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THE UNIVERSITY OF ALBERTA

THE RELATIONSHIP OF CAREER DECISION MAKING ABILITY TO PERSONALITY, SOCIO-ECONOMIC STATUS AND VOCATIONAL MATURITY

BY

HARGULSHAN SINGH MALIK

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

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FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Relationship of Career Decision Making Ability to Personality, Socio-Economic Status and Vocational Maturity" submitted by Hargulshan Singh Malik in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

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ABSTRACT

The purpose of this study was to examine the relationship of anxiety, exvia (extraversion), maturity of vocational attitudes, and socio-economic status to the career decision making ability of grade nine students.

It was hypothesized that career decision making ability is negatively related to personality characteristics of anxiety and extraversion, and positively related to maturity of vocational attitudes and socio-economic status. In addition, it was hypothesized that there is no difference between sexes on career decision making ability.

The Life Career Game by Boocock was used to study the career decision making behavior of the participants. It provided a career decision making score which was used as an index of the individual's decision making ability for career planning. The scores for anxiety and extraversion were derived from the individual's scores on the Junior-Senior High School Personality Questionnaire by Cattell. Crites' Vocational Development Inventory - Attitude Scale was used to obtain the maturity of vocational attitudes score. The socio-economic status was determined by using Blishen's scale, using father's occupation as the criterion.

Career decision making ability scores of 144 grade nine students of a suburban community were correlated with anxiety, exvia, maturity of vocational attitudes and socio-economic status scores. The findings supported the hypothesis of no difference between career decision making ability scores for males and females. The hypotheses of a positive relationship of career

decision making ability scores to socio-economic status and maturity of vocational attitudes socres were not supported. The findings of the study also failed to confirm the hypothesized negative relationship of career decision making ability socres to anxiety and exvia (extraversion) scores.

The observations of the teachers and the counsellors involved in the study and the comments of the participants suggested that the experience of playing the Life Career Game provided an opportunity to increase awareness of educational and vocational opportunities available. It also gave some idea of the importance of various human, environmental, and chance factors in career decision making.

Some suggestions for making the game more interesting and appropriate for grade nine students were offered. It was also recommended that more measures tapping varied aspects of career decision process should be employed in the evaluation of this ability in future research studies.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

Career decision making is a complex phenomenon. It is not the result of a single act of decision at a single moment in the individual's life span but it is the cumulative result of the decisions made throughout the period of development. The nature and scope of the problems faced by the individual in the past, and the use of various strategies to find their solutions, shape his future decision making pattern. This pattern of handling problems differs from individual to individual for the same problem, and from problem to problem for the same individual. These individual differences in decision making are considered to be the result of early life experiences, variations in child rearing, differing methods of schooling, and the presence or absence of appropriate models in the environment (Brim, Glass, Lavin, & Goodman, 1962, p.2).

Human variability is the result of hereditary and environmental influences and is instrumental for the emergence of a multi-faceted decision making process. This process can be taught (Evans, 1969; Yabroff, 1964) and this task will be accomplished with greater success if the potential of individualized instructional techniques - methods of instruction geared to fit the diverse requirements of the different individuals - is recognized. The concept of individualized instruction has not been amply exploited in the recent efforts in teaching vocational decision making whether through regular classroom instruction based on the scientific method of problem solving (Evans, 1969; Yabroff, 1964;

Zingle, Safran, & Hohol, 1968) or through Life Career Games (Boocock, 1967; Varenhorst, 1968). The outcome of such teaching and training is encouraging and could be increased significantly if a better understanding of the relationship of career decision making ability to personality characteristics, vocational maturity, and socio-economic status of the individuals was gained. The importance of individual differences in the field of instruction and learning has been emphasized by Tylor and Brownell (1962) in these words:

> Human variability is real, inevitable, ineradicable, desirable, and indeed essential. Nothing less than uniform acceptance of these facts and full recognition of their implications for education and for society will suffice even as a start toward the individualization of instruction. Human diversity is a key to social progress and a challenge to better education. As far as schools and instruction are concerned, we have a long way to go in making the most of the opportunities afforded in individual differences ... (p. 326).

THE PROBLEM

Statement of the Problem

The major purpose of this study was to examine the relationship of career decision making ability to personality characteristics, socio-economic status, and maturity of vocational attitudes of grade nine students.

Career development theory is in its infancy and for its successful growth to maturity, Borow (1964) proposes that vocational psychologists should devise sub-theories to deal with the "process of behavior" or "agents of behavior". The present study is an effort to investigate problems which are related to this "process of behavior", focusing on the interaction of socio-economic status and personality in shaping the career decision making strategy of the individual. The relationship between the total personality organization and the career decision making behavior of an individual has

been investigated by many researchers (Bordin, Nachmann,& Segal, 1963; Holland, 1966b; Roe, 1957). Their studies have emphasized the mapping of occupations in terms of personality characteristics. The importance of personality factors such as anxiety, extraversion, introversion, and independence, in shaping the future career patterns of the individuals have not been taken into consideration by many of these researchers. This investigation is designed to examine the role of some of these personality traits in influencing the career decision making behaviour of the individual. It also endeavours to study some qualitative aspects of such decisions. The quality of various decisions is dependent on consideration of relevant factors during the process of decision making. Awareness of the relationship of abilities, interests and values to career decisions affects the quality of decisions made by an individual. The attitude of the individual towards decision making is another factor which affects the realism of future career decisions. The measure of these factors is provided by the measure of vocational maturity. Hence it seems logical to study the effect of vocational maturity on the career decision making process of the individual. Furthermore, the relationship between the socio-economic status of the individual and his ability to do future career planning is looked into by the investigator. The relationship between the sex of the individual and career decision making ability is also examined.

Sub-problems Investigated by the Study

In order to investigate the major problems outlined for the study, a number of sub-problems were examined. These sub-problems are presented

below:

1. In what way is career decision making ability of individuals related to their anxiety level?
11. Is the socio-economic level of individuals related to their career decision making ability?
111. What is the relationship between maturity of vocational attitudes of individuals and their career decision making ability?
IV. How is career decision making ability of individuals related to their exvia-invia (extraversion-introversion) level?
V. What is the relationship between the sex of individuals and their career decision making ability?

SIGNIFICANCE OF THE STUDY

The importance of decision making in the life of the individual has been recognized for a long time but not enough effort has been expended in helping the individual to learn this process efficiently and economically. He learns the process by trial and error, sometimes relying on his previous experiences and intuitions while at other times he learns through observation of the problem solving behavior of "significant others" around him. This haphazard method of learning such an important skill many times proves costly.

Efforts to train individuals in the skill of decision making should start early in life through family, school, and community, and should not be left for a particular period of development or a particular agency. The aim should be to equip the individual with the necessary skills to handle his future decisions in the realms of education, occupation, family and leisure, with more realism and satisfaction. The accomplishment of this objective depends on the extent of knowledge about the individual's personal assets

and liabilities and his social, cultural, and physical or material environment. Such information helps the individual to have a better understanding of his career decision making behaviour. It also equips the teachers with the facts and figures needed for doing a better job of training such an individual for realistic decision making.

The quality of future career decisions of an individual depends in part on the extent of information regarding himself and his environment which the individual possesses, and on his skill in the systematic processing of such information. Such training in the skill of obtaining and processing information can prepare him to make more realistic decisions about his immediate, intermediate, and long-range plans. The realism of these plans is likely to be proportional to the amount of information held and the skill in processing that information.

The significance of making realistic decisions about present and future plans of action is well accepted and becomes paramount when the individual considers the fact that he is preparing himself to live in a future world about which very little specific information is available at the time of decision making. The modern technological developments are changing the present world at such a tremendous rate that it is clearly evident that the future world of work and living patterns will be quite changed. In the future some of the present opportunities in the occupational structure will become obsolete and this obsolescence will affect personal, social, educational, vocational and leisure-time activities, giving rise to a markedly different pattern of work and life. In view of such changes, it does not seem wise to prepare present day students in specific ways of living and working. Instead, they should be equipped with the skill of decision making to enable them to choose the most

appropriate ways of handling their future career plans.

The systematic teaching of the scientific method for solving problems and resolving conflicts, is often done in a dry, dreary and boring way. One of the purposes of such training is to instill confidence in the individual; however, this is often not achieved. Efficient learning of this skill depends on the degree of freedom allowed to make and implement choices. One way of providing such opportunities is through educational games which simulate decision making in real life. Abt (1968) puts it in these words:

> Educational games use the student's way of viewing things. They present concrete problems in a simplified but dramatic form that mediates between abstraction and confusion, between dry theory and multi-variable reality (p. 79).

The part played by simulation games in teaching strategic planning is currently being researched, and efforts are being made to establish the ways and means through which the gain through simulation learning can be maximized. The potential of the games is unlimited claims Abt (1968) who expresses his optimism in the following words:

> They (games) offer the greatest educational potential for student comprehension of structural relationships, the problems, motives, and methods of others, and for vicarious experiences of possibilities beyond the student's direct experience. Games of reality exploit the child's and adolescent's love of adult reality, achieving very high student motivation (p. 77).

Abt (1968) also states:

> The clearest advantage of education gaming is increased student motivation. Particularly when student motivation may be very low because of socio-cultural factors, and where students find much of their curriculum irrelevent to their own life experiences, education games can make previously uninteresting material fascinating (p. 81).

In the field of career decision making, the development of the

Life Career Game by Sarane S. Boocock (1968) is proving to be beneficial by making the learning of this process an interesting experience. The greatest usefulness of this game is expected to be with grade nine students who are confronted with the first major decisions of their future careers. These students are asked to indicate their educational decisions, which in turn requires them to consider their future activities with regards to occupation and family life. Knowledge of the process of career decision making coupled with training in that area, will, hopefully, assist students in making realistic decisions. Every student may not be benefited equally by such training due to the differential impact of the game. Inbar (1968, p. 170) attributes this to one or more of the following factors:

(1) variations in player's background characteristics;
(2) differences in the predisposition;
(3) differences in their experience and behavior while the game is going on;
(4) differences in the characteristics of the groups of which they are members.

The present study is an effort to examine the role of individual differences, personal as well as social, in the process of career decision making.

DEFINITION OF TERMS

The lack of consensus of psychologists on definitions of various terms used by them, makes it necessary for the researcher using these terms to define them operationally. In order to clarify the usage of such terms, an effort has been made to define the constructs used in this study as follows:

a. Career decision making. The operational definition of this term as used by Boocock (1968), the developer of Life Career Game, is accepted and used in this study. She views career decision making as a

developmental process of planning the future activities of an individual in the fields of education, job, family life, and leisure. During the process the individual is forced to examine his values and attitudes pertaining to various social, personal, and occupational issues. The use of the term "career decision making" in its newer context gives it a more inclusive meaning which makes its traditional explanation, emphasizing vocational decision making only, a part of this broader concept.

b. Career decision making ability score. This is a score which is taken as an index of the individual's career decision making ability and is directly proportional to the quality of strategy or plan used by him. For this study, the score for an individual will be obtained by adding the total scores received on the eight successive rounds of strategic planning in the Life Career Game (Boocock, 1968). The total score for a single round will be determined by the summing of the separate scores in the areas of education, job, family and free time activities. The better the strategy used by the player, the higher will be the career decision making ability score.

c. Anxiety. No specific definition of anxiety has been offered by Cattell; however, for the purposes of the present study anxiety has been measured by Cattell's Junior Senior High School Personality Questionnaire "The HSPQ". According to Cattell and Cattell (1969) the major variables contributing to anxiety are ego weakness, excitability, low super-ego strength, threat sensitivity, guilt proneness, low self-sentiment, and high ergic tension (p.41). Furthermore, Cattell and Cattell state that anxiety should not be confused with neuroticism, which they believe is actually a composite of many factors, including anxiety (1969, p. 38).

d. Exvia-Invia. The exvia-invia (extraversion-introversion) level of the students was measured by the HSPQ. Cattell and Cattell (1969) use exvia-invia as similar to the widely used term of extraversion-introversion, but their definition of this term emphasizes only the "general tendency to social interaction" aspect. According to them, exvia-invia refers to the degree of inhibition in social interaction with people, whereas, extraversion-introversion takes into consideration the tendency of general inhibitedness in regards to people as well as to the physical world. Consequently, the exvia-invia factor of personality measures a child's seeking versus avoidance tendency towards social interaction (Cattell & Cattell, 1969, p. 38).

e. Vocational maturity. Crites' (1961) definition of vocational maturity is used in this study. This definition takes into consideration the vocational behaviors and developmental tasks of an individual for determining his degree and rate of vocational development. According to Crites (1961):

> Degree of vocational development 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.... The rate of vocational development refers to the maturity of an individual's vocational behavior in comparison with that of his own age group (p. 259).

This explanation of vocational maturity provides the criteria for comparison of vocational development of an individual to the members of his life stage as well as to the members of his age group.

The presentation of the problem to be investigated and an examination of its significance has been attempted in this chapter. The operational definitions of the various terms used in the present study are also given in this chapter. In the next chapter a brief review of various

theoretical approaches dealing with career decision making behavior is presented.

CHAPTER II

THEORETICAL BACKGROUND

Several theoretical frames of reference dealing with the process of career decision making are examined in this chapter. These viewpoints are presented under the following headings:

I. Career Decision Making - A Developmental Process

II. Career Decision Making - A purposeful Action

III. Career Decision Making - Compatibility Between Personal Orientations and Occupational Environments

IV. Career Decision Making and Vocational Maturity

V. Career Decision Making and The Systems Approach

VI. Career Decision Making and The Sociological Approach

VII. Career Decision Making and Simulation Games

At the end a summary of these viewpoints is presented and a tentative sketch to explain the various aspects of the process of career decision making is discussed.

I. CAREER DECISION MAKING - A DEVELOPMENTAL PROCESS

Career decision making is not a single act of decision at a single moment in the individual's life span but it is the cumulative result of the decisions made throughout the period of preceding development. This shift of emphasis from a "point-in-time" approach to a "developmental" viewpoint has become more evident in the literature during the last twenty years (Ginzberg, Ginsberg, Axelrad, & Herma, 1951; Super, 1953; Tiedeman & O'Hara, 1963; Osipow, 1968), and has helped to bring forth some formulations which have applied the principles of general development to the

process of vocational development. This specific aspect of general development is interrelated and interdependent with other aspects of human development. The relevance of the principles of continuity, differentiation, and integration in this process has been explained by Beilin (1955). He claims that the process of career decision making is controlled by physical, physiological, social and psychological factors, and is sequential, continuous, and irreversible. Super and Overstreet (1960) emphasize this fact when they say:

> Vocational decisions are series of related behaviors rather than a limited number of discrete acts, and they are behaviors which change with time, generally in the direction of increasing complexity and greater specificity.... The development of vocational behavior does not take place independently of development in other areas .... Development is a continuous process with the ability to perform new behavioral acts largely dependent on capacities for behaviors which have already been developed (pp. 1-2).

As regards to the various steps of this process, there seems to be a consensus of opinion among the various writers and researchers in this area (Brim, Glass, Lavin, & Goodman, 1962; Clarke & Woodsworth, 1963; Evans, 1969; Gelatt, 1962; Krumboltz, 1966; Zingle, Safran, & Hohol, 1968; Yabroff, 1964). The following steps in the strategy of career decision making can be delineated on the basis of their writings:

(1) Identification of the decision situation.

(2) Collection of the necessary information.

(3) Consideration of possible alternatives.

(4) Evaluation of the various courses of action.

(5) Selection of a plan of action.

(6) Actual performance of the action.

(7) Evaluation of the consequences and revision of the strategy.

Considering the applicability of this scientific approach to decision making, Ivey and Morril (1968) suggest that the individual should not be pushed to make decisions about his future occupational plans. He should be allowed to "be himself" during the career process which is defined as "the continuing process through which a person engages in the sequence of developmental tasks necessary for personal growth in occupational life (p. 645)". Bernard (1966) defines developmental task as "specific learning which an individual needs in terms of the expectation and pressures of the society in which he lives (p. 25);" this definition catches the essence of this term used by Ivey and Morril. Wrenn (1962) reiterates this viewpoint by saying that the individual should be encouraged to be himself during the career choosing process and be allowed to decide the why, when, and how of his future by himself. The early career choices are considered too limiting for the individuals, especially the gifted ones. These persons should be helped to develop their talents on as broad a front as possible, thus preparing them for the inevitability of rapid change. The effort should be directed to develop enough flexibility so that they are able to meet these changes with confidence and security. Borow (1969) is also against the narrowing down of the field of choices in the earlier periods of development but is decidedly in favor of occupational and educational awareness which should be gained by the extension of the exploration stage. Increased awareness of the individual about educational and occupational opportunities available to him could make his evaluation of the possible career choices more meaningful and help him to reach reasonably realistic and purposeful decisions.

