Review of the literature in counseling, sociology, psychology, and organizational behavior failed to yield a model satisfactory for a comprehensive research framework investigating why people choose different occupations. Rational and irrational occupational decision making models were unsatisfactory in capturing the many dimensions of the decision making/occupational choice process. A model developed by Blau, Gustad, Jessor, Parnes, and Wilcock rests on the thesis that occupational choice involves the interaction of the individual's valuation of the rewards offered by different occupational choices and his assessment of his chances of being able to realize each of the choices. Eight factors were identified as major intermediate determinants of occupational choice and were tested in three populations through an interview schedule and questionnaire. The pragmatic utility of the Blau model was also investigated through curricular materials for an 11th grade mini-course. Positive comments from participant-users suggested further revision of the materials to achieve a conceptually and pragmatically useful curriculum for improving the process of occupational decision making. (A 30-item bibliography is included.) (AG)
DEVELOPING A MODEL OF OCCUPATIONAL CHOICE

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Why do people enter different occupations? Is the choice influenced by information held concerning the occupation? Is the choice influenced by knowledge of one's abilities, characteristics and values? Or, is choice affected by a combination of occupational and individual factors? Mounting an attack on these questions quickly revealed that the literature of counseling, sociology, psychology and organizational behavior is staggering in amount and in scope of attention to decision making models and occupational choice. However, review of this literature failed to yield a model satisfactory for a comprehensive research framework to respond to the basic question: Why do people choose different occupations?

Analysis of the literature indicated that one body could be grouped in a category of rational occupational decision making models. This category of models is exemplified by the work of Ginzberg (1951), Super (1957), Roe (1957), Tiedeman (1966), Crites (1969) and Holland (1973). The rational models view occupational choice as developmental and planful; choice is typically a compromise between what a person wants and the opportunities available. Therefore, decision making is objective, conscious and reasoned.
Rational models view decision making as a process of identifying a problem, assessing alternative solutions and then making a choice based on knowledge. A major weakness of the rational models centers around their assumptions of equal accessibility to knowing, to formulating alternative choices and to equal forces operating on choice selection -- as well as, the freedom to select among the alternatives available.

Further analysis of the literature indicated irrational factors enter the decision making process. Another group of decision making models was identified as irrational; that is, occupational choice and the decision making process are viewed as more unreasoned and spontaneous. This model provides for "accidental" choices and/or choices based on imagined life styles of occupations. The work of Kahl (1953), Caplow (1954), Beardslee and O'Dowd (1962), and Katz and Martin (1962) fit within this classification.

Although these basic rational and irrational models of occupational choice have received some measure of empirical support, the varied support indicates that as yet no single approach has managed to capture the many dimensions of the decision making/occupational choice process. There is, therefore, a need for a model of occupational choice that is sufficiently broad based to account for those factors which are present in varying degrees in the many and often diverse theories and models.

The framework developed by Blau, Gustad, Jessor, Parnes and Wilcock (1956) presents an alternative to answering the question, Why do people choose different occupations? The underlying thesis of the Blau model is that occupational choice involves the interaction of two kinds of factors: the individual's valuation of the rewards offered by different
occupational choices (preference hierarchy) and his assessment of his chances of being able to realize each of the choices (expectancy hierarchy). The model contains an occupational set of factors and a set related to the individual. Both sets of factors are ordered in a hierarchy and the occupational choice that an individual makes will compromise between or reflect these factors. (See Figure 1 for Blau Schema.) The occupational choice does not necessarily involve a "conscious deliberation and weighing of factors" (Blau, 1956). Rather, individual variations in knowledge, in rationality, and in discrimination are the limiting conditions within which that person's occupational choice is made. The Blau framework, therefore, takes into account those parameters of "real" and "imagined" which delineate rational and irrational models of occupational decision making.

Blau identified eight factors as major intermediate determinants of occupational choice. Four of the factors are associated with the occupation: 1) Formal opportunities -- the demand for new members in an occupation; 2) Functional requirements -- the necessary technical qualifications for best performance in that occupation; 3) Nonfunctional requirements -- selection criteria for the occupation that are not related to occupational performance (e.g., veteran status, age); 4) Rewards -- those occupational conditions that are desirable (e.g., salary, opportunities for advancement). The remaining factors are associated with the individual: 5) Information -- the general knowledge held by an individual about an occupation; 6) Technical qualifications -- refers to specialized skills an individual perceives he possesses to perform the occupational duties; 7) Social Role Characteristics -- refers to the individual's particular characteristics that may
FIGURE 1. Schema of the Process of Occupational Choice and Selection

Occupational Entry

Preference Hierarchy

Expectancy Hierarchy

Perceiving Individual

1. IMMEDIATE DETERMINANTS
   Occupational Information
   Technical Qualifications
   Social Pole Characteristics
   Reward Value Hierarchy

2. SOCIO-PHYSICAL ATTITUDES
   General Level of Knowledge
   Abilities and Educational Level
   Social Position and Relations
   Orientation to Occupational Life
   (Its Importance, Identification with Models, Aspirations, etc.)

