — —
43. I really can't find any work that has much appeal to me. — —
44. You should choose a job in which you can someday be famous. — —
45. If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions. — —
46. You should choose a job which allows you to do what you believe in. — —
47. The most important part of work is the pleasure which comes from doing it. — —
48. I keep changing my occupational choice. — —
49. As far as choosing an occupation is concerned, something will come along sooner or later. — —
50. I am not going to worry about choosing a job, since you don't have anything to say about it anyway. — —

OCSQ FORM

1. What is your age? _____
2. What is your sex? Male _____
Female _____
3. What is your race? White _____
Nonwhite _____
4. In terms of grades in high school, are you considered:
"A" student _____
"B" student _____
"C" student _____
"D" student _____
5. Check the person in your family who is the major wage earner
(holds better job): Father _____
Mother _____
Guardian _____
6. What is that person's job? _____
(Example: laborer, carpenter, mechanic, nurse, nurse aide, secretary,
sales clerk, gas station attendant)
Unemployed at this time _____
7. Which is more important to you: Salary _____
Job security _____
- Which is more important to you: Prestige _____
Salary _____
- Which is more important to you: Interest and satisfaction _____
Salary _____
- Which is more important to you: Job security _____
Prestige _____
- Which is more important to you: Interest and satisfaction _____
Job security _____
- Which is more important to you: Prestige _____
Interest and satisfaction _____
8. Who or what influenced you most in choosing the vocational program
you are in: Father, mother, guardian _____
Media (television, newspaper, books) _____

Who or what influenced you most in choosing the vocational program you are in:

Peer group (friends) _____
 Father, mother, or guardian _____

Who or what influenced you most in choosing the vocational program you are in:

Media (television, newspaper, books) _____
 Educational personnel (counselor, teacher) _____

Who or what influenced you most in choosing the vocational program you are in:

Worker (neighbor, family member) _____
 Peer group (friends) _____

Who or what influenced you most in choosing the vocational program you are in:

Educational personnel (counselor, teacher) _____
 Peer group (friends) _____

Who or what influenced you most in choosing the vocational program you are in:

Father, mother, guardian _____
 Educational personnel (counselor, teacher) _____

Who or what influenced you most in choosing the vocational program you are in:

Worker (neighbor, family member) _____
 Father, mother, guardian _____

Who or what influenced you most in choosing the vocational program you are in:

Media (television, newspaper, books) _____
 Worker (neighbor, family member) _____

9. Do you like to work with People _____
 Numbers _____

Do you like to work with People _____
 Things _____

Do you like to work with Numbers _____
 Things _____

10. Name the job you plan to enter after this program: _____
 I don't know _____

11. Will this job require further schooling? Yes _____
 No _____
 I don't know _____

12. Will this job be:

Indoors _____
Outdoors _____
I don't know _____

THANK YOU FOR YOUR ASSISTANCE. THIS INFORMATION COULD ASSIST OTHERS
LIKE YOU IN THE FUTURE.