II. CAREER DECISION MAKING - A PURPOSEFUL ACTION

Career decision making is considered a purposeful action by Tiedeman and Field (1968). According to them, an action is purposeful when it is "consciously selected ... on the basis of both outside and inside information, each in adequate amounts and hence reasonably balanced in effects upon the individual's evaluation of alternative actions and probable outcomes (p. 421)." The two important factors which help the individual to make career decisions with reasonable chances of success are "inside" and "outside" information about himself. Inside information, a significant factor in increasing the effectiveness of the person's future decisions, consists of the "complex set of criteria" developed in him throughout the period of growth and could be called personality. The origin of these criteria lies in the parents, past and present experiences of the individual, and many other factors which may be referred to as random. Outside information includes most of the relevent facts about physical and social environment surrounding the individual. His awareness of the physical world around him and of other persons' perceptions of his experiences in it affects his decisions about future plans of action.

In the opinion of Tiedeman and Field (1968) the function of guidance, "a unique professional practice designed to alter behavior (p. 419)," is to help the individual to acquire outside as well as inside information and to put it to use by making more purposive career choices. The objective of their program of guidance-in-education is to "develop the capacity to engage in purposeful action in response to all the numerous opportunities which he will encounter from day to day as he assumes responsibility for the management of his life (p. 448)."

The purposeful action has been defined as the process of comparing the

present state with the future state, and to reduce the difference between the two by choice, development, modification, and performance of a series of actions (Tiedeman & Field, 1968, p. 409). This further depends on the consideration of prediction and measurement as sources of information. Prediction provides the individual with information on the basis of which he can make his future decisions. Measurement supplies an assessment of the individual's ability to assimilate the information for a "socially acceptable" initiative to act. The assessment of initiative should be discussed by the individual involved in deciding and by other persons interested in him. In this way, prediction and measurement are believed to help the cultivation of a purposeful action which is considered to be an important factor in career development process.

Career development, according to Tiedeman and O'Hara (1963), is "the process of fashioning a vocational identity through differentiation and integration of personality as one confronts the problem of work in living (p. v)." Identity or self-concept is seen as an individual's evaluation of himself through an investigation of his aptitudes, interests, social class, and values. Differentiation is defined as "a matter of distinguishing by a specific difference; of separating an aspect from its larger considerations; distinguishing a part from whole (p. 36)." Integration is considered a corollary of differentiation, and is viewed as an important process. The proper integration or synthesis of relevant differentiated parts of a situation is conceived as basic to the process of career development. The process of differentiation begins when an individual experiences a problem, that is, he becomes aware of the fact that the condition of his present situation is unsatisfactory or is likely to become unsatisfactory in the future. This experience necessitates making a decision. The process of differentiation and integration are believed to be

helpful in making such a decision. These processes do not occur only for this problem but are repeated often in the course of an individual's life enabling him to attain a rational solution of his problems.

The concept of purposeful action (Tiedeman & Field, 1968) and the concept of differentiation and integration (Tiedeman & O'Hara, 1963) are considered to be at the centre of the dynamic process of personality development by Tiedeman and Field (1968). They see a precise relationship between career decision making and personality. They are of the opinion that:

> ... personality differences can be discussed in terms of the particular pattern of alternative future situations which various individuals have predicted and chosen to pursue above all else. Of course there are myriad alternatives that could have been given priority (p. 434).

They further equate personality and the concept of an everchanging and consistent priority system. They state:

> Personality (priority) affects all steps in differentiation and integration during problem solving just as it affects the evolution of purpose; both paradigms represent the same process, specifically that by which personality and situation affect behavior (p. 434).

The relationship between career and personality is described by Tiedeman and O'Hara (1963) as an interpenetration which is developed from the preliminary evaluation of the choices to the final career choice. It is influenced by the desires, opportunities, and capacities of the individual. It is believed that the process of vocational development is not one major decision but an infinity of minor ones which are responsible for interpenetration of vocation and personality. Educational and vocational choices are predictable from the personality characteristics as revealed by sex roles, family roles, and self-concept.

III. CAREER DECISION MAKING - COMPATIBILITY BETWEEN PERSONAL ORIENTATIONS AND OCCUPATIONAL ENVIRONMENTS

A "search" for environments or vocations, which are congruent with the individual's "pattern of personal orientations", occurs during the career decision making process according to Holland (1959, 1966b). In his theory, a person is conceived of as a personality type or a personality pattern. He postulates six types of personality patterns or personal orientations: Realistic, Intellectual, Social, Conventional, Enterprising, and Artistic. Corresponding to these personal orientations are six kinds of environments which bear the same designations. The personal orientations are the result of the interaction between an individual's heredity and cultural and personal forces. The assessment of these orientations is derived from Holland's Vocational Preference Inventory (VPI). The environments are viewed as a way of life rather than a conglomeration of isolated skills, and include the individual's family, social group, school, and work situations. The Environmental Assessment Technique (EAT) developed by Holland is used to assess the environmental pattern of an individual.

Holland (1966b) believes that the level of stability or instability of an individual's vocational behavior can be explained in terms of interaction of his personality pattern and his environment.

> ... stability is the outcome of passing through a series of consistent environments that foster and strengthen one's ability to cope with the world in an integrated way. Instability, in contrast, results from living in a succession of inconsistent environments that create and perpetuate inaccurate contradictory self concepts and conflicting ineffective coping behavior (p. 84).

It is also assumed that the individual's personal and vocational stability is determined by his personal development, particularly during his childhood. The stable person tends to have had parents whose individual

personality patterns were consistent both in themselves and in relation to the spouse's personality pattern. The level of consistency or inconsistency of the individual's personality pattern is assessed by the degree of similarity (intercorrelation) between his primary (highest score on one of the scales of VPI) and secondary (second highest score) personality types. A person with a Social-Enterprising personality pattern is considered to have a consistent pattern (r= .36), whereas, a person with Conventional-Artistic personality pattern is believed to have an inconsistent pattern (r= .09). However, if one or both of the parents have internally inconsistent personality patterns, or if the father's pattern is inconsistent with the mother's pattern, then the child is likely to develop inconsistent values, ineffective coping behavior, inaccurate self-concept, and little self-confidence. Consequently, such an individual will tend to vacillate, function ineffectively, and make poor choices in many areas of his life, in other words, he will manifest vocationally immature behavior by making less realistic decisions.

IV. CAREER DECISION MAKING AND VOCATIONAL MATURITY

The developmental nature of the career decision making process has led many researchers (Super & Overstreet, 1960; Hall, 1963; Dilley, 1965; Tiedeman & O'Hara, 1963; Crites, 1965) to use vocational maturity as its index. But the definition of vocational maturity differs from researcher to researcher. Crites'(1961) analysis of the current definitions of this concept has led him to provide a definition which tries to consolidate the major constructs underlying the various definitions. In this definition he takes into consideration the degree and rate of vocational development, which he believes are two independent measurable constructs. He further remarks (Crites, 1965) that the concept of vocational maturity is more comprehensive than vocational

choice and includes not only the selection of an occupation but also the attitude towards decision making. This multi-dimensional construct, vocational maturity, can be analyzed into several different kinds of choice "competencies" and "attitudes". Along with the "consistency" and "wisdom" of vocational choice, "competencies" and "attitudes" give us an elaborated construct of vocational maturity. These are four dimensions of vocational maturity along which the career decision making ability of an individual can be evaluated.

V. CAREER DECISION MAKING AND THE SYSTEMS APPROACH

The influence of situational and individual factors on the decision making process is recognized by the "systems approach to decision making" presented by Osipow (1968). According to this point of view:

> Decisions may be viewed as links in a chain. Each decision can be made only immediately prior to action, yet preparation for the act of deciding and plans for the implementation of the decision itself are necessary. Furthermore, even though decisions have immediate implications, the long range effects of decisions and estimates of their effects on future decisions are to be considered even though not made final now (pp. 236-237).

He believes that this approach uses useful concepts from other theories of vocational choice and applies them to the understanding of the individual's vocational decision making behavior. He further claims that with this approach the social, personal, and economic factors may be analyzed and the relationships between the larger systems may also be considered to a large extent. According to Osipow (1968) this viewpoint recognizes the importance of various sequential and individual factors in making career decisions and suggests that there is an interdependence between personality variables, choice dimensions, and environmental conditions. Osipow (1968) attempts to make this point of view more explicit when he says:

> One person, with a particular set of attributes in a given culture and operating under a special set of economic circumstances, will be confronted by a series of choice points which will lead to an idiosyncratic sequence of decisions. Vigorous, energetic, restless, intelligent young men in nineteenth century America were attracted to entrepreneurial fields as a result of social and economic presses. In twentieth century America, such men may seek technological careers because they represent the same potential for achievement that entrepreneurial activities provided for their nineteenth century counterparts (p. 239).

VI. CAREER DECISION MAKING AND THE SOCIOLOGICAL APPROACH

The sociological approach to career decision making emphasizes that circumstances beyond an individual's control influence his career decisions. The supporters of this approach (Blau, Gustad, Jessor, Parnes, & Wilcox, 1956; Caplow, 1954; Havighurst, 1964; Hollingshead, 1949; Lipsett, 1962; Miller & Form, 1951) suggest that an individual has a very limited degree of freedom for making his career choices, which they believe are dependent on self-expectations of the individual. These self-expectations are considered to be influenced by society's expectations for that individual. In this way, an individual's career decisions are not independent, but are influenced by the expectations of the society in which he lives. The role of "chance" factors in the career decision making process is also recognized by the proponents of the sociological approach to career decision making. The relevance of geographic, climatic, and economic factors on the one hand and of social environment and cultural organization on the other is considered important in the process of career decision making. Researchers have demonstrated that social class membership influences the attitudes towards education and work, the amount and kind of education and training acquired, and the economic resources available for execution of one's plans (Osipow, 1968). These attitudes in turn influence the career decisions of

an individual.

VII. CAREER DECISION MAKING AND SIMULATION GAMES

A simulation game is a game with simulated environment which magnifies some aspect of social interaction and provides the individual with opportunities to make decisions in situations which are similar to those found in "real life". This new teaching device, based on the well known principle of "learning by doing", helps the student to carry out a sequence of behavior and see its consequences, without fear of reproach or punishment from parents, teachers, peers, or other members of the society.

These games allow for repeated trials and are less complex than real life. It is contended that they develop a sensitivity to the interplay of forces involved in decision making that other teaching methods cannot match (Carlson, 1969, p. 14). Through participation and involvement in the simulation game, the player's learning evolves through the following three states:

1. Learning facts expressed in the game content and dynamics;
2. Learning processes simulated by the game;
3. Learning the relative costs and benefits, risks and potential rewards of alternative strategies of decision making (Abt, 1968, p. 78).

In the case of these games, learning is enhanced through an increase in the level of motivation and interest which is often lacking in traditional teaching methods. Abt (1968) elaborates this point with these words:

> One of the main problems for secondary school students is their sense of the relevance of what they are learning to their future expectations. Motivation must be sustained beyond the transient rewards of grades and college admission. Students must believe, and believe correctly, that what they learn will be important to them as adults. "Importance" should be defined broadly to include not only useful career guidance and training, but also a sense of

> meaningful identity and the appreciation of general intellectual and social values. Students should have reason to believe that what they learn will help them to understand, predict, and control to a socially acceptable degree their own future environment, as well as their own actions in it (p. 80).

Boocock and Coleman (1966) reiterate this point of view and consider "mismatching of time" as the greatest drawback of career decision making in the present day school system. The children are being prepared for an unknown future and they do not have any specific information about it. This uncertainty concerning the future may be responsible for the lack of interest of these students in planning for the future. The games with simulated environments are valuable for such training as they tend to bring the future into the present, motivate the student, and are self-judging in that "the outcome decides the winner, and a player knows that he has won or lost by his own actions (Boocock & Coleman, 1966, p. 219)".

SUMMARY AND EVALUATION

The preceding discussion of the various viewpoints explaining the nature of career decision making indicates that an individual's career decision behavior is influenced by several variables. Super (1953) sees career decision making as a developmental process which carries on during an individual's life span such that his future career decisions are dependent on the preceding career decisions. Tiedeman and Field (1968) specify and clarify the process of career decision making in that career decisions are purposeful actions and an individual's personality characteristics and physical and social environment play an important role in this process. Tiedeman and O'Hara (1963) see the process of career decision making as a "process of fashioning a vocational identity" by an individual during which the proper synthesis of relevant differentiated parts of a career decision situation is conceived. Holland (1966) has attempted to explain

this process by relating personal orientations to environmental variables. The role of chance factors in such decisions has been emphasized by the proponents of the sociological approach to career decision making, and the influence of situational and individual factors in career decision making has been recognized by Osipow's systems approach (1968). Osipow considers the formation of "links" between the decisions made in past and present as a basis for future decisions. It is apparent from the above summarization of the various viewpoints looking into career decision making behavior that the individual's career decisions are affected by many factors. Choosing one particular viewpoint over others for explaining an individual's career decision behavior does not seem desirable in this situation. Instead, a tentative sketch, combining the relevant parts of the most of the viewpoints discussed is proposed to be used as a reference in setting up guidelines for the present study. The following aspects of career decision behavior are included in the proposed tentative sketch:

1. Career decision making is a developmental process.
2. Career decision making is a purposeful action which is influenced by the amount and accuracy of the information an individual has about himself and world of work around him.
3. Realism of an individual's career decisions depends on his ability to analyse the decision situation into various parts and then to integrate only those parts which seem relevant.
4. Career decisions made in the past provide a frame of reference for the future career decisions.
5. "Chance" plays an important part in the process of career decision making.
6. Career decision making skill of the individual may be improved by appropriate training techniques.

Every individual is faced with decisions about his future career at least once during his life time. He has to make these decisions whether he likes it or not. The suggested sketch of career decision making behavior may not make this task easier but it does provide a framework for understanding this behavior. This sketch recognizes that the realism of career decisions depends in part on the individual's consideration of his personal and environmental resources during the process of decision making. Moreover, these decisions can be made more realistically if the influence of economic, social, and family background of the individual is duly recognized. This sketch also recognizes that individuals can be trained in the skill of career decision making. This aspect of career decision making behavior has not been made very clear by the majority of the other viewpoints.

The major aspects of career decision behavior have been outlined in this chapter. In the next chapter a brief summary of the significant research as it applies to the problems of this study is presented.

CHAPTER III

REVIEW OF RELATED RESEARCH

The need for exploring the relationship between personality variables and career decision making has been felt for many years and some literature has developed. More extensive research has been carried out in the field of general decision making during the same period providing a substantial literature for the guidance of future investigators. The lack of research in the area of career decision making may be due to the recency of emphasis on this aspect of decision making and the non-availability of appropriate tools to study it. Many researchers (Crites, 1969; Super, 1969; Tiedeman, 1969; Townsend, 1969) are involved in constructing and validating instruments, individual as well as group, for studying and analysing the process of career decision making. The results obtained so far are promising and it is hoped that future investigators will find these instruments helpful in understanding the process of career decision making.

Although there are not many directly related studies available in the literature yet, those studies which have some relevance to this topic will be discussed under the following headings:

1. Personality characteristics and general decision making.
2. Personality characteristics and career decision making.
3. Career decision making and vocational maturity.
4. Career decision making and simulation games as teaching devices.
5. Other related research.

1. Personality Characteristics and General Decision Making

The relationship between general decision making and various personality traits such as anxiety, defensiveness, dominance, submissiveness, risk taking,

field dependence and independence, open-mindedness and closed-mindedness has been examined in recent research studies. The purpose of this section is to review studies which have approached this problem from different angles thus providing a varied perspective of the problem. It was also felt that these studies would provide a basis for better understanding of the process of career decision making and its relation to personality traits.