3. PERSONALITY DEVELOPMENT
   Educational Development
   Process of Socialization
   Effects of Available Financial Resources
   Differential Family Influences

BIOLOGICAL CONDITIONS
   Native Endowment

SOCIAL STRUCTURE
   Social Stratification System
   Cultural Values and Norms
   Demographic Characteristics
   Type of Economy
   Technology

PHYSICAL CONDITIONS
   Resources
   Topography
   Climate

Socioeconomic Organization
   Occupational Distribution and Rate of Labor Turnover
   Division of Labor
   Policies of Relevant Organizations (Government, Firms, Unions, etc.)
   Stage of the Business Cycle

III. HISTORICAL CHANGE
   Trends in Social Mobility
   Shifts in Industrial Composition
   Historical Development of Social Organizations
   Changes in Level and Structure of Consumer Demand

influence a hiring decision (e.g., race, ethnicity, sex); and 8) Reward Value Hierarchy -- that is, the relative significance that different occupational rewards have for an individual.

The occupational decision making model of eight intermediate factors was tested in three populations: liberal arts college seniors (Rubin, 1973), tenth grade students (Russell, 1973), and eighth grade students (Jurica, 1973). An interview schedule and questionnaire were developed using Likert scaling techniques. The SPSS computer program was used for data analysis. Univariate analysis of population characteristics and bivariate analyses using procedures for item-to-item analyses to construct composite scales which operationalized concepts and, analyses of scale-to-scale relations to test relations between the independent scales and the dependent concept were carried out. Multivariate analysis used a step-wise multiple regression. Findings were statistically supported to indicate the utility of the Blau framework in making curricular choices affecting career choice and in making specific career decisions.

For example, tenth grade students who had made a choice to attend an occupational school program or an academic school program in the eleventh grade had index agreement scores on six of the eight variables that indicated these factors were used in making their program decision (Russell, 1973). The college students used all factors at a statistically significant level except formal opportunities and non-functional requirements. These two factors may not have achieved significance because of their perceived lack of relevance to the college population and the target occupational choice (Rubin, 1973). Jurica's findings supported the individual set of factors used by eighth grade students in making their ninth grade program choice.
Occupation (curriculum) related factors were assessed through interviews with guidance counselors. The number of guidance counselors was too few to merit statistical analysis but summary interviews indicated strength in the four factors as shown by guidance counselor use in assisting the student with his program choice (Jurica, 1973).

Conceptual utility of the Blau model of occupational choice was shown through the research of Rubin (1973), Jurica (1973), and Russell (1973). However, additional support for the relationship between the two sets of intermediate determinants, occupational and individual, was sought to strengthen the model's conceptual utility.

Johnston and Egner (1973) tested the relationship between career awareness (occupational determinants) and self awareness (individual determinants) with a population of sixth grade students from classes having a career education program. In addition, the research explored the effects of instruction in career education as an intervening variable between self awareness and career awareness.

Johnston (1974) has reviewed the literature of self concept and career awareness in four categories: 1) development of the self including the relationship between self, ideal self and significant others; 2) career knowledge and aspiration; 3) relationship of self awareness and career aspiration, and 4) educational implications. Johnston underscores the importance of recognizing the relationship between an individual's self image and his/her eventual choice of a career or occupation.

Data were collected prior to and after instruction in career education. Career Awareness data were collected using the Fadale (1973) instrument.
Bledsoe's (1962) self awareness scale was used to measure the real self and ideal self for a composite self awareness score. Additional data were collected for the sixth grade student population to determine the influence of intelligence, socioeconomic status, sex, and number of siblings on self and career awareness.

The SPSS computer program produced summary statistics for each variable; and, reliability coefficients, item-total correlation matrices and multiple regression analyses were completed.

The relationship between career awareness and self awareness was not statistically significant at the .05 level but results were in the direction of significance. Data indicated, however, that the ideal self score was significantly increased (.001 level) from the pre to the posttest period.