APPENDIX B

1970 Census List of Occupations With Accompanying
Codes of Duncan's SES and 1963 Census SES

| <u>Occupational and SES Codes</u> | | | |
|--|-----------------|---------------|--|
| <u>1970</u> | | <u>1963</u> | |
| <u>Census</u> | <u>Duncan's</u> | <u>Census</u> | <u>Occupation</u> |
| <u>Code</u> | <u>SES</u> | <u>SES</u> | |
| <u>Group 1. Professional, Technical, and Kindred</u> | | | |
| 001 | 78 | 92 | Accountants |
| 002 | 90 | 98 | Architects |
| 003 | 62 | 85 | Computer Programmers |
| 004 | 62 | 85 | Computer Systems Analysts |
| 005 | 62 | 85 | Computer Specialists, nec |
| 006 | 87 | 97 | Engineer - Aeronautical & Astronautical |
| 010 | 90 | 98 | Engineer - Chemical |
| 011 | 84 | 96 | Engineer - Civil |
| 012 | 84 | 97 | Engineer - Electrical & Electronic |
| 013 | 86 | 95 | Engineer - Industrial |
| 014 | 82 | 96 | Engineer - Mechanical |
| 015 | 82 | 97 | Engineer - Metallurgical & Materials |
| 020 | 85 | 97 | Engineer - Mining |
| 021 | 85 | 97 | Engineer - Petroleum |
| 022 | 87 | 97 | Engineer - Sales |
| 023 | 87 | 97 | Engineer - nec |
| 024 | 83 | 94 | Farm Management Advisors |
| 025 | 48 | 78 | Foresters & Conservationists |
| 026 | 83 | 94 | Home Management Advisors |
| 030 | 93 | 98 | Judges |
| 030 | 93 | 98 | Lawyers |
| 032 | 60 | 64 | Librarians |
| 033 | 60 | 64 | Archivists & Curators |
| 034 | 81 | 96 | Actuaries |
| 035 | 80 | 95 | Mathematicians |
| 036 | 81 | 96 | Statisticians |
| 042 | 80 | 95 | Scientists - Agricultural |
| 043 | 80 | 95 | Scientists - Atmospheric & Space |
| 044 | 80 | 95 | Scientists - Biological |
| 045 | 79 | 94 | Scientists - Chemists |
| 051 | 79 | 94 | Scientists - Geologists |
| 052 | 79 | 94 | Scientists - Marine |
| 053 | 79 | 94 | Scientists - Physicists & Astronomers |
| 054 | 79 | 94 | Scientists - Life & Physical Scientists, nec |
| 055 | 62 | 85 | Operations & Systems Researchers & Analysts |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|------------------------|-----------------|-----------------------|--|
| 056 | 84 | 96 | Personnel & Labor Relations Workers |
| 061 | 75 | 89 | Chiropractors |
| 062 | 96 | 99 | Dentists |
| 063 | 79 | 96 | Optometrists |
| 064 | 82 | 95 | Pharmacists |
| 065 | 92 | 99 | Physicians, Medical & Osteopathic |
| 071 | 92 | 99 | Podiatrists |
| 072 | 78 | 95 | Veterinarians |
| 073 | 65 | 86 | Health Practitioners, nec |
| 074 | 39 | 64 | Dietitians |
| 075 | 46 | 71 | Registered Nurses |
| 076 | 58 | 81 | Therapists |
| 080 | 48 | 73 | Clinical Lab Technologists & Technicians |
| 081 | 48 | 73 | Dental Hygienists |
| 082 | 48 | 73 | Health Record Technologists & Technicians |
| 083 | 48 | 73 | Radiologic Technologists & Technicians |
| 084 | 48 | 73 | Therapy Assistants |
| 085 | 48 | 73 | Health Technologists & Technicians, nec |
| 086 | 52 | 67 | Clergymen |
| 090 | 56 | 63 | Religious Workers, nec |
| 091 | 81 | 96 | Social Scientists - Economists |
| 092 | 81 | 96 | Social Scientists - Political |
| 093 | 81 | 96 | Social Scientists - Psychologists |
| 094 | 81 | 96 | Social Scientists - Sociologists |
| 095 | 81 | 96 | Social Scientists - Urban & Regional Planners |
| 096 | 81 | 96 | Social Scientists - nec |
| 100 | 64 | 85 | Social Workers |
| 101 | 67 | 84 | Recreation Workers |
| 102 | 84 | 96 | Univ. Teachers - Agriculture |
| 103 | 84 | 96 | Univ. Teachers - Atmos., Earth, Marine & Space |
| 104 | 84 | 96 | Univ. Teachers - Biology |
| 105 | 84 | 96 | Univ. Teachers - Chemistry |
| 110 | 84 | 96 | Univ. Teachers - Physics |
| 111 | 84 | 96 | Univ. Teachers - Engineering |
| 112 | 84 | 96 | Univ. Teachers - Mathematics |
| 113 | 84 | 96 | Univ. Teachers - Health Specialties |
| 114 | 84 | 96 | Univ. Teachers - Psychology |
| 115 | 84 | 96 | Univ. Teachers - Business & Commerce |
| 116 | 84 | 96 | Univ. Teachers - Economics |
| 120 | 84 | 96 | Univ. Teachers - History |