First of all a study by Brim et al. (1962) is reviewed. This study attempted an analysis of general decision making behavior, and decision process variables determined from the analysis were related to various personality traits. Next, the findings of an investigation carried out by Kogan and Wallach (1964) are discussed. Kogan and Wallach examined the relationship between personality and cognitive correlates of risk in decision making. The studies done by Elliot (1961), Kemp (1962), and Gibby, Gibby, and Hogan (1967) are presented near the end of this section. These studies enquire into the relationship between decision making ability and personality traits such as dominance.

In an attempt to answer the question of what changes in parental decisions concerned with their child rearing problems occur, Brim et al. (1962) studied the relationship between parental decision making behavior and personality traits such as anxiety and defensiveness. They designed and constructed a battery of ten tests to study the various variables considered in the investigation. One of these tests called Decision Process Test was designed to study the decision making process of parents and was administered to approximately 200 parents (96 couples). The parents made decisions on four problems of their school age children, concerned with situations involving masturbation, homework, obedience, and stealing. The study was an effort to explore child rearing decisions in particular and decisions in other situations in general, and was

carried out from a sociological point of view as the researchers felt that the reported research on decision making has been poor due to absence of such a perspective. Some of the findings of Brim et al. (1962) study are given below.

The "number of outcomes" measured by the number of results given by a subject to each of the given alternative actions was positively associated with intelligence and social status for middle-class males, middle-class females, and lower-class females. It was suggested that the brighter and higher-status respondents, within each of these three groups, considered more of the possible outcomes of their actions.

The "desirability direction" factor, estimated from a subject's response regarding the desirability of an action, was closely tied to the personality dimension of autonomy-dependency for most of the groups formed on the basis of sex and social status. The autonomy pole of this dimension was represented by future orientation, independence of judgement, belief in thinking before acting, intelligence, etc. The dependency end was constituted of the variables such as belief in fate, belief in supernatural causes, dominance in child-rearing attitudes, a general optimism about the outcomes of actions, and other related variables. In other words, it meant that more dependent persons made higher estimates of the desirability of the results of their actions. The results also showed that dependent people tended to be more optimistic about the outcomes of their actions, considered fewer such outcomes in evaluating alternatives, and were less "rational" in their preferential ranking of actions according to their prior evaluations.

One important finding of this study was the absence of any relationship between manifest anxiety and the characteristics of decision making

process. This was a contradiction of previous research results. Manifest anxiety as defined by Brim et al. (1962) is a continuum which includes emotionality, nervousness, autism, and cycloid tendencies at one end, and self-confidence, self-sufficiency, and persistence at the other end.

Finally, it was shown that the process of decision making was influenced by both social class and sex of the respondents. Middle class males and females were not different in their decision making characteristics, whereas, lower class women were different both from their husbands and from the middle class respondents in considering the outcomes of their behavior. Moreover, the lower class women considered more immediate and optimistic outcomes of their actions rather than the more distant and undesirable ones.

The problem of human thinking and decision making in situations which involved risk was investigated by Kogan and Wallach (1964) with one of the major aims of their inquiry being to explore the relationship between personality traits and decision making. They used the moderator analysis technique which was first suggested by Saunders (1956) and later used by many researchers in its original or improved form (Drake and Oetting, 1957; Ghiselli, 1960; Korman, 1967; Ruch and Ruch, 1967; Sorenson, 1966; Wallach, 1962). They adopted this technique in an effort to explain the nature of relationships between the variables on the assumption that "relations between variables might differ in different subgroups of the larger population (Klien, Barr & Wolitsky, 1967, p. 495)" due to individual differences. In this study test anxiety and defensiveness were cast into the role of moderators in an effort to understand the nature of the influences of these variables on the patterns of relationship between the decision making measures and cognitive-judgemental ability, and personality characteristics.

The correlations obtained for the male and female samples as a whole did not reveal a relationship between personality variables and decision making aspects involving risk. However, these relationships emerged in a meaningful way when the role of moderator variables such as test anxiety and defensiveness was considered. It was observed that persons who were high on both defensiveness and anxiety were highly consistent in risk-taking during the process of decision making. Furthermore, persons high in defensiveness and in the tendency to react to stress with anxiety were susceptible to irrational decision making behavior, whereas the persons who were low both in defensivenss and in stress-induced anxiety had a tendency to make more rational decisions.

It was further shown that the implications of personality characteristics for risk taking in decision making were sex-linked. Among the females in the high test anxious-high defensive subgroup, decisions moved in the risky direction for the individuals high in self-sufficiency, high in independence, and low in rigidity. In the case of persons low in self-sufficiency, high in yielding tendencies, and high in rigidity, the movement was in the direction of conservatism. Among the males in this high test anxious-high defensive subgroup, decisions tended toward risk taking for persons high in independence and towards conservatism for the persons with high yielding tendencies.

The decision making behavior was also affected when the motivational factors such as high affect level in child rearing and generalized need for certainty predominated and "show-off" risk-taking tendencies appeared. This type of situation developed when the decision task involved face to face interaction with an experimenter or any other significant person. Kogan and Wallach (1964)

put it in these words:

> Thus, where the decision tasks being related both involve face-to-face interaction with an experimenter, processes of image maintenance and the need for social approval began to play an important role, with the consequence that defensiveness heightens relationships, and consideration of test anxiety becomes less relevent. Correspondingly, in those cases where the decision making task is embedded in a format suggestive of an intelligence or aptitude assessment, test anxiety moderator becomes more critical and defensivenss assumes more of a background role. One truly arrives at the impression that particular motivational predispositions are engaged in accordance with the total psychological 'press' of the decision situation (p. 68).

In such circumstances, the highly defensive male viewed the situation as a test of his masculine decision making prowess. Also the high test anxious female conceived failure as a personal reflection on her critical judgement. These motivational forces, in turn, affected the various aspects of both male and female decision making behavior.

Decision making behavior of 56 male subjects was studied by Gibby, Gibby and Hogan (1967) in their study of the relationship between dominance needs and decision making ability. The findings of the study showed that individuals with a higher degree of ego strength were capable of making better decisions. It was also found that subjects with both "high perceived dominance" and "high discrepancy scores" (perceived minus desired dominance) had significantly higher decision making scores than did subjects with other dominance patterns.

The relationship between open and closed-mindedness and decision making was studied by Kemp (1962) who came to the conclusion that persons with either of these personality characteristics did not satisfy the same needs during their decision making process. Open-minded persons had a greater need for autonomy, dominance, intraception, and heterosexuality, whereas closed-minded persons had a greater need for abasement, succorance,

nurturance, and endurance. Open-minded people accepted the decisions which offered more experience, independence, and opportunities for satisfying relationships with people. On the other hand closed-minded people looked for the decisions providing more security, more approval from the authorities, and less change in the existing set up.

While studying the relationship between field dependence and decision making, Elliot (1961) reported that field-dependent persons had a tendency to describe themselves as indecisive, conventional, and practical, which made them conservative decision makers.

Most of the research relating general decision making ability to personality traits has been on the exploratory level. Some researchers have presented data indicating a relationship between decision process variables and personality traits like anxiety, and others have studied the influence of variables such as anxiety on the relationship between decision making taken as a unitary process and variables such as risk taking. Studies examining the moderating effect of variables such as risk taking on the relationship between personality traits and decision making have not come to this writer's knowledge and it is believed by him that such studies may provide a different point of view regarding this relationship. Many of the studies have examined the part played by anxiety in decision making, but the results have been inconclusive so far. Not many studies have looked into the effect of extraversion on decision making and the writer believes that such studies could provide more knowledge about human decision making behavior. The studies in the area of general decision making have used adult populations most of the time and again it is believed by the writer that an extension into the school and college going populations could enhance the knowledge of this process, which may further

prove helpful in devising ways to improve their general decision making ability as well as decision making in specific situations such as career decision making.

2. Personality Characteristics and Career Decision Making

That personality plays a part in the determination of career decisions has been recognized by psychologists for a long time and they have designed studies to examine the relationship between personality and career decisions. Some of these studies are reviewed in this section. The studies are discussed according to two aspects of personality: (1) personal orientation, and (2) self-concept. The studies in the first category test Holland's theory of vocational choice (1959, 1962, 1966a, 1966b). In general these studies (Osipow & Ashby, 1968; Osipow, Ashby, & Wall, 1966; Wall, Osipow & Ashby, 1967) supported Holland's formulations that an individual's pattern of personal orientations directs him towards vocational choices which will fit his particular pattern. The studies in the second category have tested the hypothesis that vocational choice is a means for implementing one's self-concept. These studies have examined the relationship between vocational choice and self-esteem (Korman, 1966, 1967, 1969) and self-concept and realism of vocational choice (Anderson & Olsen, 1965).

Several aspects of Holland's theory were tested in a recent study conducted by Osipow, Ashby, and Wall (1966). They used a sample of college freshmen to test four hypotheses. One of these was concerning the relationship between vocational preferences and personal orientations. They predicted that subjects would express occupational preferences consistent with their major personal orientations. The results of the study supported the hypothesis in that the college students chose occupations consistent with their personal orientations.

Another study by Wall, Osipow, and Ashby (1967) compared vocational interest

scores and the personality types of 186 male freshmen at the Pennsylvania State University. The data provided by the Strong Vocational Interest Blank (SVIB) and several items asking students to indicate their first through fifth vocational choices on the Personal Information Blank (PIB). Along with these, the subjects were asked to rank the descriptions of Holland's personality types. It was found that the results supported Holland's theory in that the personality types had high group scores where they would be expected and low scores where low scores would be expected.

The self-concept aspect of personality has been studied in relation to vocational choice by Anderson and Olsen (1965) and Korman (1966, 1967, 1969). Korman (1966), in examining the relationship between self-concept and occupational choice, found that individuals with high self-esteem tended to make vocational choices which were congruent with their self-perceived characteristics, whereas individuals with low self-esteem failed to do so. Self-esteem was defined by Korman (1967) as "a person's characteristic evaluation of himself as an individual (p. 65)". Furthermore, high self-esteem is characterized by a sense of personal adequacy whereas low self-esteem is characterized by a sense of personal inadequacy (p. 65). In another study, Korman (1969) found that the vocational choice process was influenced by the level of self-esteem of the individual in that high self-esteem individuals were more likely to seek self-fulfillment in the realm of occupational behavior than were individuals with low self-esteem.

Approaching the matter of vocational choice from another direction, Anderson and Olsen (1965) postulated a relationship between realism of choice and congruency between self and ideal self concepts. They found no significant

difference between "realistic" and "unrealistic" students on the congruency of their self and ideal self concepts. The subjects for the study were 96 male and female high school students. These students were classified as "realistic" or "unrealistic" in their vocational choices depending upon whether they had the aptitude for the occupation chosen. Flanagan Aptitude Classification Tests (FACT) were used for the assessment of aptitudes of the students.

Finally, in a recent research study (Weinhold, 1969) an attempt was made to develop the construct validity for vocational problem solving ability and the presumably related trait behaviors of manifest anxiety, defensiveness, and reasoning ability. These traits were measured by administering a battery of experimental instruments (two for each trait) to 128 college freshmen and sophomores. Manifest anxiety was measured by the Minnesota Manifest Anxiety Scale and the S-R Inventory of Anxiousness. The measures of defensiveness were the Minnesota Defensive Scale and the Dogmatism Scale. Reasoning ability was tapped by the Differential Aptitude Test Abstract Reasoning Scale and the American Council on Education Test of Critical Thinking. The Attitude Toward Problem Solving Scale and the Life Career Game, a simulated enviornment game adapted for use with college students, were used to measure the vocational problem solving ability of the subjects. The findings of the study showed that none of the relationships (linear and non-linear) between manifest anxiety, defensiveness, reasoning ability, and vocational problem solving ability were statistically significant. The results also failed to provide support for the claim of a central underlying construct of vocational problem solving ability.

Most of the findings of the research testing Holland's theory supported the idea that individuals choose occupations consistent with their personal

orientations. These studies, particularly those which were done by Holland, used samples drawn from the select group of National Merit Scholars and their findings could not be considered true for the total college going population. To reduce the effect of this disadvantage the sample used in Holland's recent research studies are being drawn from the group which is being tested for American College Testing Program. But, at the same time it is felt that study of the relationship between personality and career decision making of the school going population could provide information which would complement existing results. The relationship between the self concept and the realism of career decisions needs to be examined more extensively for high school students before we can have some faith in the results. In addition, the researchers studying the relationship between personality characteristics and career decision making behavior have tended to use a broad definition of personality. Although the emphasis on the concept of total personality is helpful in understanding its contribution to career decision behavior, it does not throw enough light on the relationship between various personality traits such as anxiety and career decision making. For a diagnostic and remedial approach which emphasizes career decision making, it is important that the whole process of career decision making be appraised and units of analysis be established. Consideration of these units of career decision process along with personality traits, could provide some insight into the relationship between the variables. Research studies looking into this relationship need to be designed and carried on using valid and reliable measures tapping the various traits.

3. Career Decision Making and Vocational Maturity

Very few studies have examined the relationship between career decision making and vocational maturity. But, the relationship of maturity of vocational attitudes to variables such as intelligence, scholastic ability, and personality

ha been studied extensively and the research studies in this area have been reviewed by Crites in his recent monograph (1969, pp. 52-65). Many of the studies mentioned in the monograph used the Attitude Scale of Crites' Vocational Development Inventory as a measure of maturity of vocational attitudes. In a recent study (Dilley, 1965) nc specific inventory was used to assess vocational maturity but the levels of subjects on three variables, namely intelligence as measured by the Minnesota Scholastic Aptitude Test (MSAT), academic achievement as measured by High School Rank (HSR), and frequency of participation in extra-curricular activities, were taken as indices of vocational maturity. Career decision making ability was assessed by administering the Decision Making Inventory (DMI) developed by Dilley. "Acceptance of responsibility", "concern for choice", and "extent of planning" were taken as indices of career decision making ability in the inventory. The DMI was administered to 174 high school seniors in order to assess their career decision making ability. The scores on MSAT, High School Rank, and frequency of participation in activities ratings were obtained from the school authorities. Dilley found that the subjects who had the ability to make "good career decisions" (decisions in which the decision maker selected the alternatives having the highest expected utility) were more mature vocationally. The "good decision makers" earned higher intelligence scores, higher grades, and were more involved in extra-curricular activities than "poor decision makers". On the basis of these results it was stated:

> Vocational maturity may well reflect an increase in planning activity, acceptance of responsibility, and a general concern about the making of good decisions. Vocational maturity may also reflect growth in rational decision making ability (p. 427).

In another study (Cover, 1969) the relationship of vocational maturity

to school achievement, socio-economic level, career decision making, previous work experience, and various personal variables was studied. The subjects for the study were 162 male high school seniors from a large city. Vocational maturity of these subjects was measured by the Attitude Scale of Crites' Vocational Development Inventory (VDI). Educational decision making ability of the subjects was assessed from the post high school decisions of the subjects as indicated by them on a demographic type questionnaire administered during the study. The Alienation Scale (Neal) was used to collect data pertaining to other variables studied. The results indicated that vocational maturity is related to the ability to make post high school decisions, the belief that events have meaning, the absence of isolation, and the feeling that events can be controlled.

Research looking into the concept of vocational maturity and its relationship to various variables such as academic achievement, socio-economic status, and personality characteristics was initiated by Super through his Career Pattern Study (Super & Overstreet, 1960) in 1951. Since then vocational psychologists have been studying the relationship between vocational maturity and its correlates such as intelligence, scholastic achievement, and career decision making. The research studies investigating the relationship between career decision making ability and vocational maturity have been unable to present any conclusive evidence for the existence of such relationships. This may partly be due to the fact that the instruments used for assessing vocational maturity and career decision making ability were either too crude, or were still in the process of development. The use of standardized measures in the future research may provide data which would help to clarify the nature of the relationship between career decision making ability and vocational maturity.

A majority of the studies have used high school seniors as subjects thus limiting their scope to one educational level. The use of subjects from other educational levels would help to enhance the understanding of the relationship between vocational maturity and career decision making ability.