Inspection of career education curricular materials and instructional processes indicated that program emphasis was placed on occupational information (career awareness) and little, if any, attention was directed to values clarification and understanding of self. The desired level of significance may not have been reached because of the career education program emphasis and because of the role of maturation in the development of self concept. Rogers (1951), Havighurst (1946), Katz and Zigler (1967) and Piaget (1971) point to the developmental aspects of self concept and the resultant changes occurring through age and experiences. Since the pretest-posttest time frame was four months, it seems reasonable to interpret lack of significance of relationship between career and self awareness as, at least, partially due to the time frame. It is a question and a problem area that the researchers will continue to pursue. Findings concerning other variables in the research effort are reported by Johnston (1974).
Efforts to explore the conceptual utility of the Blau schema for occupational choice indicated that the eight major intermediate determinants were operant in decision making, that the relationship between the two sets of factors, individual (self) and occupational (career) was supported by prior research and was in the direction of significance within the short time frame used in supplementary research.

The last phase of "Developing a Model of Occupational Choice" sought to investigate the pragmatic utility of the Blau model. To accomplish this it was decided to develop curricular materials based on the Blau intermediate determinants. These curricular materials were placed in a synthesized decision making framework to form a mini course of career decision making (Jackson and Egner, 1974). The mini course was targeted for eleventh grade academic program students.

Jackson has reviewed decision making models that show applicability to adolescent career choice and synthesized these models to form a new model of career decision making (Jackson, 1974). Common components of decision making models were identified from the reviews of Alexis and Wilson (1967), Dinklage (1966) and Borgen and Davis (1971). In addition, the models of Gelatt (1962), Brunstetter (1970) and Stufflebeam (1971) provided focus for the concepts of options, values, probability and decision recycling.

Figure 2 shows the J-E Career Decision Making Model designed from a review and synthesis of existing models found in the literature and research findings. Emphasis in the J-E Model is on the individual decision maker; his options, his values and information he knows about occupations. Probability, action and flexible choice follow in the decision making process.
Figure 2: J-E Career Decision Making Model

OPTIONS

YOU the Decision Maker

INFORMATION
Occupational Information
Educational Requirements
Job Performance Requirements
Rewards
Occupational Information Summary

VALUES
Knowing Myself
My Skills and Abilities
Rewards I Value
Values Summary Sheet

What is Probable?
Weighing Consequences and Outcomes

OUTCOME

ASSESS

ALTERED ACTION and CHOICE

MORE DEFINITE

INVESTIGATORY

Recycle for Further Investigation

MORE DEFINITE

INVESTIGATORY
Within the J-E decision making model, the eight Blau intermediate determinants were inserted. Adaptation of the eight determinants and revision of terminology was necessary for manageability and user understanding. The Blau factors (originals noted in bracket), values frame and information frame in the J-E model fit as follows:

Values of Self:

1. **Knowing Yourself.** (social role characteristics) understanding who I am, my interests and other characteristics that are determinants of choice.

2. **My Skills and Abilities.** (technical qualifications) skills and academic strengths a student possesses.

3. **Rewards I Value.** (reward value hierarchy) the relative significance of different occupational rewards or satisfactions the student wants.

Information About Occupations:

4. **Occupational Information.** (occupational information) general knowledge a student has about an occupation.

5. **Educational Requirements.** (formal opportunities) the student's understanding of necessary education and experience and demand for new members in the occupation.

6. **Job Performance Requirements.** (functional requirements) necessary technical qualifications (skills and abilities) for satisfactory job performance in the occupation.

7. **Rewards.** (rewards) satisfactions that are inherent in a particular occupation.
Curricular materials in the form of a career decision making learning packet were developed. The packet is divided into three units: A Values Packet, an Occupational Information Packet, and a Decision Point Packet. Fifteen learning capsules comprise the complete packet.

The values frame in the decision making model, with the redefined Blau factors became the structure for the values packet in the mini course. Each factor, for example, My Skills and Abilities, is designated as a learning capsule. Each capsule comprises individual and group activities to help the student know himself better; to know his interests and characteristics and skills and abilities as they relate to occupations. Figure 3 shows the mini course framework.

The second unit of the mini course explores preferred occupations to discover the education and job performance requirements and the rewards or satisfactions available in the occupation.

There are five decision points within the Decision Point Unit of the packet. The linking of values and information is brought about in this section. Various occupational alternatives and information are weighed and assessed and probable consequences and outcomes are predicted. Answering the questions, "Do I have the skills and abilities to meet the requirements of the occupation?, Are the rewards in the occupation of value to me?, Do my other characteristics meet the requirements of the occupation?" complete the linking of values and information.