| 1970 Census Data | Duncan's SES | 1963 Census SES | Occupation |
|------------------------|-----------------|-----------------------|---|
| 121 | 84 | 96 | Univ. Teachers - Sociology |
| 122 | 84 | 96 | Univ. Teachers - Social Science, nec |
| 123 | 84 | 96 | Univ. Teachers - Art, Drama & Music |
| 124 | 84 | 96 | Univ. Teachers - Coaches & Physical Ed. |
| 125 | 84 | 96 | Univ. Teachers - Education |
| 126 | 84 | 96 | Univ. Teachers - English |
| 130 | 84 | 96 | Univ. Teachers - Foreign Language |
| 131 | 84 | 96 | Univ. Teachers - Home Economics |
| 132 | 84 | 96 | Univ. Teachers - Law |
| 133 | 84 | 96 | Univ. Teachers - Theology |
| 134 | 84 | 96 | Univ. Teachers - Trade, Industrial, Tech. |
| 135 | 84 | 96 | Univ. Teachers - Misc., College & Univ. |
| 140 | 84 | 96 | Univ. Teachers - Subject not Specified |
| 141 | 72 | 89 | Teachers - Adult Education |
| 142 | 72 | 89 | Teachers - Elementary School |
| 143 | 72 | 89 | Teachers - Prekindergarten & Kindergarten |
| 144 | 72 | 89 | Teachers - Secondary School |
| 145 | 72 | 89 | Teachers - nec except College & Univ. |
| 150 | 62 | 80 | Technicians - Agri. & Biol., except Health |
| 151 | 62 | 80 | Technicians - Chemical |
| 152 | 67 | 87 | Technicians - Draftsmen |
| 153 | 62 | 80 | Technicians - Elec. & Electronic Engineer |
| 154 | 62 | 80 | Technicians - Industrial Engineer |
| 155 | 62 | 80 | Technicians - Mechanical Engineer |
| 156 | 62 | 80 | Technicians - Mathematical |
| 161 | 62 | 80 | Technicians - Surveyors |
| 162 | 62 | 80 | Technicians - Engineer & Science Tech., nec |
| 163 | 79 | 96 | Airplane Pilots |
| 164 | 79 | 96 | Air Traffic Controllers |
| 165 | 59 | 83 | Embalmers |
| 170 | 65 | 86 | Flight Engineers |
| 171 | 69 | 90 | Radio Operators |
| 172 | 65 | 86 | Tool Programmers, Numerical Control |
| 173 | 62 | 85 | Technicians, nec |
| 174 | 72 | 89 | Vocational & Educational Counselors |
| 175 | 60 | 84 | Actors |
| 180 | 52 | 60 | Athletes & Kindred Workers |
| 181 | 76 | 93 | Authors |
| 182 | 45 | 61 | Dancers |
| 183 | 73 | 91 | Designers |