4. Career Decision Making and Simulation Games as Teaching Devices

It is contended that one major function of simulation games - games with controlled representation of real life situations - is to facilitate learning of the given subject matter by restructuring the learning situation. Some research studies have been designed to evaluate the instructional aspect of these games. The transfer of learning from game to game and to real life situations has also been investigated. Some studies (Weinhold, 1969) have used simulation games for the purpose of evaluation of the process involved. The Life Career Game has been designed to train individuals in career decision making and has been used for this purpose in research situations as well as in regular classrooms. This game, while training the individuals for better career decisions, is believed to improve the process of decision making by confronting the player with a situation which requires him to follow the steps of the scientific method of problem solving. Through this method the individual formulates more realistic and satisfactory solutions which, in turn, influence his score for the game. In this way the game score, a function of realism of career choices, becomes an index of the individual's career decision making ability. To the writer's knowledge, only one study (Weinhold, 1969) using the simulation games to measure career decision making ability, has been reported in the literature to date. The Life Career Game (Boocock, 1968) was used to assess vocational problem solving ability. In this study Weinhold tried to develop the construct validity of vocational problem solving ability

by the Campbell and Fiske (1959) technique in which a nomological network of traits is designed to increase the validity of the central construct. This process of relating previous unvalidated or poorly validated instruments and constructs to other more valid instruments and constructs is called "bootstraps effect" by Campbell and Fiske. The results of Weinhold's study failed to provide support for the establishment of the construct of vocational problem solving ability. In addition, a separate validity study conducted during the major study (Weinhold, 1969) provided results which cast doubt upon the contention that the Life Career Game measures the construct called vocational problem solving ability. The design of the study seems to be deficient in that not enough time was spent in learning the rules for playing the Life Career Game. Furthermore, the game was played only for a very short period of three rounds and one of those was a practice round. The writer feels that two rounds of the Life Career Game are not sufficient for a valid estimate of a player's vocational problem solving ability. For a relatively valid measure of a player's vocational problem solving ability, it would seem necessary to provide the player more than one practice round and from five to six rounds of planning for the experimental profile. The use of the player's own profile for career planning may have introduced another variable thus leading to relatively less valid scores. The Life Career Game was played after the administration of all the other tests used in the study and the players' performance may have been affected by variables such as fatigue. Under these conditions it would be inadvisable to accept the findings without further examination of such variables as sample size, number of raters, technique of rating, and the game playing period used in the study.

Another study used the Life Career Game as a tool for teaching the process of career decision making rather than for assessing it (Boocock, 1967). In this way this study served a useful purpose of providing some basis for establishing content validity of the Life Career Game as an instrument for assessing career decision making ability. The effects of playing the Life Career Game on the amount of learning that occurred during the game were examined. The sample consisted of 1200 delegates (ranging in age from 13 to 21) to a summer conference in 1964 of 4-H organizations. The delegates were assigned to one or the other of two simulation games, which were the Life Career Game and the Legislature Game. A questionnaire to measure the amount and kind of factual information acquired from the game played was used before and after the game session. In comparing the scores obtained from the questionnaires it was found that both groups of players increased their knowledge of facts related to the game played. It was also found that the amount of learning in the Life Career Game groups was significantly greater than that of the Legislature groups on listing items and on questions that required understanding of the relationships between educational requirements and vocational choices. On the basis of these results it was claimed that players can both have fun and learn at the same time through simulation games.

The effectiveness of simulation techniques in shaping general as well as vocational decision making behavior of the individuals has been looked into by some researchers who used programmed vocational materials, films, and career-day activities (Ryan, 1968), simulation games like the Consumer Game, the Life Career Game, and the Legislature Game (Farren, 1968), and the Parent-Child Game (Schild, 1966). These researchers came to the conclusion

that simulation techniques could be used to shape and improve decision making behavior of individuals. Cherryholmes (1966) is not so optimistic about the claims made by the exponents of simulation games. On the basis of the results of six studies (Anderson, 1964; Boocock, 1963; Boocock & Coleman, 1966; Cherryholmes, 1963; Garvey & Seiler, 1966; Robinson, Anderson, Hermann & Snyder, 1966) which used simulation games, he concluded that games do motivate but that there is no substantial evidence showing the superiority of these games over the other methods of learning as far as the technique of problem solving or learning of facts is concerned. But support for this conclusion was put forward on the basis of very meagre data. The refutation or acceptance of Cherryholmes' claim should be left to future research in the design and utilization aspects of simulation games.

Because of the recency of the Life Career Game relatively few studies have been reported in the literature which have been directly designed to examine the validity of this game as an assessment tool. Complexity of rules to play the game, time required to play a desirable number of rounds, and the scoring techniques have been some of the aspects which have made it rather difficult to reach a relatively reliable and valid evaluation of the game as an acceptable instrument for measuring career decision making ability. Lack of criterion measures tapping career decision making ability have made the task of establishing validity of this game as a measurement tool difficult. Inspite of these limitations, the results of the studies using the Life Career Game for training and assessing career decision making seem promising. Further sophistication in the designing of this game, it is hoped, would help to solve the measurement problem in career decision making research to a certain extent.

5. Other Related Studies

The role of age, grade, and socio-economic status in career decision making behavior has been investigated by some researchers. This section presents a few studies designed to examine the relationship of career decision making to one or more of these variables.

On the basis of the findings of a recent study which looked into the relationships among age, grade, and vocational choices, Hollender (1967) claimed that vocational choices become more realistic with advancing age and grade. He also maintained that the period of realistic choice began between the ages of fourteen and sixteen, usually about the ninth grade, and was carried on in subsequent age levels. Hollender further postulated that school grades were better than that of age levels as the indices of the decision making ability of adolescents, since academic experiences and social learning experiences were more closely related to grade than to age.

In another study which used Readiness for Vocational Planning (RVP) Scales, Gribbon (1964) found that many eighth graders were more advanced and more ready to make vocational decisions than were some tenth grade students. His study also showed more awareness of the interests and values on the part of tenth graders as compared to eighth graders. Tenth graders were more willing to take responsibility for their decisions. It was suggested that vocational decision making ability was related to the individual's readiness for vocational planning and it differed from individual to individual.

This writer has not come across research studies designed to look into the relationship between socio-economic status and career decision making ability as such, but there are some research studies which have examined the effects of socio-economic status on vocational choice. Gribbon and Lohnes (1964)

found that their Readiness for Vocational Planning (RVP) indices were slightly related (r= .24) to socio-economic status of high school students. Super and Overstreet (1960) have also found a slight relationship (r= .27) between vocational choice and socio-economic status for the students from the Career Pattern study. Research into the relationship between career decisions and socio-economic status has yielded inconsistent results and definite conclusions regarding this relationship are not forthcoming to date.

SUMMARY AND EVALUATION

In this chapter the relevant literature examining the relationship of career decision making to personality characteristics, maturity of vocational attitudes, and socio-economic status was presented and discussed. Studies looking into the effect of personality characteristics on general decision making were also discussed. The advantages of simulation games as training and assessment tools were highlighted and studies using the Life Career Game and other simulation games in these capacities were presented and evaluated. The review of research literature revealed that while recognition was given to the importance of personality characteristics in career decision making, no intensive analysis of the influence of the specific personality traits such as anxiety on the career decisions of an individual was available. Rather, there was a tendency to consider personality as a unitary factor and to relate this to career decision making ability of the individual. It was also evident from the review that limitations in the validity and reliability of tools to assess personality, vocational maturity, socio-economic status, and career decision making ability were likely responsible for inconsistent results in a majority of the research in the area of career decision making.

The next chaper present the hypotheses, and discusses the design and procedures for the present study.

CHAPTER IV

HYPOTHESES AND RESEARCH DESIGN

The presentation of hypotheses and discussion of the sample, data collection, experimental procedures, and statistical techniques used are detailed in this chapter.

Hypotheses

The purpose of this investigation was to examine the relationship of career decision making ability to anxiety, exvia (extraversion), maturity of vocational attitudes, and socio-economic status. In keeping with this purpose, the following hypotheses were tested and accepted or rejected if the correlation coefficients were significant at the 5 percent or better level for the total male plus female subgroups which consisted of male and female participants from all the three schools. All the variables were measured on equal interval scales with scores running from high to low so that the high scores reflected a greater magnitude in a positive direction for the measured characteristics:

1. There is no significant relationship between the sex of the subject and career decision making ability scores.
2. There is a significant positive relationship between socio-economic status indices and career decision making ability scores.
3. There is a significant negative relationship between anxiety scores and career decision making ability scores.
4. There is a significant negative relationship between exvia scores and career decision making ability scores.
5. There is a significant positive relationship between maturity of vocational attitudes scores and career decision making ability scores.

Sample

The participants in this study were grade nine students from three schools in a suburban community. There were 258 grade nine students in these schools. The writer intended to include all of them in the present study, but as a result of administrative limitations, it was possible to include only 155 (60.8% of total population) in the present study. The sample consisted of all three grade nine classes from school 1, one grade nine class (social science option class) from school 2, and two grade nine classes from school 3. The sample was further reduced to 144 students of which 75 were male (52.08%) and 69 were female (47.92%). Eleven students were dropped because of lack of scores on one or more of the following measures:

1. The Junior-Senior High School Personality Questionnaire (The HSPQ).
2. The Vocational Development Inventory - Attitude Scale.
3. The Student Questionnaire.
4. The Life Career Game.

The final distribution of the sample is given in Table 1.

Data Collection

Variables measured and instruments used were as follows:

1. Measurement of career decision making ability. The Life Career Game by Boocock (1968) was used to obtain career decision making ability scores of the subjects. In this game the player is required to make future plans for a fictitious person for a period of eight to ten years. The information about the abilities, aptitudes, interests, home conditions (economic and social), and academic achievements of the individual is provided in the form of a profile. Players plan in rounds, each of which represents one year in the life

TABLE 1

DISTRIBUTION OF THE PARTICIPANTS BY SCHOOL AND SEX

GROUPS	MALE			FEMALE			TOTAL		
	Population	Sample	% of Population	Population	Sample	% of Population	Population	Sample	% of Population
SCHOOL 1	37	37	100.0	22	20	90.9	59	57	96.6
SCHOOL 2	54	21	38.9	40	24	60.0	94	45	47.9
SCHOOL 3	43	17	39.5	62	25	40.3	103	42	40.8
TOTAL	134	75	56.0	124	69	55.7	258	144	55.8

of the person. The player considers the future schedule of activities for the person in the areas of education, occupation, family life, and leisure. Most activities need a certain amount of energy, time, and finances. In this way the person cannot be involved in every activity and has to consider the relative advantages of the available alternatives which could be expected to bring maximum satisfaction to the person in his present and future life.

A set of tables and spinners is used to score the person's one round planning in various areas of decision making. The scores are based on the allocation of time given to each of these areas and are determined by probability data gathered in 1960 United States Census. A chance factor is also introduced when the player pulls an 'Unplanned Events Card' at the end of each round.

This is a simulation game which imitates certain features of real life - education, occupation, family, and labor markets. It has rules, players, winners, and losers. A player who plans the life of the profile person in a realistic manner, determined by the criteria set up by the developer of the game, ends up with a better score. A more detailed description of the material used, rules of play, and scoring system used in the Life Career Game is given in Appendix B.

No validity data regarding the use of the Life Career Game as a measure of career decision making ability is forthcoming as yet. The validity of the instruments measuring proficiency level of the individuals is established through content validation procedure. According to Anastasi (1961) establishing of content validity "involves essentially the systematic examination of the test content to determine whether it covers a

representative sample of the behavior domain to be measured (pp. 136-137)". Content is defined in broad terms by her and includes major objectives such as application of principles and interpretation of data and factual knowledge. Later she warns against confusing content validity with face validity which refers "not to what the test actually measures but to what it appears superficially to measure (p. 138)". The decision to use the Life Career Game as an assessment tool for measuring career decision making ability of the students in the present study was based on its content validity, that is, the assumed appropriateness of the contents of the game materials and the process of making career decisions for the fictitious profile persons.

2. Measurement of personality variables. The Junior-Senior High School Personality Questionnaire (The HSPQ), prepared by Cattell (1963) and published by the Institute for Personality and Ability Testing (IPAT), was used for determining exvia (extraversion) and anxiety scores.

Form A, which contains 142 items and can be administered in 45-50 minutes, was used. The HSPQ provides scores on fourteen personality factors which are further used to calculate an individual's exvia and anxiety scores by using the weights and constants given in the Technical Handbook for the HSPQ (Cattell & Cattell, 1969, p. 41).

The immediate retest reliability coefficients, calculated from the test scores of 302 high school juniors, for the fourteen factors vary from .74 to .91 for Form A and from .85 to .96 for Forms A and B combined (Cattell & Cattell, 1969, p. 9).

The construct validity coefficients of the personality factors measured by the HSPQ, calculated from the test scores of 200 high school boys and girls, vary from .57 to .77 for one form and from .72 to .86 for two forms combined (Cattell & Cattell, 1969, p. 12).

3. Measurement of maturity of vocational attitudes. The level of maturity of vocational attitudes was measured by the Attitude Scale of Crites' Vocational Development Inventory (VDI). This scale consists of 50 statements which can be answered as either "True" or "False". These statements are designed to measure involvement in processes of vocational choice, orientation to the world of work, independence from others in vocational decision making, preference for certain factors in occupations, and conceptions of work and choice.

The stability coefficient of the Attitude Scale Form III, for ninth through twelfth graders (N=1948) retested after one year was .71 (Crites, 1963). The correlation of vocational maturity with age was .385 and with grade was .463 (Crites, 1965, p. 32). In a recent study (Ostashewski, 1969) test-retest reliability estimate of .73 (N=49) was found for Form IV of this scale over a two weeks interval for ninth grade students.

It is believed by Crites (1969) that only the concept of content validity applies to the Attitude Scale. On the basis of the analysis of the findings of the studies using the Attitude Scale he concludes:

> ... evidence for its "content" validity comes from the 74% agreement between judges responses to the scale and the scoring key, and support for its "criterion-related" validity is found in its relationship to vocational aspiration, vocational choice consistency, decision, and realism, and possibly to vocational maturity as assessed by the Readiness for Vocational Planning (RVP) Scales (p. 52).

4. Measurement of socio-economic status. The socio-economic status level of the students was determined with the help of the Blishen Scale of Socio-Economic Index (1967). First, the students were asked to give information about their father's occupation by answering the questions in the Student Questionnaire developed by the writer. A copy of this questionnaire is given in Appendix A. These answers were used to identify the actual occupation in which the father was involved. The use of the father's occupation,

according to Pavalko (1967), results in smaller number of 'no data' cases and increases the comparability of the findings with other research results. It is easier to get the father's occupation than other indices of socio-economic status such as material possessions.

After finding the father's occupation, the Blishen Scale of Socio-Economic Index (1967) was used to ascertain the 'rank' for that occupation which was an index of socio-economic status for the family. The Blishen Scale used is a revised form of Blishen's 1958 Socio-Economic Index and is based on data on education and income of incumbents of 320 occupations mentioned in the 1961 Canadian Census. The ratings are given for only those occupations which are characteristic of males in the labor force, "on the assumption that the family's social status is dependent upon the occupation of the husband rather than the wife when both are working (Blishen, 1967, p. 42)".

This new Blishen Scale also included the Pineo-Porter Occupation Scale, which is a "social standing" measure of occupations, as a third basis for establishing the socio-economic ratings of occupations.

The new Blishen Scale correlates 0.96 with the original 1951 Blishen Scale. The date obtained from the Blishen Scale were called Socio-Economic Scores (SES).

Procedure

The HSPQ Form A and the Attitude Scale of the VDI were administered to the subjects according to the instructions given in their respective manuals. These tests were taken by the subjects in the classroom situation and were given by the researcher with the help of the counselor and teachers in the school. The HSPQ answer sheets were scored with the help of the quick scoring answer key developed by IPAT. Then the raw scores were converted to

standard (sten) scores by the use of the norm tables provided. These sten scores were further used in calculating the anxiety-adjustment and exvia-invia scores according to the instructions provided in the Technical Handbook (Cattell & Cattell, 1969, p. 41). The Attitude Scale of the VDI was also scored by hand with the help of the key provided by Crites, the author of the VDI.

The students were asked to complete the Student Questionnaire at home with the help of their parents in order to make the information more valid. The responses of the students to the following two questions were used to assign a socio-economic status index with the help of the Blishen Scale, whose main features have already been disucssed.