If, at any of the decision points, there is disagreement about the information the student has about himself and the occupation, he may recycle and explore another occupation or he may look at himself and his values
CAREER DECISION MAKING
Mini Course Framework

1

Knowing Myself
- Who Am I? -Capsule 1
- My Interests -Capsule 2
- My Other Characteristics -Capsule 3

My Skills and Abilities -Capsule 4

Rewards I Value
- Rewards I Want From My Occupation -Capsule 5

Values Summary Sheet -Capsule 6

Information about Occupations
CAREER DECISION MAKING
Mini Course Framework

2

Decision Point I - Capsule 11
Do I have the Skills and Abilities to meet the Requirements of the Occupation?

If Yes — proceed
Check with counselor

If Undecided

If No

Information about Occupations

Occupational Information
Exploring Occupations - Capsule 7

Educational Requirements
Necessary Education and Experience - Capsule 8

Job Performance Requirements
Qualifications for Job Performance - Capsule 9

Rewards
Rewards Inherent in the Occupation - Capsule 10

Occupational Information Summary - Capsule 7, 8, 9, 10
CAREER DECISION MAKING
Mini Course Framework

Point I - Capsule 11

If Yes — proceed
Check with counselor

If Yes — proceed
Are REWARDS in the Occupation of Value to Me?

If Yes
Do My Other Characteristics Meet the Requirements of the Occupation?

If Yes
If No or Indifferent

If No — Recycle for 2nd Choice and/or Related Occupation

If Undecided — See Counselor

If No — Recycle
Look Again at Self-Information

If Undecided — Counselor

Decision Point II - Capsule 12

Decision Point III - Capsule 13
CAREER DECISION MAKING
Mini Course Framework

Decision Point II - Capsule 12
If Yes and Satisfied

Decision Point III - Capsule 13
Do My Other Characteristics Meet the Requirements of the Occupation?
If Yes
If No or Indifferent

Decision Point IV - Capsule 14
Weighing Consequences and Outcomes
What is Probable?

Decision Point V - Capsule 15
Altered Action and Choice
Necessitate Investigation?
Where Do I Go From Here?

If Undecided - Counselor
If No
Recycle
Look Again at Self - Information

Satisfied with Outcome
Present or Future Recycling and Investigation

If Yes

If No or Indifferent
again. This recycling is pictured graphically by following the arrows on Figure 3. At the fifth decision point, Capsule 15, the student asks himself, "Where do I go from here?" When the information he has at this final decision point is in agreement, his choice may lead to his desired outcome.

The Career Decision Making Mini Course had trial use in two eleventh grade classes in a city school district and a rural central school district. Information was collected prior to, during and at the end of the mini course to assess its trial use. Crites' Attitude Scale of the Career Maturity Inventory (Crites, 1973) and Career Decision Making Get Acquainted and Summary Questionnaires plus a counselor-leader-parent evaluation form (Jackson, 1974) were administered.

Utility of the Career Decision Making Mini Course was noted by the increase in the posttest mean score on the Career Maturity Inventory for both groups of eleventh grade students and an increase in the weighted scores on the posttest Career Decision Making Questionnaire. Participant-user evaluation comments were positive and recommended offering the mini course to a larger population in following school terms. Leaders stressed the need for their training in skills to carry out values clarification activities and to increase sensitivity to individual student needs.

The Mini Course is being revised to incorporate information gained from the trial run. Additional trial and evaluation of the materials will be carried out. The Cornell Institute for Occupational Education will coordinate dissemination and use of the final product.
The J-E occupational decision making framework and curricular materials, places emphasis upon improving the processes of occupational decision making rather than upon making an early specific occupational choice. Improvement of decision making skills is a necessary prior activity to occupational entry choice.

"In choosing an occupation one is in effect choosing a means of implementing a self-concept." (Super, 1957) Research has indicated that "provision of vocational information for an individual has little relevance to the emergence of his career pattern" (Sprinthall and Tiedeman, 1966). Yet career development and choice usually consist of dispersement of college catalogues, visits with college representatives, talks with a counselor, state employment counseling, testing and job interviewing and occasional use of interest inventories. Often students have made an early curricular choice which has little or no bearing on their eventual occupation. Their early choice based on little information and incomplete decision processes may have narrowed considerably their occupational options. While information is part of content, how to make decisions should be concerned with processes and strategies. A curriculum that will offer a framework of options, personal value clarifications and an information system is imperative.

The team programmatic research effort (Rubin, Jurica, Russell, Johnston, Jackson and Egner) has developed the J-E model of occupational choice that has conceptual and pragmatic utility. The research effort presents a further step toward a comprehensive framework to respond to the basic question: Why do people choose different occupations?
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