| 1970 Census Data | Duncan's SES | 1963 Census SES | Occupation |
|------------------------|-----------------|-----------------------|--|
| 184 | 82 | 95 | Editors & Reports |
| 185 | 52 | 72 | Musicians & Composers |
| 190 | 67 | 88 | Painters & Sculptors |
| 191 | 50 | 73 | Photographers |
| 192 | 82 | 95 | Public Relations Men & Publicity Writers |
| 193 | 69 | 90 | Radio & Television Announcers |
| 194 | 31 | 48 | Writers, Artists & Entertainers, nec |
| 195 | 65 | 86 | Research Workers, not specified |
| 201 | 56 | 82 | Assessors, Controllers & Treas/Local Public Adm. |
| 202 | 85 | 96 | Bank Officers & Financial Managers |
| 203 | 33 | 51 | Buyers & Shippers, Farm Products |
| 205 | 72 | 92 | Buyers, Wholesale & Retail Trade |
| 210 | 74 | 92 | Credit Men |
| 211 | 59 | 83 | Funeral Directors |
| 212 | 66 | 90 | Health Administrators |
| 213 | 66 | 90 | Construction Inspectors, Public Admin. |
| 215 | 66 | 90 | Inspectors, exc. Construc., Public Admin. |
| 216 | 32 | 41 | Managers & Superintendents, Building |
| 220 | 80 | 96 | Office Managers, nec |
| 221 | 54 | 79 | Officers, Pilots & Purshers/Ship |
| 222 | 54 | 79 | Officials & Admin., Public Admin., nec |
| 223 | 58 | 82 | Officials of Lodges, Societies & Unions |
| 224 | 60 | 82 | Postmasters & Mail Superintendents |
| 225 | 77 | 92 | Purchasing Agents & Buyers, nec |
| 226 | 58 | 73 | Railroad Conductors |
| 230 | 39 | 70 | Restaurant, Cafeteria & Bar Managers |
| 231 | 68 | 89 | Sales Managers & Dept. Heads, Retail Trade |
| 233 | 70 | 90 | Sales Managers, exc. Retail Trade |
| 235 | 84 | 96 | School Administrators, College |
| 240 | 72 | 89 | School Admin., Elementary & Sedondary |
| 245 | 62 | 89 | Managers & Administrators, nec |
| <u>Group 3. Sales</u> | | | |
| 260 | 66 | 90 | Advertising Agents & Salesmen |
| 261 | 40 | 67 | Auctioneers |
| 262 | 35 | 62 | Demonstrators |
| 264 | 08 | 08 | Hucksters & Peddlers |
| 265 | 66 | 89 | Insurance Agents, Brokers & Underwriters |
| 266 | 27 | 20 | Newsboys |
| 270 | 62 | 86 | Real Estate Agents & Brokers |
| 271 | 73 | 94 | Stock & Bond Salesmen |
| 280 | 47 | 10 | Salesmen & Sales Clerks, nec |
| 281 | 65 | 88 | Sales Rep./Manufacturing Industries |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|--------------------------------------|-----------------|-----------------------|--|
| 282 | 61 | 85 | Sales Rep./Wholesale Trade |
| 283 | 39 | 61 | Sales Clerks/Retail General & not 284 |
| 284 | 50 | 77 | Salesmen/Retail Lbr., Veh., Appl., Fuel |
| 285 | 50 | 77 | Salesmen of Services & Construction |
| <u>Group 4. Clerical and Kindred</u> | | | |
| 301 | 52 | 75 | Bank Tellers |
| 303 | 45 | 69 | Billing Clerks |
| 305 | 51 | 73 | Bookkeepers |
| 310 | 44 | 69 | Chasiers |
| 311 | 44 | 73 | Clerical Assistants, Social Welfare |
| 312 | 61 | 82 | Clerical Supervisors, nec |
| 313 | 39 | 66 | Collectors, Bill & Account |
| 314 | 44 | 73 | Counter Clerks exc. Food |
| 315 | 40 | 73 | Dispatchers & Starters, Vehicle |
| 320 | 62 | 89 | Enumerators & Interviewers |
| 321 | 62 | 89 | Estimators & Investigators, nec |
| 323 | 62 | 89 | Expeditors & Production Controllers |
| 325 | 44 | 73 | File Clerks |
| 326 | 62 | 89 | Insurance Adjusters, Exam. & Investigators |
| 330 | 44 | 50 | Library Attendants & Assistants |
| 331 | 53 | 80 | Mailcarriers, Post Office |
| 332 | 44 | 73 | Mail Handlers, exc. Post Office |
| 333 | 28 | 43 | Messengers & Office Boys |
| 334 | 44 | 73 | Meter Readers, Utilities |
| 341 | 45 | 69 | Off. Mach. Opr. - Bkpg. & Billing Mach. |
| 342 | 45 | 69 | Off. Mach. Opr. - Calculating Mach. |
| 343 | 45 | 69 | Off. Mach. Opr. - Computer & Peripheral |
| 344 | 45 | 69 | Off. Mach. Opr. - Duplicating Mach. |
| 345 | 45 | 69 | Off. Mach. Opr. - Key Punch |
| 350 | 45 | 69 | Off. Mach. Opr. - Tabulating Mach. |
| 355 | 45 | 69 | Off. Mach. Opr. - Office Machines, nec |
| 360 | 44 | 73 | Payroll & Timekeeping Clerks |
| 361 | 44 | 73 | Postal Clerks |
| 362 | 44 | 73 | Proofreaders |
| 363 | 68 | 90 | Real Estate Appraisers |
| 364 | 44 | 73 | Receptionists |
| 370 | 61 | 82 | Secretaries - Legal |
| 371 | 61 | 82 | Secretaries - Medical |
| 372 | 61 | 82 | Secretaries - nec |
| 374 | 22 | 58 | Shipping & Receiving Clerks |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|---------------------------------------|-----------------|-----------------------|---|
| 375 | 44 | 73 | Statistical Clerks |
| 376 | 61 | 82 | Stenographers |
| 381 | 44 | 73 | Stock Clerks & Storekeepers |
| 382 | 44 | 50 | Teacher Aides, exc. School Monitors |
| 383 | 22 | 33 | Telegraph Messengers |
| 384 | 47 | 75 | Telegraph Operators |
| 385 | 45 | 72 | Telephone Operators |
| 390 | 60 | 82 | Ticket, Station & Express Agents |
| 391 | 61 | 82 | Typists |
| 392 | 44 | 73 | Weighers |
| 394 | 44 | 73 | Misc. Clerical Workers |
| 395 | 44 | 73 | Clerical Workers, not specified |