Q. 7. What is your father's occupation?

Q. 8. What does he actually do at the job?

In the majority of the cases the information provided by the students enabled the investigator to assign a socio-economic status index to the students, but in some cases the task became quite difficult. The reasons for such a situation were one or more of the following:

(1) Father deceased - mother housewife (n=4).

(2) Not enough information provided by the student (n=3).

(3) Father in the process of improving his qualifications or going through a retraining program (n=2).

In such cases, an effort was made to interview the student and/or contact the parents and then an index was assigned on the basis of the new information regarding father's present or past occupation.

The Life Career Game, used for measuring the career decision making ability of the subjects, was played according to the instructions and rules provided by the developer. A few minor changes in the format of the forms

and rules of the game were made to make the game more suitable for this investigation. Instead of playing in groups of two or three, the subjects played the game individually. Also, before starting on the test profile, each subject played four rounds on Larry's profile (practice profile) in order to acquaint himself with the format of the game. After making certain that most of the subjects understood and could play the game, they were assigned randomly to two groups of players. One group was asked to plan the future eight years of life for Bob's profile, whereas the other group played eight rounds for Mary's profile. The distribution of the sample by sex of player and sex of profile person is given in Table 2.

The profiles of Mary and Bob were selected to provide the players with an opportunity to plan the future career of two individuals of opposite sex but with the other characteristics and conditions comparable as much as possible. In the present study, both Bob and Mary are:

(a) high on verbal, quantitative, and electives ability (which tells how well he/she will do in commercial, art, music, home economics and shop courses),

(b) not very sociable. and

(c) teenagers from high schools.

But on the other hand there were some features on which these profiles were different. Bob belonged to a poor family while Mary came from a rich family. Bob got along quite well with his parents whereas Mary was in trouble with her parents most of the time. Bob was a hard working, achieving, striving, and "conventionally liked" type of boy but Mary was an unconventional, alienated, radical girl. These profiles provided the players with challenge and opportunity to plan the future of two teenagers. Furthermore, it provided the investigator with an opportunity to look into the effects of same sex and

TABLE 2

DISTRIBUTION OF THE PARTICIPANTS BY SEX OF PLAYER

AND SEX OF PROFILE PERSON

GROUPS	MALE					FEMALE					TOTAL				
	Sample	Bob's Profile	% of Sample	Mary's Profile	% of Sample	Sample	Bob's Profile	% of Sample	Mary's Profile	% of Sample	Sample	Bob's Profile	% of Sample	Mary's Profile	% of Sample
SCHOOL 1	37	24	64.9	13	35.1	20	9	45.0	11	55.0	57	33	57.9	24	42.1
SCHOOL 2	21	12	57.1	9	42.9	24	8	33.3	16	66.7	45	20	44.4	25	55.6
SCHOOL 3	17	10	58.8	7	41.2	25	10	40.0	15	60.0	42	20	47.6	22	52.4
TOTAL	75	46	61.3	29	38.7	69	27	39.1	42	60.9	144	73	50.7	71	49.3

opposite sex profile presentation on the career decision making scores.

The subjects played all the eight rounds which were scored at the end of each round by the players and checked by the investigator. Special attention was given to the time allocation in each round to make sure that the minimum time required by each decision area had been correctly assigned and the total number of hours for all the four decision areas add up to 84 for each round of the game. This method of scoring helped in providing feedback from the scores which could affect the decision making strategy of the subject. The grand total of all the total scores for each of the eight rounds was taken as the career decision making ability score of the subject. More information regarding the rules governing the playing of the game and the basis of scoring is provided in Appendix B. Comments regarding the usefulness of the experience of playing the Life Career Game were solicited from the players on the Final Questionnaire (see Appendix C) on the completion of the eight rounds of career planning for Bob or Mary. One hundred forty-three out of 144 players (99.3%) completed the final questionnaire. The distribution of their comments to the five parts of question 3 of the questionnaire is presented in Table 3. Eighty-six (60%) players considered the experience of playing the Life Career Game as useful, whereas, 42 (29%) players felt that it was a waste of time. Eighty-one (57%) players felt that it will be worthwhile experience for future grade nine students but 21 (15%) did not see much value in such an experience. One hundred and nine (76%) players felt that the Life Career Game has drawbacks and 9 (6%) players did not see any drawbacks in the game. Suggestions (range 1-4) for improving the game were offered by only 49 (34%) players. Some of the players' comments are presented in Appendix D.

Statistical Analyses

The scores for all the variables used in the study were punched on IBM

TABLE 3

DISTRIBUTION OF PLAYERS' COMMENTS REGARDING

LIFE CAREER GAME

QUESTIONS		COMMENTS				
		YES	UN-CERTAIN	NO	NO COMMENT	TOTAL
USEFULNESS TO YOU	%	60	2	29	9	100
	N	86	3	42	12	143
USEFULNESS TO FUTURE GRADE NINE STUDENTS	%	57	10	15	18	100
	N	81	15	21	26	143
GOOD POINTS	%	66	5	11	18	100
	N	95	7	16	25	143
BAD POINTS OR DRAWBACKS	%	76	0	6	18	100
	N	109	0	9	25	143
SUGGESTIONS FOR IMPROVEMENT	%	34	0	4	62	100
	N	49	0	5	89	143

cards, and data were used to run the various programs on the IBM 360/67 computer with the help of the Division of Educational Research Services, Faculty of Education, University of Alberta, Edmonton.

The preliminary analysis of the data indicated that the career decision making ability scores for the group working with Bob's profile were significantly ($p = .000001$) different from those of the group working with Mary's profile (Table 4). Considering these findings it was decided to do all the analyses separately for the group using Bob's profile and the group using Mary's profile. The analyses considered total group, male and female subgroups, and school subgroups for each profile group. The decision to consider the school subgroups separately in all the analyses was based on the observed differences in social and psychological climate in the three schools. The relationships among the members of the staff and the students in school 1 and school 3 seemed more congenial than seemed true for those in school 2. Principals and teachers of school 1 and school 3 seemed more permissive and most of the students looked relaxed. On the other hand, the general school climate seemed tense in school 2. The students were rebellious and did not seem to care much for the school program. Incidents of fire and theft were reported two times during the course of the present study. Also, the analyses of the anxiety scores, exvia scores, socio-economic scores, and maturity of vocational attitudes scores indicated that the three schools differed significantly on one or more of these variables (Table 5).

The first hypothesis regarding the relationship between the sex of the subject and career decision making ability scores was tested by two-way analysis of variance. To test the other four hypotheses, Pearson product moment correlation coefficients were calculated to determine the relationship between career decision making ability scores and (a) socio-economic

TABLE 4

SUMMARY OF ANALYSIS OF VARIANCE FOR SEX OF PLAYER BY SEX OF PROFILE PERSON BY CAREER DECISION MAKING ABILITY SCORES

SOURCE OF VARIATION	SS	df	MS	F
SA (Sex of Player)	7392.00	1	7392.00	1.06
SB (Sex of Profile Person)	630192.00	1	630192.00	90.25**
SAB (Sex of Player by Sex of Profile Person Interaction)	16.00	1	16.00	0.00
SE (Experimental Error)	977616.00	140	6982.97	

*p $\leq$ .05 (two-tailed tests)
**p $\leq$ .01 ( )

TABLE 5

SCHEFFE'S MULTIPLE COMPARISONS BETWEEN SCHOOL MAIN EFFECTS FOR CAREER DECISION MAKING ABILITY CORRELATES

CORRELATES	SCHOOLS		1	2	3
		MEANS	48.51	48.99	42.22
SOCIO-ECONOMIC STATUS	1	48.51			6.29
	2	48.99			6.77*
	3	42.22			
	SCHOOLS		1	2	3
		MEANS	33.05	33.45	35.11
MATURITY OF VOCATIONAL ATTITUDES	1	33.05		.40	2.06
	2	33.45			1.66
	3	35.11			
	SCHOOLS		1	2	3
		MEANS	5.06	6.50	5.96
EXVIA	1	5.06		1.44**	.90
	2	6.50			.54
	3	5.96			
	SCHOOLS		1	2	3
		MEANS	6.09	5.86	5.31
ANXIETY	1	6.09		.23	.79
	2	5.86			.55
	3	5.31			

*p $\leq$ .05 (two-tailed tests)
**p $\leq$ .01 ( )

status indices, (b) anxiety scores, (c) exvia scores, and (d) maturity of vocational attitudes scores. The values of these product moment r's were tested with t-test to find out whether these were different from zero. A level of .05 was used for determing the statistical significance of the F-ratios and the correlation coefficients. Two-tailed tests were used for the first hypothesis. As the other four hypotheses predicted a direction, one-tailed tests were applied to the data.

In this chapter the investigator has presented hypotheses, procedure and instruments used, and an outline of the statistical analyses performed. The next chapter presents the results of the various statistical analyses done in the study.

CHAPTER V

RESULTS

This chapter presents the evidence for the confirmation or rejection of hypotheses, and is divided into six major sub-divisions - one for each hypothesis and one for the summary of results. The results are reported in two parts for each hypothesis. The first part presents the results for the group which used Bob's profile and second part gives the results for the group which used Mary's profile. These results are further presented with reference to total male subgroups, total female subgroups, total male plus female subgroups, and the three school subgroups.

Hypothesis 1

The first hypothesis was: There is no significant relationship between the sex of the subject and career decision making ability scores.

A two-way analysis of variance was carried out to discover if significant differences existed between the sexes on career decision making ability scores. This was done separately for players using Bob's profile and players using Mary's profile. The results for the both profile subgroups are summarized in Table 6.

As can be seen in Table 6, the main effects for sex variable were not significant for career decision making ability scores for Bob's profile, which supported the hypothesis of no relationship between the sex of the player and career decision making ability scores for the group using Bob's profile. The main effects for sex variable were also not significant for career decision making ability scores for Mary's profile thus supporting the hypothesis of no relationship between the sex of the player and career decision making ability scores for the group which used Mary's profile (Table 6).

TABLE 6

SUMMARY OF ANALYSES OF VARIANCE FOR SCHOOL BY SEX BY CAREER DECISION MAKING ABILITY SCORES

SOURCE OF VARIATION	SS	df	MS	F
BOB'S PROFILE				
SA (School)	1728.00	2	864.00	0.09
SB (Sex of Player)	3456.00	1	3456.00	0.34
SAB (School by Sex Interaction)	5664.00	2	2832.00	0.28
SE (Experimental Error)	680800.00	67	10161.20	
MARY'S PROFILE				
SA (School)	534.00	2	267.00	0.06
SB (Sex of Player)	1806.00	1	1806.00	0.42
SAB (School by Sex Interaction)	11859.00	2	5929.50	1.38
SE (Experimental Error)	279646.00	65	4302.25	

*p $\leq$ .05 (two-tailed tests)
**p $\leq$ .01 ( )

In summary, consideration of the results for Bob's profile (Table 6) and Mary's profile (Table 6) indicated that the hypothesis of no relationship between the sex of the subject (player) and career decision making ability as measured by total Life Career Game scores was supported for the total sample comprised of players using Bob's profile and players using Mary's profile.

Hypothesis 2

It was hypothesized that there is a significant positive relationship between socio-economic status indices and career decision making ability scores.

Pearson product moment correlation coefficients between socio-economic status indices and career decision making ability scores were calculated and tested for significance with t-tests. The summary of these results is presented in Table 7.

In the case of the group with Bob's profile (Table 7), no significant relationship was found between socio-economic status indices and career decision making ability scores for total male subgroup, total female subgroup, total male plus female subgroup, and the three school subgroups.

In the case of the group with Mary's profile (Table 7), the correlation coefficients between socio-economic status indices and career decision making ability scores failed to support hypothesis 2 for total male subgroup, total female subgroup, total male plus female subgroup, school 1 subgroup, and school 3 subgroup. The relationship between socio-economic status and career decision making ability was significant ($p \leq .05$) and positive for school 2 subgroup, which was reverse to that predicted.

Hypothesis 3

The third hypothesis was: There is a significant negative relationship between anxiety scores and career decision making ability scores.

TABLE 7

CORRELATION COEFFICIENTS BETWEEN SOCIO-ECONOMIC STATUS AND CAREER DECISION MAKING ABILITY SCORES BY SEX

GROUPS	SEX	N	CORRELATION COEFFICIENTS
	BOB'S PROFILE		
TOTAL	M	46	-0.103
	F	27	-0.088
	M + F (Total)	73	-0.100
SCHOOL 1	M + F (Total)	33	0.076
SCHOOL 2	M + F (Total)	20	-0.300
SCHOOL 3	M + F (Total)	20	-0.245
	MARY'S PROFILE		
TOTAL	M	29	-0.009
	F	42	0.065
	M + F (Total)	71	0.032
SCHOOL 1	M + F (Total)	24	-0.109
SCHOOL 2	M + F (Total)	25	0.333*
SCHOOL 3	M + F (Total)	22	0.213

*p $\leq$ .05 (one-tailed tests)
**p $\leq$ .01 ( )

Pearson product moment correlation coefficients between anxiety scores and career decision making ability scores were calculated and tested for significance using t-tests. These results are summarized for the both profile subgroups in Table 8.

In the case of the group with Bob's profile (Table 8), the relationship between anxiety scores and career decision making ability scores for the total female subgroup was significant ($p \leq .05$) and negative as hypothesized (Table 8). There were significant positive relationships between anxiety scores and career decision making ability scores for total male subgroup ($p \leq .01$), school 1 subgroup ($p \leq .05$), and school 2 subgroup ($p \leq .05$), which were opposite to that expected.

In the case of the group with Mary's profile (Table 8), the correlation coefficients between anxiety scores and career decision making ability scores failed to support hypothesis 3 for the total male subgroup, total female subgroup, total male plus female subgroup, and the three school subgroups.

In summary the findings of the study failed to show a significant negative relationship between anxiety scores and career decision making ability scores for total profile subgroups.

Hypothesis 4

It was hypothesized that there is a significant negative relationship between exvia scores and career decision making ability scores.

Correlation coefficients between exvia scores and career decision making ability scores were calculated and tested for significance with t-tests. These results are presented in Table 9.

The results of the study failed to support the hypothesized relationship between career decision making ability scores and exvia scores

TABLE 8

CORRELATION COEFFICIENTS BETWEEN ANXIETY AND CAREER DECISION MAKING ABILITY SCORES BY SEX

GROUPS	SEX	N	CORRELATION COEFFICIENTS
	BOB'S PROFILE		
TOTAL	M	46	0.350**
	F	27	-0.343*
	M + F (Total)	73	0.167
SCHOOL 1	M + F (Total)	33	0.346*
SCHOOL 2	M + F (Total)	20	0.422*
SCHOOL 3	M + F (Total)	20	-0.151
	MARY'S PROFILE		
TOTAL	M	29	-0.028
	F	42	-0.061
	M + F (Total)	71	-0.011
SCHOOL 1	M + F (Total)	24	0.100
SCHOOL 2	M + F (Total)	25	-0.136
SCHOOL 3	M + F (Total)	22	-0.079

*p $\leq$ .05 (one-tailed tests)
**p $\leq$ .01 ( )

TABLE 9

CORRELATION COEFFICIENTS BETWEEN EXVIA AND CAREER DECISION MAKING ABILITY SCORES BY SEX

GROUPS	SEX	N	CORRELATION COEFFICIENTS
	BOB'S PROFILE		
TOTAL	M	46	0.063
	F	27	0.093
	M + F (Total)	73	0.063
SCHOOL 1	M + F (Total)	33	0.201
SCHOOL 2	M + F (Total)	20	0.309
SCHOOL 3	M + F (Total)	20	-0.348
	MARY'S PROFILE		
TOTAL	M	29	-0.016
	F	42	-0.155
	M + F (Total)	71	-0.086
SCHOOL 1	M + F (Total)	24	-0.088
SCHOOL 2	M + F (Total)	25	0.304
SCHOOL 3	M + F (Total)	22	0.122

*p $\leqslant$ .05 (one-tailed tests)
**p $\leqslant$ .01 ( )

as the correlation coefficients for all the subgroups were not significant at the .05 level or better.

In the case of the group with Bob's profile (Table 9), no significant relationship was found between career decision making ability scores and exvia scores for total male subgroup, total female subgroup, total male plus female subgroup, and the three school subgroups. In the case of the group with Mary's profile (Table 9), the relationship between exvia scores and career decision making ability scores was not significant for total male subgroup, total female subgroup, total male plus female subgroup, and the three school subgroups.