| <u>Group 5. Craftsmen and Kindred</u> | | | |
| 401 | 19 | 52 | Auto Accessories Installers |
| 402 | 22 | 50 | Bakers |
| 403 | 16 | 31 | Blacksmiths |
| 404 | 33 | 59 | Boilermakers |
| 405 | 39 | 69 | Bookbinders |
| 410 | 27 | 50 | Brickmasons & Stonemasons |
| 411 | 32 | 57 | Brickmasons & Stonemasons, Apprentices |
| 412 | 21 | 52 | Bulldozer Operators |
| 413 | 23 | 48 | Cabinetmakers |
| 415 | 19 | 35 | Carpenters |
| 416 | 31 | 50 | Carpenters Apprentices |
| 420 | 19 | 35 | Carpet Installers |
| 421 | 19 | 35 | Cement & Concrete Finishers |
| 422 | 52 | 79 | Compositors & Typesetters |
| 423 | 40 | 57 | Printing Trades Apprentices, exc. Pressmen |
| 424 | 21 | 52 | Cranemen, Derrickmen & Hoistmen |
| 425 | 40 | 67 | Decorators & Window Dressers |
| 426 | 48 | 73 | Dental Laboratory Technicians |
| 430 | 44 | 74 | Electricians |
| 431 | 37 | 61 | Electrician Apprentices |
| 433 | 49 | 76 | Electric Power Linemen & Cablemen |
| 434 | 55 | 81 | Electrotypers & Stereotypers |
| 435 | 47 | 75 | Engravers, exc. Photoengravers |
| 436 | 24 | 57 | Excavating, Grading & Road Mach. Opr. exc. Bulldozer |
| 440 | 40 | 65 | Floor Layers exc. Tile Setters |
| 441 | 49 | 10 | Foremen, nec |
| 442 | 23 | 51 | Forgemen & Hammermen |
| 443 | 17 | 10 | Furniture & Wood Finishers |
| 444 | 39 | 66 | Furriers |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|------------------------|-----------------|-----------------------|---|
| 445 | 26 | 57 | Glaziers |
| 446 | 22 | 58 | Heat Treaters, Annealers & Temperers |
| 450 | 23 | 48 | Inspec., Scalers & Graders/Log & Lumber |
| 452 | 41 | 10 | Inspectors, nec |
| 453 | 36 | 63 | Jewelers & Watchmakers |
| 454 | 28 | 64 | Job & Die Setters, Metal |
| 455 | 58 | 68 | Locomotive Engineers |
| 456 | 45 | 76 | Locomotive Firemen |
| 461 | 33 | 68 | Machinists |
| 462 | 41 | 59 | Machinist Apprentices |
| 470 | 27 | 61 | Mech/Repairmen - Air Cond., Heat. & Refrig. |
| 471 | 48 | 79 | Mech/Repairmen - Aircraft |
| 472 | 19 | 52 | Mech/Repairmen - Auto Body Repairmen |
| 473 | 19 | 52 | Mech/Repairmen - Auto Mechanics |
| 474 | 25 | 46 | Mech/Repairmen - Auto Mech. Apprentices |
| 475 | 36 | 62 | Mech/Repairmen - Data Proc. Mach. Repairmen |
| 480 | 27 | 61 | Mech/Repairmen - Farm Implements |
| 481 | 27 | 61 | Mech/Repairmen - Heavy Equip Mech., incl. Diesel |
| 482 | 27 | 61 | Mech/Repairmen - Hshld. Appl. & Acces. Instal. & Mech. |
| 483 | 27 | 61 | Mech/Repairmen - Loom Fixers |
| 484 | 36 | 66 | Mech/Repairmen - Office Machines |
| 485 | 36 | 62 | Mech/Repairmen - Radio & Television |
| 486 | 23 | 52 | Mech/Repairmen - Railroad & Car Shop |
| 491 | 31 | 51 | Mech/Repairmen - Mechanic, exc. Auto, Appren. |
| 492 | 27 | 61 | Mech/Repairmen - Misc. Mech & Repairmen |
| 495 | 27 | 61 | Mech/Repairmen - Mech. & Repairmen, not spec. |
| 501 | 19 | 39 | Millers - Grain, Flour & Feed |
| 502 | 31 | 62 | Millwrights |
| 503 | 12 | 41 | Molders, Metal |
| 504 | 33 | 55 | Molder Apprentices |
| 505 | 43 | 73 | Motion Picture Projectionists |
| 506 | 39 | 72 | Opticians, Lens Grinders, Polishers |
| 510 | 16 | 37 | Painters, Construction & Maintenance |
| 511 | 29 | 49 | Painter Apprentices |
| 512 | 10 | 22 | Paperhangers |
| 514 | 44 | 74 | Pattern & Model Makers, exc. Paper |
| 515 | 64 | 84 | Photoengravers & Lithographers |
| 516 | 38 | 54 | Piano & Organ Tuners & Repairmen |
| 520 | 25 | 46 | Plasterers |
| 521 | 29 | 49 | Plasterer Apprentices |
| 522 | 34 | 64 | Plumbers & Pipe Fitters |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|------------------------|-----------------|-----------------------|-------------------------------------|
| 523 | 29 | 49 | Plumber & Pipe Fitter Apprentices |
| 525 | 47 | 72 | Power Station Operators |
| 530 | 49 | 77 | Pressmen & Plate Printers, Printing |
| 531 | 40 | 57 | Pressmen Apprentices |
| 533 | 22 | 54 | Rollers & Finishers, Metal |
| 534 | 15 | 34 | Roofers & Slaters |
| 535 | 33 | 68 | Sheetmetal Workers & Tinsmiths |
| 536 | 33 | 55 | Sheetmetal Apprentices |
| 540 | 40 | 65 | Shipfitters |
| 542 | 12 | 22 | Shoe Repairmen |
| 543 | 32 | 62 | Sign Painters & Letterers |
| 545 | 47 | 72 | Stationary Engineers |
| 546 | 25 | 44 | Stone Cutters & Stone Carvers |
| 550 | 34 | 66 | Structural Metal Craftsmen |
| 551 | 32 | 62 | Tailors |
| 552 | 32 | 62 | Telephone Installers & Repairmen |
| 554 | 49 | 76 | Telephone Linemen & Splicers |
| 560 | 27 | 50 | Tile Setters |
| 561 | 50 | 77 | Tool & Die Makers |
| 562 | 33 | 55 | Tool & Die Maker Apprentices |
| 563 | 22 | 53 | Upholsterers |
| 571 | 31 | 51 | Specified Craft Apprentices, nec |
| 572 | 39 | 55 | Not specified Apprentices |
| 575 | 32 | 62 | Craftsmen & Kindred Workers, nec |
| 580 | 18 | 10 | Former Members of the Armed Forces |
| 581 | 18 | 10 | Armed Forces - Enlisted Men |
| 582 | 26 | 10 | Armed Forces - Officers |

Group 6. Operatives, Except Transportation

| | | | |
|-----|----|----|--|
| 601 | 32 | 63 | Asbestos & Insulation Workers |
| 602 | 17 | 61 | Assemblers |
| 603 | 11 | 33 | Blasters & Powdermen |
| 604 | 09 | 26 | Bottling & Canning Operatives |
| 605 | 25 | 47 | Chainman, Rodman & Axman - Surveying |
| 610 | 17 | 61 | Checkers, Examiners & Inspectors - Mfg. |
| 611 | 15 | 37 | Clothing Ironers & Pressers |
| 612 | 18 | 10 | Cutting Operatives, nec |
| 613 | 23 | 35 | Dressmakers & Seamstresses, exc. Factory |
| 614 | 38 | 70 | Drillers, Earth |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|------------------------|-----------------|-----------------------|---|
| 615 | 18 | 38 | Dry Wall Installers & Lathers |
| 620 | 12 | 36 | Dyers |
| 621 | 22 | 57 | Filers, Polishers, Sanders, Buffers |
| 622 | 18 | 45 | Furnacemen, Smeltermen & Pourers |
| 623 | 19 | 44 | Garage Workers, Gas Station Attendants |
| 624 | 17 | 14 | Graders & Sorters, Manufacturing |
| 625 | 10 | 19 | Prod. Graders & Packers, exc. Factory, Farm |
| 626 | 29 | 56 | Heaters, Metal |
| 630 | 15 | 37 | Laundry, Dry Cleaning Operatives, nec |
| 631 | 29 | 60 | Meat Cutters & Butchers, exc. Mfg. |
| 633 | 29 | 60 | Meat Cutters & Butchers, Mfg. |
| 634 | 18 | 38 | Meat Wrappers, Retail Trade |
| 635 | 29 | 56 | Metal Platers |
| 636 | 46 | 73 | Milliners |
| 640 | 10 | 10 | Mine Operatives, nec |
| 641 | 18 | 10 | Mixing Operatives |
| 642 | 15 | 44 | Oilers & Greasers, exc. Auto |
| 643 | 18 | 38 | Packers & Wrappers, exc. Meat & Produce |
| 644 | 18 | 47 | Painters, Manufactured Articles |
| 645 | 42 | 65 | Photographic Process Workers |
| 650 | 26 | 62 | Drill Press |
| 651 | 26 | 62 | Grinding Machine |
| 652 | 26 | 62 | Lathe & Milling Machine |
| 653 | 26 | 62 | Precision Machine Operatives, nec |
| 656 | 26 | 62 | Punch & Stamping Press |
| 660 | 26 | 62 | Riveters & Fasteners |
| 661 | 16 | 40 | Sailors & Deckhands |
| 662 | 05 | 10 | Sawyers |
| 663 | 17 | 39 | Sewers & Stitchers |
| 664 | 26 | 62 | Shoemaking Machine Operatives |
| 665 | 16 | 48 | Solderers |
| 666 | 17 | 40 | Stationary Firemen |
| 670 | 10 | 33 | Textile - Carding, Lapping & Combing |
| 671 | 10 | 33 | Textile - Knitters, Loopers & Toppers |
| 672 | 10 | 33 | Textile - Spinners, Twisters & Winders |
| 673 | 10 | 33 | Textile - Weavers |
| 674 | 10 | 33 | Textile - Textile Operatives, nec |
| 680 | 24 | 62 | Welders & Flame-Cutters |
| 681 | 18 | 10 | Winding Operatives, nec |
| 690 | 22 | 57 | Machine Operatives, Misc. Specified |
| 692 | 22 | 57 | Machine Operatives, Not Specified |
| 694 | 20 | 10 | Misc. Operatives |
| 695 | 20 | 10 | Operatives, Not Specified |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|---|-----------------|-----------------------|--|
| <u>Group 7. Operatives - Transportation</u> | | | |
| 701 | 24 | 50 | Boatmen & Canalmen |
| 703 | 24 | 65 | Bus Drivers |
| 704 | 30 | 61 | Conductors & Motormen, Urban Rail Transit |
| 705 | 32 | 59 | Deliverymen & Routemen |
| 706 | 21 | 61 | Fork Lift & Tow Motor Operatives |
| 710 | 03 | 28 | Motormen/Mine, Factory, Logging Camp, etc. |
| 711 | 19 | 44 | Parking Attendants |
| 712 | 23 | 56 | Railroad Brakemen |
| 713 | 23 | 56 | Railroad Switchmen |
| 714 | 10 | 37 | Taxicab Drivers & Chauffeurs |
| 715 | 15 | 40 | Truck Drivers |
| <u>Group 8. Laborers, Not Farm</u> | | | |