Hypothesis 5

The fifth hypothesis was: There is a significant positive relationship between maturity of vocational attitudes scores and career decision making ability scores.

Pearson product moment correlation coefficients between maturity of vocational attitudes scores and career decision making ability scores were calculated and tested for significance with t-tests. These results are presented in Table 10.

In the case of the group with Bob's profile (Table 10), the results failed to support the hypothesized relationship between maturity of vocational attitudes and career decision making ability for the total male subgroup, total female subgroup, total male plus female subgroup, and the three school subgroups. In the case of the group with Mary's profile (Table 10), the correlation coefficients for all the subgroups were not significant. On the basis of these results it was concluded that the hypothesized relationship between maturity of vocational attitudes scores and career decision making ability scores was not supported.

TABLE 10

CORRELATION COEFFICIENTS BETWEEN MATURITY OF VOCATIONAL ATTITUDES AND CAREER DECISION MAKING ABILITY BY SEX

GROUPS	SEX	N	CORRELATION COEFFICIENTS
BOB'S PROFILE			
TOTAL	M	46	-0.006
	F	27	0.178
	M + F (Total)	73	0.059
SCHOOL 1	M + F (Total)	33	0.166
SCHOOL 2	M + F (Total)	20	-0.098
SCHOOL 3	M + F (Total)	20	-0.001
MARY'S PROFILE			
TOTAL	M	29	0.195
	F	42	-0.134
	M + F (Total)	71	0.012
SCHOOL 1	M + F (Total)	24	0.014
SCHOOL 2	M + F (Total)	25	-0.203
SCHOOL 3	M + F (Total)	22	0.163

*p $\leq$ .05 (one-tailed tests)
**p $\leq$ .01 ( )

Summary of Results

The following statements summarize the major findings of this study.

1. There was no significant difference between the career decision making ability of male and female players as measured by Boocock's Life Career Game total scores.

2. No positive relationship was found between socio-economic status as determined by Blishen's Scale (1967) and career decision making ability as measured by total Life Career Game scores for the total group.

3. Anxiety as measured by Cattell's Junior-Senior High School Personality Questionnaire (The HSPQ) and career decision making ability as measured by total Life Career Game scores were not negatively related as predicted.

4. Evidence was not found in support of the hypothesized negative relationship between exvia (extraversion) as measured by the HSPQ and career decision making ability as measured by total Life Career Game scores.

5. The hypothesis of a positive relationship between maturity of vocational attitudes as measured by Crites' Vocational Development Inventory - Attitude Scale and career decision making ability as measured by total Life Career Game scores was not supported.

CHAPTER VI

DISCUSSION, IMPLICATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The results of the study have been presented in the preceding chapter. This chapter focusses on the discussion of the findings and their implications for couselling and research in career decision making.

Discussion

An examination of the relationship of socio-economic status, anxiety, exvia (extraversion), and maturity of vocational attitudes to career decision making ability as measured by the Life Career Game scores has been stated as a primary objective of the present study.

The findings of the study offer little support for the hypothesized relationships between career decision making ability and its proposed correlates. Some of the findings contradict the postulated direction of the relationships. But, the break up of the total sample into sex and school subgroups demonstrated, for some subgroups, a significant relationship between career decision making scores and various correlates being considered in this study.

The results of this study supported the findings of a recent study (Weinhold, 1969) which also failed to find any relationship between anxiety and vocational problem solving ability, measured by the Life Career Game. It was suggested that the lack of support for the hypothesized relationship between these two variables may be partly due to the unrefined nature of the instruments used in the study. The failure of the present study to support the relationship between career decision making ability and anxiety may also be partly due to the use of the Life Career Game which is as yet an unrefined instrument.

One important finding of the study done by Brim et al. (1962) was the absence of any relationship between manifest anxiety and the decision making process. The present study, which uses a similar definition of anxiety, supported the findings of that study. Both of these results contradicted previous research results. Furthermore, Brim et al. (1962) showed that there was not much concern about the more distant consequences of the participant's actions in their study, which was supported by the present study when the comments of the players about the Life Career Game and their "Record Sheets" were reviewed. Finally, the results of the present study contradicted the previous research findings (Brim et al., 1962) that decision making ability was related to the sex of the respondents. The findings of the present study indicated that the career decison making ability of the participants was not related to their sex.

The findings of the present study showed very little support for the hypothesized relationship between vocational maturity and career decision making ability thus contradicting the findings of the previous studies (Dilley, 1962; Cover, 1969) supporting the relationship between these two variables. No conclusive support was evident for the expected relationship between socio-economic status and career decision making ability which contradicted the findings of Gribbons and Lohnes (1964) and Sewell and Shah (1967).

The failure of the findings of the present study to support four out of five hypotheses may have been due to limitations in the design, sample, and measurement techniques. Some of the shortcomings are given below.

1. The Life Career Game which was used to measure career decision making ability of the participants may have, in part, affected the results of the study. This was a novel role assigned to this game on the basis of the validity of its contents and it may not have been a valid measure of

this ability. Some other drawbacks of the game, which could have affected the total Life Career Game scores of the subjects, include:

(a) The fairlure of the game to provide a comparable spread of scores on all decision areas. Education and leisure contributed more to the total score as compared to those of job and family life.

(b) The failure of the game to provide checks against the tendency of the participants to repeat the same set of scores from round to round, particularly when their profile person got a job.

2. The disinterest on the part of some participants who suggested that they were forced into the playing of the Life Career Game which was long, complicated, and boring may have influenced their Life Career Game scores as well as scores on other instruments.

3. The personal whims and curiosity of the participants may have led them to make unrealistic plans for their profile persons. This may have affected their Life Career Game scores.

4. "Most (players) are too preoccupied with living the present (Boocock, 1968, p. 3)" and usually do not attach too much importance to the future. This could have been another reason for less realistic decisions in the areas of job and family life, thus, affecting the total Life Career Game scores.

5. The desire of some players to "try out some personal decision making alternative life patterns for themselves (Boocock, 1968, p. 4)" may have made the Life Career Game scores of these players unrealistic. This may have been beneficial to them for evaluating their own future career plans, but could have made the career plans of the profile person

unrealistic, thus affecting the player's total Life Career Game scores.

6. The tendency of the participants to select socially desirable responses on the HSPQ and the VDI may have influenced their scores on these instruments. Also this phenomenon of social desirability may have affected the future planning of their profile person. In this way the scores of the participants on the game and personality and vocational maturity inventories may have influenced the results of the study to an extent that the confirmation or rejection of the hypotheses seem questionable.

7. The adminstrative set up of some schools involved in the study made it difficult to draw a truly random sample by restricting the investigator to work only with particular grade nine classes or optional subject groups which may have affected the results of the study.

The limitations of the study as discussed above should be kept in mind while designing a new study using these instruments or replicating the present study. It is obvious from the above discussion that several alternative procedures might be employed to improve the overall design and possibility of producing more valid and reliable results.

Implications and Suggestions for Further Research

In the following section the implications of the present research are discussed in terms of counselling and further research in the field of career decision making.

Counselling for career decision making. The inconclusive nature of the findings of the present study makes the task of appraising their usefulness in the counselling process rather difficult. The interpretation of the findings suggests that career decision making ability is independent of sex differences but the findings of the study have failed to confirm the relationship of personality characteristics of anxiety and extraversion to

career decision making ability. The belief that the knowledge of the client's personality characteristics, maturity of vocational attitudes, and socio-economic status affects an individual's career decision making ability has not been substantiated by the findings of this study. In that event the Life Career Game record sheets showing the career plans for the profile persons made by the individual clients may be the only source available to the counsellor to pinpoint the weaknesses in the career planning of the individual. This may lead to some rededial treatment. For example, if the planning of the individual seems unrealistic in the area of education due to lack of knowledge about the future possibilities open to that individual, the counsellor could suggest the use of some material dealing with the programs offered in various schools, their pre-requisites, and their importance in the future training programs. Furthermore, an intimate study of the career plans of the individual, coupled with the discussion about his reasons for such plans, could provide a counsellor with details about the aspirations, interests, attitudes, and beliefs of the individual. This could become a key to the understanding of the client's reaction patterns and provide an opportunity to establish a meaningful relationship with that individual. This will provide the counsellor with an insight which will prepare him to offer the needed support to the individual to make his career decisions more realistic and meaningful.

Further research in career decision making. A few of the reasons for failure to obtain hypothesized results could be the reliability of the instruments used, or actual differences within the groups as a result of sampling. A comparison of the scores obtained on this game with scores on other measures of career decision making ability would be helpful for validation of game scores. Such a study could bring out information about the

different aspects of this ability. The use of the Vocational Development Inventory - Competence Test by J.O. Crites, Vocational Decision Test by T.A. Ryan, and Townsend-Smith Decision Making Test by J.C. Townsend may prove a rewarding experience in this direction. All of these tests are in the final stages of development and will be available soon.

Perhaps an additional step into further research on career decision making and personality characteristics would be to explore the developmental aspects of this problem. The subjects of the present research were grade nine students from suburban schools. It would be interesting to know the reactions of grade nine students from rural and urban schools and the relationship of their scores to personality characteristics. Furthermore, the study could be replicated for grade 8 to 12 students from rural, suburban, and urban schools which might provide an idea about the developmental trends of such relationships.

The development of a 'realism of career planning index' could become a worthwhile project. Moreover, this index could be used to compare the career decisions of an individual for successive intervals of five years duration, thus providing an insight into the developmental patterns of this facet of human growth. Along with the insight into an individual's career planning patterns, it would also provide some guidelines for other individuals faced with the problems of career planning in the areas of education, job, family life, and leisure activities.

Some studies could be designed to explore the contributions of the Life Career Game in developing the decision making ability of the students. As it was expressed by the students that their experience with the game prepared them for planning of grade 10 courses and future careers, a pre-post test design could be used to evaluate this aspect of the Life Career Game.

In the introductory phase, a discussion of available educational programs and job situations could be undertaken, and afterwards the individuals could be provided with an opportunity to play the game and at the same time extend the discussion in between the rounds. It is expected that this experience would enhance the understanding of the students of the world for which they are preparing themselves.

A study dealing with voluntary and forced participation of the individuals in the game experience might lead to some interesting results. After the preliminary introduction about the future possibilities in the fields of education, training, and employment, the individuals should be asked to express their plans for future educational programs and vocational goals. Afterwards, the individuals could be divided into two groups on the basis of their expressed desire to participate or stay away from the game experience. Both of these groups should be provided with an opportunity to play the game after which they should be asked to state their educational and vocational plans. A comparison of these pre-post plans might bring out the role of motivation in learning and using the skill of career decision making.

Finally, comparison of career decision making ability of individuals from high and low anxiety groups could be a worthwhile undertaking. This type of study could provide some insight into the career decision making ability of individuals with high and low anxiety levels. In addition, it could enable counsellors, teachers, parents, and the individuals involved in career decision making to understand the nature of career decisions reached under the various levels of anxiety. Consideration of ther variables such as extraversion, vocational maturity, and socio-economic status in the above manner could reveal some pertinent information regarding the

role of these variables in the process of career planning. This would, hopefully, provide some direction for the person involved in career decision making to make his decisions more realistic.

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APPENDIX A

STUDENT QUESTIONNAIRE

STUDENT QUESTIONNAIRE

(Confidential)

1. Name _____ 2. Sex: a) Male ___
(Last Name - Print) (First Name) b) Female ___

3. Date of birth _____

4. Address _____

5. School _____ 6. Grade _____

7. What is your father's occupation? (Be specific. For example: sales clerk at Eaton's, door to door salesman with Fuller Brush, bus driver with City of Edmonton, manager of St. Albert Safeway, principal of Paul Kane High School, etc.)

_____

8. What does he actually do at the job? (Such as paints houses, sorts mail, cuts up meat, drives school bus, etc.)

_____

9. Does he work for himself or someone else?
a) Himself _____ b) Someone else _____

10. Does he work on a full-time and/or part-time job?
a) Full-time only _____
b) Full-time and part-time _____ If yes, how many hours a week does part-time job take? _____
c) Part-time only _____ If yes, how many hours a week does part-time job take? _____

11. What is your mother's occupation? (Be specific. For example: housewife, waitress at Seven Seas, cashier at Woodwards, secretary at Principal's Office, nurse at University Hospital, teacher in Leo Nickerson Elementary School, etc.)

_____

12. What does she actually do at her job? (Such as keeps house, acts as a receptionist, cleans office building, teaches grade four, handles correspondence in St. Albert Garage, etc.)

_____

13. Does she work for herself or someone else?
a) Herself _____ b) Someone else _____

14. Does she work on a full-time and/or part-time job?
a) Full-time only _____
b) Full-time and part-time _____ If yes, how many hours a week does part-time job take? _____
c) Part-time only _____ If yes, how many hours a week does part-time job take? _____

THANKS FOR YOUR COOPERATION

APPENDIX B

LIFE CAREER GAME MATERIALS

APPENDIX B

LIFE CAREER GAME MATERIALS*

* These materials were taken from the Life Career Game by Sarane S. Boosock (1968) and were used in the study in their original or adapted form.

APPENDIX B-1

LIST OF MATERIALS

1. Instructor's Manual
2. How the Scoring Works
3. Players' Folder
4. Players' Rules
5. Fictitious Profiles
6. School Job Catalog
7. Time Schedule Form
8. Record Sheet
9. School Application
10. Application for Employment
11. Classified Ads
12. School Spinners
13. Job Spinners
14. Family Spinners
15. Scorer's Tables
16. Scorer's Spinners
17. Unplanned Events Cards

APPENDIX B-2

HOW THE SCORING WORKS

Education

A person's grade for a course is affected by three things:

1. his ability for that course. This is given in his Profile. Verbal ability tells how well he will do in English, social studies, and foreign language courses. Quantitative ability tells how well he will do in math and science. Vocational skills tells how well he will do in commercial, art, music, home economics and shop courses. For example, Mike has below average verbal ability, which means that he will have a hard time in English or social studies. However, he has average vocational ability, which means that for the same amount of effort he should do better in a commercial or shop course.

2. the amount of time he studies for this course. This is a decision the players make for their person, and you will find this on the Schedule Form for this round.

3. luck -- for example, whether the person got along with his teacher, or whether he felt well the day of the final exam. This is determined by spinning the School Grades spinner.

A person's Education Score is based upon how many courses he is taking and how good his grades are in relation to his ability. A's give the highest scores, B's next highest, and so on down to F's which give no score or a negative score. However, the score also depends upon the person's ability for the course -- and thus how hard he has to work to get a good grade. For example, getting an A takes such hard work and is so rare for a person with low ability that it gives him more satisfaction and reward than it does to a brighter person who wouldn't have to work so hard to get a good grade. Likewise, flunking a course gives a high ability person a negative score, but a low ability person just a 0.

Occupation

If the person is a high school student with a part-time job, his score is determined by the number of hours he works and his family's financial situation.

For example, students from poor families, whose families really need the extra money, get more reward from working than students whose families are relatively well off.

If the person has a full-time job, his score is based upon what job he holds and how long he has held it. Some jobs, such as waitress, janitor, and other lower level service jobs, are fairly satisfying to begin with but get less rewarding if a person keeps the same job for more than a few years. Other jobs stay about the same no matter how long you hold them -- for example, dental hygienist, surveyor. And some jobs, such as physician, architect, and other high level professional positions, start out a high level of satisfaction and get even more rewarding over time.

Family

An unmarried person gets a family score only if he or she does more helping around the house than he has to -- that is, if he invests more energies in his family or his home than the minimum required. If he is still living with his parents, the amount of satisfaction (score) he gets from this extra effort at home depends upon (1) how well he gets along with his family and (2) the family's need for this extra help. For example, Bob gets along well with his parents and his family need all the help they can get, so he gets the highest possible score for each hour of extra help. Anne's mother needs help, but since the family life is unhappy, Anne gets less satisfaction than Bob. Liz, on the other hand, gets along with her family but their need for help is not great, so she also gets less satisfaction than Bob. The least score would be for a Profile like Mike's. Mike is in trouble with his father because of his poor school record and his happy-go-lucky attitude, and at the same time the father is earning enough money to take care of his family especially now that the two oldest children have left home, and there are no medical problems that

call for especially high expenses and need for extra care. So spending extra time around the home isn't very rewarding for Mike.