| 740 | 06 | 10 | Animal Caretakers, exc. Farm |
| 750 | 07 | 16 | Carpenters Helpers |
| 751 | 07 | 16 | Construc. Laborers, exc. Carpenters Help |
| 752 | 10 | 11 | Fishermen & Oystermen |
| 753 | 08 | 28 | Freight & Material Handlers |
| 754 | 08 | 24 | Garbage Collectors |
| 755 | 11 | 19 | Gardeners & Groundskeepers, exc. Farm |
| 760 | 11 | 25 | Longshoremen & Stevedores |
| 761 | 04 | 04 | Lumbermen, Raftsmen & Woodchoppers |
| 762 | 08 | 28 | Stock Handlers |
| 763 | 08 | 13 | Teamsters |
| 764 | 08 | 24 | Vehicle Washers & Equipment Cleaners |
| 770 | 08 | 28 | Warehousemen, nec |
| 780 | 07 | 06 | Laborers - Misc. |
| 785 | 07 | 06 | Laborers - Not Specified |
| <u>Group 9. Farmers and Farm Managers</u> | | | |
| 801 | 14 | 10 | Farmers - Owners & Tenants |
| 802 | 36 | 10 | Farm Managers |
| <u>Group 10. Farm Laborers and Foremen</u> | | | |
| 821 | 20 | 10 | Farm Foremen |
| 822 | 06 | 10 | Farm Laborers, Wage Workers |
| 823 | 17 | 10 | Farm Laborers, Unpaid Family Workers |
| 824 | 22 | 10 | Farm Service Laborers, Self-Employed |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|--|-----------------|-----------------------|---|
| <u>Group 11. Service Workers, except Private Household</u> | | | |
| 901 | 11 | 18 | Chambermaids & Maids, exc. Private Hsehld. |
| 902 | 10 | 15 | Cleaners & Charwomen |
| 903 | 09 | 18 | Janitors & Sextons |
| 910 | 19 | 46 | Bartenders |
| 911 | 16 | 19 | Busboys |
| 912 | 15 | 31 | Cooks, exc. Private Household |
| 913 | 11 | 18 | Dishwashers |
| 914 | 16 | 39 | Food Counter & Fountain Workers |
| 915 | 16 | 39 | Waiters |
| 916 | 16 | 39 | Food Serv. Workers, nec, exc. Priv. Hsehld. |
| 921 | 26 | 46 | Dental Assistants |
| 922 | 13 | 38 | Health Aides, exc. Nursing |
| 923 | 26 | 46 | Health Trainees |
| 924 | 37 | 51 | Lay Midwives |
| 924 | 13 | 38 | Nursing Aides, Orderlies & Attendants |
| 926 | 22 | 32 | Practical Nurses |
| 931 | 31 | 61 | Airline Stewardesses |
| 932 | 19 | 26 | Attendants, Recreation & Amusement |
| 933 | 26 | 46 | Attendants, Personal Service, nec |
| 934 | 04 | 16 | Baggage Porters & Bellhops |
| 935 | 17 | 37 | Barbers |
| 940 | 31 | 61 | Boarding & Lodging Housekeepers |
| 941 | 08 | 02 | Bootblacks |
| 942 | 26 | 46 | Child Care Workers, exc. Private Household |
| 943 | 10 | 28 | Elevator Operators |
| 944 | 17 | 37 | Hairdressers & Cosmetologists |
| 945 | 26 | 46 | Personal Service Apprentices |
| 950 | 31 | 61 | Housekeepers, exc. Private Household |
| 952 | 26 | 46 | School Monitors |
| 953 | 25 | 34 | Ushers, Recreation & Amusement |
| 954 | 11 | 18 | Welfare Service Aides |
| 960 | 11 | 18 | Crossing Guards and Bridge Tenders |
| 961 | 37 | 73 | Firemen, Fire Protection |
| 962 | 18 | 38 | Guards & Watchmen |
| 963 | 21 | 44 | Marshals & Constables |
| 964 | 40 | 74 | Policemen & Detective |
| 965 | 34 | 66 | Sheriffs & Bailiffs |

| 1970 Census Code | Duncan's SES | 1963 Census SES | Occupation |
|--|-----------------|-----------------------|---------------------------------------|
| <u>Group 12. Service Workers - Private Household</u> | | | |
| 980 | 07 | 07 | Child Care Workers, Private Household |
| 981 | 21 | 32 | Cooks, Private Household |
| 982 | 21 | 32 | Housekeepers, Private Household |
| 983 | 12 | 09 | Laundresses, Private Household |
| 984 | 11 | 18 | Maids & Servants, Private Household |

APPENDIX C

Summary Table of the Female Sample (N = 149) With
 Criterion Variable X_8 - Students' Choice Satisfaction
 as a Dependent Variable

| Variable number | β Weights | Multiple R | R^2 | β Elasticity | Overall F | Significance |
|--------------------|--------------------|---------------|-------|-----------------------|--------------|--------------|
| X_{2a} | .090 | .237 | .067 | .150 | 2.95 | .022 |
| X_{2b} | .098 | .286 | .082 | .130 | 2.95 | .023 |
| X_{2c} | .373 | .347 | .121 | .803 | 2.95 | .023 |
| X_{2d} | .073 | .237 | .056 | .006 | 2.95 | .022 |
| X_3 | -.003 | .220 | .037 | -.340 | 2.72 | .052 |
| X_{4a} | -.076 | .207 | .040 | -.110 | 1.97 | .029 |
| X_{4b} | -.093 | .212 | .041 | -.202 | 3.79 | .058 |
| X_{4c} | -0.89 | .217 | .022 | -.151 | 3.79 | .058 |
| X_{4d} | -.061 | .205 | .010 | -.102 | 3.79 | .058 |
| X_5 | -.150 | .191 | .032 | -.340 | 2.18 | .102 |
| X_6 | .006 | .181 | .039 | -.150 | 2.59 | .079 |
| X_7 | .172 | .185 | .129 | .227 | 4.85 | .029 |

Summary Table of the Male Sample (N = 268) With
 Criterion Variable X_8 - Students' Choice Satisfaction
 as a Dependent Variable

| Variable number | β Weights | Multiple R | R^2 | β Elasticity | Overall F | Significance |
|--------------------|--------------------|---------------|-------|-----------------------|--------------|--------------|
| X_{2a} | .131 | .320 | .108 | .190 | 2.98 | .000 |
| X_{2b} | .208 | .346 | .129 | .270 | 2.98 | .001 |
| X_{2c} | .218 | .337 | .109 | .401 | 2.98 | .001 |
| X_{2d} | .162 | .331 | .110 | .156 | 2.98 | .001 |
| X_3 | -.007 | .320 | .105 | -.090 | 3.85 | .001 |
| X_{4a} | -.170 | .290 | .081 | -.220 | 3.72 | .002 |
| X_{4b} | -.287 | .300 | .089 | -.560 | 3.72 | .001 |
| X_{4c} | -.107 | .290 | .080 | -.161 | 3.71 | .001 |
| X_{4d} | -.082 | .291 | .082 | -.121 | 3.71 | .001 |
| X_5 | -.107 | .207 | .040 | -.220 | 3.99 | .008 |
| X_6 | .221 | .202 | .240 | -.607 | 5.70 | .004 |
| X_7 | -.007 | .107 | .010 | .009 | 3.15 | .077 |

Summary Table of the Total Sample (N = 417) With
 Criterion Variable X_8 - Students' Choice Satisfaction
 as a Dependent Variable

| Variable number | β Weights | Multiple R | R^2 | β Elasticity | Overall F | Significance |
|--------------------|--------------------|---------------|-------|-----------------------|--------------|--------------|
| X_1 | -.197 | .215 | .130 | .099 | 3.08 | .000 |
| X_{2a} | .131 | .324 | .108 | .190 | 2.90 | .001 |
| X_{2b} | .208 | .331 | .109 | .191 | 2.90 | .001 |
| X_{2c} | .218 | .349 | .129 | .270 | 2.90 | .001 |
| X_{2d} | .162 | .329 | .110 | .169 | 2.90 | .001 |
| X_3 | .107 | .320 | .105 | -.090 | 3.85 | .000 |
| X_{4a} | -.171 | .290 | .061 | -.220 | 3.71 | .001 |
| X_{4b} | -.287 | .298 | .080 | -.561 | 3.71 | .001 |
| X_{4c} | -.107 | .293 | .080 | -.120 | 3.71 | .001 |
| X_{4d} | -.081 | .292 | .091 | -.162 | 3.71 | .001 |
| X_5 | -.107 | .207 | .042 | -.220 | 3.99 | .008 |
| X_6 | .190 | .201 | .201 | -.197 | 5.70 | .004 |
| X_7 | -.091 | .107 | .012 | -.009 | 3.15 | .007 |