When a person gets married, he gets a bonus of ten points, and from then on a yearly score based upon the amount of education he or she has, how long he has been married and the number of children he has. Studies of American families have shown that better educated people tend to have more stable and satisfying marriages. They have also shown that people's satisfaction with their marriages tend to decline over time unless they invest extra efforts to make their marriages meaningful -- this is simulated in the game by giving extra points for having children and for spending more time around the home than the minimum number of hours required.

Because marriage and family life are still considered the woman's "specialty," women get slightly higher points for extra investment of energies in the home.

Leisure

The leisure score of an unmarried person still living with his or her parents is based upon (1) how well the activities he chooses fit his interests and abilities, and (2) how much free time he has.

> For example, playing on an athletic team and doing things with his friends are the more rewarding activities for Mike, while Bob has more fun working on hobbies on his own. It is also usually more satisfying for a person to engage in a variety of activities rather than just one, especially if he has a lot of free time.

If the person is living on his own or is married, his leisure score is based upon how much free time he has and the amount of education he has, his marital status, and how much money he has to spend in his free time. If you look at how the Leisure Rating Wheel works you will see that the more education a person has and the higher his income above the minimum income

required, the higher his leisure rating. He also gets a higher rating if he or she is married than if he is single or divorced. A person also gets additional points if he engages in a variety of leisure activities rather than just one.

APPENDIX B-3 *

PLAYERS' FOLDER

L I F E C A R E E R

Your team's goal is to plan the best life possible for the next eight years in the life of an imaginary person.

> Begin by reading the profile card of your person. This will tell you what your person is like, what his or her abilities are, and what he likes and dislikes.

Each round of LIFE CAREER represents 1 year in this person's life. You decide how he will spend his time each year. For each round, your team must figure out your person's family budget and must decide if your person:

1. IS GOING TO STAY IN SCHOOL THIS YEAR.
2. WANTS TO HAVE A JOB THIS YEAR.
3. WANTS TO GET MARRIED OR HAVE A CHILD THIS YEAR, AND HOW MUCH TIME HE WILL SPEND WITH HIS FAMILY.
4. IS GOING TO HAVE ANY LEISURE ACTIVITIES.

Your team will get scores in each of these 4 decision areas at the end of each round.

* This material has been copied from the Player's Folder provided in the Life Career Game.

POSSIBLE CHOICES AT VARIOUS POINTS IN LIFE CAREER

Your Person Can Do As Many of The Things

On the List as He or She Has Time For

IF YOUR PERSON IS A HIGH SCHOOL STUDENT, HE CAN --

1. Stay in High School, working toward graduation.
2. Drop Out of High School and --

   -- Go to Trade School
   -- Go to Night School
   -- Not go to school at all if 16 or older.

3. Get a Part-Time Job.
4. Get a Full-Time (Level 1) Job, if not a Full-Time High School Student
5. Go into the Armed Service if 18 or older.
6. Get married, if boy is 18, girl is 16 or older.
7. Stay at home or travel, if he can afford it.

IF YOUR PERSON HAS LEFT HIGH SCHOOL BUT NOT GRADUATED, HE CAN --

1. Go to Trade School.
2. Go to Night School.
3. Get a Part-Time Job.
4. Get a Full-Time (Level 1) Job.
5. Go into the Armed Service if 18 or older.
6. Get married, and have children.
7. Stay at home or travel, if he can afford it.

IF YOUR PERSON IS A HIGH SCHOOL GRADUATE, HE CAN --

1. Go to a 4-year College
   a Junior College
   Trade School.
2. Get a Part-Time Job.
3. Get a Full-Time (Level 1 or 2) Job.
4. Go into the Armed Service (Can try for Officer's Training)
5. Get married, and have children.
6. Stay at home or travel if he can afford it.

IF YOUR PERSON HAS A HIGH SCHOOL DIPLOMA PLUS A COLLEGE DEGREE OR SOME ADDITIONAL EDUCATION, HE CAN --

1. Go to Professional or Graduate School if he is qualified.
2. Get a Part-Time Job.
3. Get a Full-Time Job (Level 1, 2 or 3 -- or higher if he has a College or Graduate Degree).
4. Go into the Armed Service (Can try for Officer's Training).
5. Get married and have children.
6. Stay at home or travel if he can afford it.

COURSES OFFERED IN HIGH SCHOOL

5-Hour Courses:

English
Social Studies
Math
Science (biology, chemistry, physics, etc.)
Foreign Languages (French, Latin, Spanish, etc.)

3-Hour Courses:

Commercial (Typing, Business, shorthand, bookkeeping, etc.)
Home Economics
Shop or Industrial Arts
Phys. Ed.

2-Hour Courses:

Music
Art

TO GRADUATE A STUDENT MUST PASS (GRADE OF D OR BETTER) AT LEAST 16 COURSES, INCLUDING:

3 English	1 Math	
3 Social Studies	1 Science	(also 4 years Phys. Ed.)

TO GO ON TO COLLEGE A STUDENT SHOULD TAKE AT LEAST:

4 English	4 Foreign Language	2 Science
4 Social Studies	3 Mathematics	4 Phys. Ed.

NOTE: All courses require some work outside of class, althogh "studying" for courses like shop or dressmaking may mean working on a project or practicing a skill instead of reading a textbook.

NUMBER OF HOURS OF HOUSEWORK REQUIRED

If a person does more than the minimum requirement shown in this table, he will get family points.

PERSON IS --		MEN	WOMEN
UNMARRIED:	living with parents	6	6
	living at school	5	6
	living alone	8	10
MARRIED:	with no children	5	25
	with children, the youngest age 5 or less	10 for 1st child + 2 for each additional child	60 for 1st child + 5 for each additional child
	with children, the youngest age 6 or older	8 for 1st child + 2 for each additional child	40 for 1st child + 5 for each additional child

APPENDIX B-4

L I F E C A R E E R

PLAYERS' RULES

This rule book will tell you how to make every kind of decision in LIFE CAREER.

For each round of the game, begin on the next page and go straight through the rule book.

BUDGET

FIRST: ESTIMATE YOUR PERSON'S FAMILY BUDGET FOR THE YEAR.

(You may want to make some changes in the budget after you have made some of the other decisions for this round -- but you'll want to know at the beginning of each round whether your person's family has enough money to live on, or whether your person has to work.)

THE BUDGET IS IN THE LEFT HAND COLUMN OF THE RECORD SHEET. THERE ARE FOUR SPACES IN THE BUDGET FOR YOU TO FILL IN:

(1) MINIMUM INCOME REQUIRED. Every family needs a certain amount of money to cover basic living expenses. In LIFE CAREER, the income required is based upon the number of people in your person's family. If the family does not have enough money, your team will lose points.

This is the way to figure out the minimum income required by your person's family:

> $2000 for the first person plus
> $500 for each additional person

Some examples:

Your person is living with his parents and two younger sisters. This equals your person plus 4 additional persons. The minimum income required = $2000 + (4 x $500) = $4000.

Your person has left home and is living by himself. The minimum income required = $2000.

Your person is married and has one child. This equals your person plus 2 additional persons. The minimum income required = $2000 + (2 x $500) = $3000.

MORE ABOUT BUDGET ON THE NEXT PAGE.

BUDGET

FIRST: ESTIMATE YOUR PERSON'S FAMILY BUDGET FOR THE YEAR.

(You may want to make some changes in the budget after you have made some of the other decisions for this round -- but you'll want to know at the beginning of each round whether your person's family has enough money to live on, or whether your person has to work.)

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Some examples:

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Your person has left home and is living by himself. The minimum income required = $2000.

Your person is married and has one child. This equals your person plus 2 additional persons. The minimum income required = $2000 + (2 x $500) = $3000.

MORE ABOUT BUDGET ON THE NEXT PAGE.

(2) TOTAL FAMILY INCOME. This includes --

(a) your person's income if he or she has a job (you will probably have to add this later after you have made a definite decision about a job);

plus

(b) either parents' income if person is living at home

or

husband or wife's income if person is married.

IMPORTANT. If the total family income is less than the minimum income required, your person must work.

(3) EXPENSES. You will fill in expense figures during the round if your person has either:

tuition and room and board at a college or other school that charges fees;

or

household or domestic help.

You will find out about these possible expenses later on in this Rule Book.

(4) TOTAL FAMILY INCOME MINUS EXPENSES. At the end of the round you will subtract any expenses from the total family income.

The important thing to remember is that this new total family income figure must be at least as large as the minimum income required. That is, your person cannot go on to college or hire domestic help unless the family can afford it.

FILL IN THE MINIMUM INCOME REQUIRED AND THE TOTAL FAMILY INCOME NOW.

(Write lightly so that you can make changes later if you need to.)

YOU CAN FILL IN THE REST OF THE BUDGET LATER IN THE ROUND IF YOUR PERSON HAS SCHOOL OR DOMESTIC HELP EXPENSES.

GO ON TO THE NEXT PAGE.

IS YOUR PERSON GOING TO STAY IN SCHOOL THIS YEAR?

A person who is under 16 must be a full-time student in high school or trade school.

A person who is 16 or older does not have to stay in school unless he or she wants to.

NO: If your person is not going to school this year,

go to page 9.

YES: If your person wants to stay in school this year --

either as a full-time or as a part-time student --

GO TO THE NEXT PAGE.

HAS YOUR PERSON GRADUATED FROM HIGH SCHOOL?

YES: Go on to page 6.

NO: Read the rest of this page.

A student who wants to go to school full time may attend either HIGH SCHOOL or TRADE SCHOOL. The rules for both these schools are in Part 1 of the School Catalog.

A student who wants to go to school part time may attend NIGHT SCHOOL or TRADE SCHOOL. The rules for these schools are in Part 1 of the School Catalog.

NOW TURN TO PAGE 8.

IF YOUR PERSON HAS GRADUATED FROM HIGH SCHOOL, he can apply to one or more of the following kinds of schools:

-- a small, co-educational liberal arts college

-- a technological institute

-- a highly competitive liberal arts college

-- a state university

-- a community junior college

-- a college of art and architecture

-- a nursing school

-- a business and secretarial college

IF YOUR PERSON HAS HAD AT LEAST SOME COLLEGE, he can apply to one or more of the following kinds of schools:

-- a college of pharmacy

-- a veterinary college

IF YOUR PERSON HAS GRADUATED FROM A 4-YEAR COLLEGE, he can apply to one or more of the following kinds of schools:

-- a dental school

-- a law school

-- graduate work in the humanities, social sciences, natural sciences or engineering

-- a medical school

-- a college of physical and occupational therapy

-- a school of social work

NOW GO TO THE NEXT PAGE.

THE RULES FOR ATTENDING ALL SCHOOLS THAT REQUIRE A HIGH SCHOOL DIPLOMA OR MORE ARE GIVEN IN PART 2 OF THE SCHOOL CATALOG.

When you have decided on the school or schools your person wants to apply to:

1. Go to the Application Table.

2. Fill out a School Application.

3. Use the School Spinners to find out if your person gets accepted at a school (and if he or she gets a scholarship).

GO ON TO THE NEXT PAGE.

SCHOOL

IF YOUR PERSON IS IN SCHOOL THIS YEAR --

1. If he is in a school that charges tuition (and maybe room and board) write in the costs in the "Expenses" item of your BUDGET for this year.

   Remember that a person cannot go to college or any other school that costs money unless either (1) his family can afford it; or (2) he gets a scholarship large enough to cover enough of these costs.

2. Write in the names of the courses your person will take on your SCHEDULE. The School Catalog tells you all the courses that are offered at each school, and what kinds of courses are required to graduate.

3. Write in the hours your person spends studying for his courses. Show study hours on the SCHEDULE by writing the word "STUDY" with the name of the course he is studying -- for example, Study English, Study Art, Study Shop. In this game, you can't break up hours and study more than one subject in any one hour.

   A HINT: Teachers for all courses assign some work outside class, although "studying" for a course like shop, art, music or typing may mean working on a project or practicing a skill instead of reading a textbook.

4. Fill in the EDUCATION columns on your RECORD SHEET. For each course your person takes, fill in: the name of the course; the number of hours it meets each week; and the number of hours your person decides to study for that course. Don't fill in the Grades column -- the scorer will do that at the end of the round.

WHEN YOU HAVE MADE ALL YOUR DECISIONS ABOUT YOUR PERSON'S EDUCATION FOR THIS YEAR, GO ON TO THE NEXT PAGE.

DOES YOUR PERSON WANT TO HAVE A JOB THIS YEAR?

NO: Go to page 11.

YES: Read the rest of this page.

IF YOUR PERSON HAS A JOB NOW, he can keep that job if he or she wants to. He does not have to re-apply. If he is going to keep his present job, go to page 10.

IF YOUR PERSON WANTS A NEW PART-TIME JOB, turn to Part 1 of the Job Catalog. Choose the job he wants and then turn to page 10.

IF YOUR PERSON WANTS A NEW FULL-TIME JOB, turn to Part 2 of the Job Catalog. Look at the section of Part 2 that describes jobs requiring the amount of education your person has now. Then:

1. Go to the Application Table.

2. Look at the Classified Ads. (Find out which day's Classified Ads you use by using the Job Spinner.)

3. Fill out an Application for Employment.

4. Use the Job Spinner to find out if your person gets the job he wants.

GO ON TO PAGE 10.

IF YOUR PERSON IS WORKING --

Fill in the hours he or she works on the SCHEDULE. Remember that a person with a part-time job must work at least eight hours a week; a full-time job takes 40 hours a week unless the Job Catalog says otherwise.

Fill in the Job column on the RECORD SHEET.

WHEN YOU HAVE MADE ALL YOUR DECISIONS ABOUT YOUR PERSON'S JOB FOR THIS YEAR, GO ON TO THE NEXT PAGE.

DOES YOUR PERSON WANT TO GET MARRIED THIS YEAR?

A man must be at least 18 years old, a woman at least 16, to get married.

NO: Go to page 12.

YES: Go to the Application Table and follow the instructions on the Family Spinner to find out if your person has an opportunity to marry this year and if so, what kind of person he or she can marry.

If your person does have an opportunity to marry, you and your teammates decide whether he or she should marry this particular potential spouse -- or whether he should try his luck again next year.

If your person does decide to marry this potential spouse, X the box in the Family column on the RECORD SHEET. Congratulations!

NOW GO TO PAGE 13.

DOES YOUR PERSON WANT TO HAVE A CHILD THIS YEAR?

NO: Go to page 13.

YES: Go to the Application Table and follow the directions on the Family Spinner to find out if your person has a child this year.

If he or she does have a child, add this child to the number of children in the Family column on the RECORD SHEET. Congratulations!

NOW GO TO THE NEXT PAGE.

NOW FIGURE OUT HOW MUCH HOUSEWORK OR HELPING AT HOME YOUR PERSON MUST DO THIS YEAR. (Remember that everyone must do some housework every round of the game.)

Use this table to tell you how much housework your person must do. A person may do more than the minimum requirement shown in the table -- and he or she will get extra Family points for this.

NUMBER OF HOURS OF HOUSEWORK REQUIRED

Person is --		Men	Women
Unmarried:	living with parents	6	6
	living at school	5	6
	living alone	8	10
Married:	with no children	5	25
	with children, the youngest age 5 or less	10 for 1st child + 2 for each additional child	60 for 1st child + 5 for each additional child
	with children, the youngest age 6 or older	8 for 1st child + 2 for each additional child	40 for 1st child + 5 for each additional child

Some Additional Rules about Housework

1. A woman may reduce her housework by hiring domestic help, if the family income will cover it. Domestic help costs $2.00 an hour. For every hour of help paid for, a woman may subtract 1 hour of housework.

   If your person does hire household help, add this cost to the "Expenses" item in the BUDGET. Remember that a person cannot hire domestic help unless the total family income minus expenses is at least as large as the minimum income required by the family.

2. If a woman does at least 10 hours of housework every round of the game before she marries, she may subtract 5 hours of housework every round after she marries.

3. If a male person marries a woman with a job, she will continue to work until the birth of the first child. After that she will automatically stop working -- and her income will cease -- unless either the family pays $2.00 an hour for domestic help for every hour the wife works, or the husband adds 1 hour of housework for every hour the wife works.

ENTER YOUR PERSON'S HOURS OF HOUSEWORK ON THE SCHEDULE. FILL IN THE FAMILY COLUMN ON THE RECORD SHEET.

GO ON TO THE NEXT PAGE.

DOES YOUR PERSON HAVE ANY FREE TIME?

(That is, are there any hours still left empty on your SCHEDULE FORM for this round?)

NO: Go on to page 15.

YES: Decide how your person is going to spend his leisure hours and fill these in on the SCHEDULE FORM. These are the different kinds of things a person can do in his leisure time:

Relaxing at home -- watching TV or doing things with your family, reading magazines, etc.

Fun with friends -- things you do with people outside your own family, like dating or going to parties, playing ball or driving around in a car with friends.

Hobbies -- sewing, working on a car, playing a musical instrument, etc. Each hobby takes at least 6 hours a week.

Clubs -- organized activities like school clubs, attending church or singing in a church choir, 4-H or scouts, etc. Each club takes 3 hours a week.

Athletics -- playing on a high school or college team. This activity is open only to boys who are full-time high school or college students and who maintain at least a C average in their academic work. A person going out for a team writes "Athletics" on his SCHEDULE from 3:00 - 5:00 Monday through Saturday.

WRITE IN WHAT YOUR PERSON WILL DO EACH HOUR OF HIS FREE TIME. FILL IN THE TOTAL TIME IN EACH KIND OF ACTIVITY IN THE LEISURE COLUMN AT THE BOTTOM OF THE SCHEDULE FORM. THEN GO ON TO THE NEXT PAGE.

YOUR SCHEDULE FORM SHOULD BE COMPLETED NOW. CHECK TO BE SURE:

1. that each of the 84 hour spaces on the SCHEDULE is filled in with one activity. If there are any empty spaces on the SCHEDULE go back and decide on an activity for each of these hours and write it in.

Remember too that a person can only do one thing each hour. Check to be sure you haven't written in more than one activity for any hour on the SCHEDULE.

2. that the BUDGET is completed. Is the total family income figure correct? (If your person has a job be sure that his or her salary is included in the total family income.) Have you added any school or household help expenses your person has? Is the total family income minus expenses (the bottom figure on your BUDGET) at least as much as the minimum income required?

3. that the TOTAL HOURS SPENT section of the RECORD SHEET is completed. Is there a number in each of the TOTAL boxes? (If your person doesn't participate in one of these areas, put a 0 in that box.) Does the total of the five boxes add up to 84?

The scorer will look only at your RECORD SHEET when he is figuring out your scores, so do this adding carefully. You want to get full credit for your person's activity. Adding up the totals accurately is kind of tedious, but it goes faster once you get the hang of it.

NOW YOU ARE READY TO GET YOUR SCORES FOR THIS ROUND OF THE GAME. TAKE YOUR RECORD SHEET TO THE SCORER'S TABLE.

THIS IS WHAT HAPPENS AT THE SCORER'S TABLE

1. If your person is in school, the scorer will compute his grade for each course and enter the grade on your RECORD SHEET.

2. The scorer will compute your team's scores for:

   education
   occupation
   family
   leisure

   and your total score for the round. He will enter them at the bottom of your RECORD SHEET.

3. You draw an Unplanned Event Card.

   No matter how carefully we plan our lives, things sometimes happen that we didn't count on. People can lose their job, or get promoted. Young men can get drafted into the armed forces. Marriages can break up.

   These kinds of things are simulated in the pack of Unplanned Event Cards at the Scorer's Table. Draw one of these cards at the end of each round. If what is on the card applies to your person, then that event happens to him. If you draw a blank card, or if the event on the card does not apply to your person (for example, if you draw a draft card and your person is a girl), then nothing unplanned happens to him or her this year.

4. Put your team's score for this round on the blackboard or scoreboard.

YOU HAVE FINISHED A ROUND OF LIFE CAREER. YOUR PERSON IS ONE YEAR OLDER NOW, AND YOU ARE READY TO BEGIN THE NEXT ROUND OF THE GAME.

USE A NEW SCHEDULE FORM AND RECORD SHEET.

GOOD LUCK!

APPENDIX B-5

LARRY

Larry is fifteen years old and beginning the 10th grade in school. Although he is small in build, he has been active in football, basketball and track, at which he works faithfully and hard. He is sensitive about his size and has been the object of kidding from classmates. Despite this, he is well-liked and is looked up to as a leader in school activities.

Larry has always enjoyed school and is proud of his academic record thus far. He has above average ability in both verbal and quantitiative skills and has demonstrated this by earning mostly all H's and A's in the subjects he has taken. He is particularly proud that he has had all H's in physical education classes.

Due to the amount of time he puts into his studying and sports and some school activities, Larry doesn't have much time left over for social life. He has never had a girl friend in junior high, but sometimes does things with the "boys" after school or after a game. Some of his leisure time is spent with his family, or with his father.

Larry's parents encourage him to do well in school and to participate in extra-curricular activities. His father is a graduate engineer, working in an aerospace industry. He earns $15,000 a year. Larry's mother went to college, but did not finish. She does not work outside the home, but is very active in sponsoring community groups. In addition to Larry there are two younger sisters in the home. All of the neighbors know Larry and his sisters and admire the family unity and spirit they all seem to show.

Although the future seems pretty far off, Larry has given it some thought. At the present time he wants to go to college and study to be a lawyer. He would like to get into politics at some time in his life, but is willing to explore other possibilities.

	7th Grade	8th Grade	9th Grade
English	B	A	A
S.S.	A	A	A
Math	H	A	H
Industrial Arts	A	H	A
Personal Typing		A	A
Science	A	A	H
P.E.	H	H	H

ABILITY

Verbal	-	Above Average
Quantitative	-	Above Average
Electives	-	Average

APPENDIX B-6

MARY

Mary, age 16, is an extremely intelligent and creative girl. In junior high and first year high school she was placed in gifted classes and advance placement classes. She has demonstrated talent in creative writing and has done some outstanding art pieces, particularly with water colors. She loves to do portraits.

In junior high, Mary got all H's and A's. During her grade 10 year a dramatic change took place. She was absent frequently from school, failed to meet class assignments and eventually withdrew from school to attend a private school. As a result, she only earned one unit of credit in the tenth grade, getting a C in Painting and a C in Girl's P.E. However, she was re-enrolled in the public high school, and would like to take classes with her own classmates. She still seems lost, and questions the purpose of school, college, society's values, etc.

Mary has an older brother who lives at home, but is attending a nearby State college, as a freshman. Her father is a Librarian at the State college, earning $8,000 per year. Mary's mother also works, in an office at a nearby private university. She makes $4,200 per year. Both parents are college graduates.

When Mary is not at school, she meets with close friends for "discussions" about life and society and other problems. She sometimes stays up all night, either painting or writing poetry. She has dates with college and graduate students, and is allowed quite a bit of freedom regarding what she does.

She has no idea what her future plans might be. She is under a great deal of pressure from her parents to go to college. Since she reads a great deal, she feels that much of her education can be acquired this way. She is not opposed to learning, but to requirements at school. The tension at home has added to her problems in making some important decisions.

	9th Grade	10th Grade
English	H	D
Social Studies	H	D
Math	A	D
French	H	D
Biology	A	C
Girls' P.E.	A	C
Exp. Art	A	
Painting		C

ABILITY

Verbal	-	Above Average
Quantitative	-	Above Average
Electives	-	Above Average

APPENDIX B-7

BOB

Bob is an extremely intelligent boy. He is just 15 years old, but is already starting his junior year because he skipped the third grade. He has above average ability in all areas. His favorite subject is social studies, and he has read almost every book the local library has on history and archaeology.

Bob's greatest fear is that he will not be able to finish high school. His father works in a factory which has been closed down frequently during the past few years, and his income last year was $3000. One of Bob's three younger brothers has a heart disease, and although the local Heart Association has provided for much free medical service, this is still a big expense to the family. The little boy has been out of school for over a year, so Bob's mother cannot work outside the home.

Bob has helped his family as much as he can. He clerks in a store about two hours every evening. Being the oldest child in the family, and having had to take on family responsibilities so early, Bob is in many ways mature for his age. His mother often turns to him for comfort and advice, and his younger brothers will do anything he tells them to do. He has learned to concentrate and make good use of his time. He has managed to get his good grades even though he does not always have much time for homework. But he worries about his future. Although he truly enjoys his school work and would love to have a college education, this seems out of the question. In fact, he feels perhaps he should leave school when he is sixteen and get a full-time job so that he can help his family. On the other hand, he can see that his father was held back because of a lack of education and job skills and Bob would like to do better.

Bob has not had much time for parties and fun with kids his own age. He is somewhat shy, although well liked by those who know him well. His teachers consider him quite a remarkable boy and have urged him to get as much education as he can.

	9th Grade	10th Grade
English	H	H
Social Studies	H	H
Foreign Language	H	H
Math	A	H
Science	A	A
Commercial		H
P.E.	H	H

ABILITY

Verbal	-	Above Average
Quantitative	-	Above Average
Electives	-	Above Average

APPENDIX B-8

TIME SCHEDULE FORM

Round Number___ Profile's Name_____Profile's Age___Player's Name_____

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
8:00-8:30							
8:30-9:00							
9:00-10:00							
10:00-11:00							
11:00-12:00							
12:00-1:00			LUNCH HOUR				
1:00-2:00							
2:00-3:00							
3:00-4:00							
4:00-4:30							
4:30-5:00							
5:00-6:00							
6:00-7:00			DINNER HOUR				
7:00-8:00							
8:00-9:00							
9:00-10:00							

There are a total of 84 hours to be accounted for. After completing this sheet, summarize your hours on the score sheet. Total hours for education, job, family and leisure should add up to 84.

APPENDIX B-9

RECORD SHEET

Round Number _____ Profile's Name _____
Profile's Age _____ Player's Name _____

I. BUDGET: Minimum Income Required: $_____

Total Family Income $_____
Expenses $_____
Balance (Total Family Income - Expenses) $_____ (must not be less than minimum income required)

II. EDUCATION:

	Name of Course	Hours in Class	Hours of Study	Grade	Score
1.					
2.					
3.					
4.					
5.					
6.					
7.					
	Put "X" here if person graduated this year				
	TOTAL				

TOTAL EDUCATION SCORE - - - - - - - - - - - - -
TOTAL HOURS OF EDUCATION ---------- _____

III. JOB:

1. Put "X" here if person: got new job _____ lost job _____ got promoted _____
2. Particulars of job: name _____ level _____ category _____ salary $_____ number of years held this job _____ hours of job _____ score for job _____

TOTAL JOB SCORE - - - - - - - - - - - - - - -
TOTAL HOURS OF JOB ---------- _____

IV. FAMILY LIFE:

1. Put "X" here if person got married this year _____
2. If married: Number of years married _____
3. Number of children _____ Ages ____ ____ ____ ____
4. Hours of housework _____ 5. Score for houseowrk _____

TOTAL FAMILY SCORE - - - - - - - - - - - - - - -
TOTAL HOURS OF HOUSEWORK ---------- _____

V. LEISURE:

	Hours		Score
1. Athletic Team	_____	(must be at least 12 hrs)	_____
2. Clubs	_____	(at least 3 hrs per club)	_____
3. Hobbies	_____	(at least 6 hrs per hobby)	_____
4. Fun with Friends	_____		_____
5. Relaxing at home	_____		_____
Total	_____		_____

TOTAL LEISURE SCORE - - - - - - - - - - - - -
TOTAL HOURS OF LEISURE ---------- _____
TOTAL SCORE FOR THIS ROUND - - - - - - - - - -
TOTAL HOURS FOR THIS ROUND --------- _____

APPENDIX B-10

S C H O O L A P P L I C A T I O N

DATE _____

NAME _____ AGE _____

EDUCATION	# of yrs. attended	X if graduated	Grade Point average for:	Type of Course (academic, commercial, etc.) or special subjects taken
HIGH SCHOOL	___	___	last 3 years	_____
TRADE SCHOOL OR 2-YEAR COLLEGE	___	___	all years	_____
4 YEAR COLLEGE	___	___	all years	_____

Your first choice school _____

Why did you choose this school? _____

What is your intended field of study? _____

What is your intended life work? _____

Your second choice school (optional) _____

Are you also applying for a scholarship? _____

If yes: What is your family's total yearly income? _____

Person accepted to first choice school _____

Person accepted to second choice school _____

Amount of Scholarship $ _____

APPENDIX B-11

A P P L I C A T I O N F O R E M P L O Y M E N T

PERSONAL INFORMATION: Date _____

Name _____ Age _____

Check One: Married ____ Single ____ Divorced ____ No. of Children ____

EMPLOYMENT DESIRED:

Position _____ Salary _____

2nd Choice (Optional) _____ Salary _____

3rd Choice (Optional) _____ Salary _____

Are you employed now? _____

EDUCATION:	X if Graduated	Type of Course: Academic, Commercial, Etc., Subjects Taken
High School	_____	_____
Trade School or 2 Year College	_____	_____
4 Year College	_____	_____
Graduate School	_____	_____

U.S. Military Service: Yes _____ No _____

Activities: (Civic, Athletic, etc.) _____

FORMER JOBS: (List last two jobs)

JOBS	SALARY	REASON FOR LEAVING
_____	_____	_____
_____	_____	_____

REFERENCES: You will need to supply the names of three persons not related to you, whom you have known for at least one year.

I authorize investigation of all statements contained in this application. I understand that misrepresentation or omission of facts called for is cause for dismissal. Further, I understand and agree that my employment is for no definite period and may, regardless of the date of payment of my wages and salary, be terminated at any time without any previous notice.

DATE _____ SIGNED _____

Person is hired? _____ Yes ____ No

Name of Job _____

Salary _____

APPENDIX B-12

SCORE RECORD SHEET

NAME: _____ GRADE _____ SCHOOL _____
Last First

NAMES OF PROFILE PERSONS	Round Numbers / Decision Areas	1	2	3	4	5	6	7	8	TOTAL
LARRY	EDUCATION									
	JOB									
	FAMILY									
	LEISURE									
	TOTAL									
BOB	EDUCATION									
	JOB									
	FAMILY									
	LEISURE									
	TOTAL									
MARY	EDUCATION									
	JOB									
	FAMILY									
	LEISURE									
	TOTAL									

APPENDIX C

FINAL QUESTIONNAIRE

FINAL QUESTIONNAIRE

(LIFE CAREER GAME)

We hope you have enjoyed working with the Life Career Game and have been able to profit from this experience. We appreciate your interest, enthusiasm, co-operation, and patience during this project and would like to thank you all for your commendable behavior.

Your comments and answers to the following questions would help us to evaluate the 'game' for use with future grade nine students from your school. Please answer these questions frankly. Be specific.

1. Did you work on Larry's profile by yourself or with your friend (s)?

   By myself _____ With my friend (s) _____

   If you worked with your friend (s), please give his/her/their name (s) below:

   (i) (ii)

   (iii) (iv)

2. Did you work on Bob's/Mary's profile by yourself or with your friend (s)?

   By myself _____ With my friend (s) _____

   If you worked with your friend (s), please give his/her/their name (s) below:

   (i) (ii)

   (iii) (iv)

3. Please give YOUR impressions about the Life Career Game.

   (a) Usefulness to you:

   (b) Usefulness to future grade nine students:

   (c) Good points:

   (d) Bad points (or drawbacks):

   (e) Some suggestions to make the 'game'more worthwhile for future students:

NAME GRADE SCHOOL

APPENDIX D

COMMENTS OF PARTICIPANTS

APPENDIX D

SELECTED COMMENTS MADE BY PARTICIPANTS IN THE STUDY

The participants were requested to answer a few questions regarding the Life Career Game at the end of the playing session. They were also asked to be precise and frank in stating their observations and comments about the 'game'. The following are some of the comments made by them.

Participant	Usefulness to you	Usefulness to future grade nine students	Good points	Bad points (or drawbacks)
Girl	It game me information that helped make my high school planning much easier and more knowledgeable.	If changed a little it would help them realize what the outlook of high school is really like and how they are to go about planning it.	It did give an idea as to how to work your high school programme.	It was the same thing all the way through which only made people wanting to get it over with.
Boy	It gave me more understanding to what was ahead or in store for me in the future.	It will probably give them the same understanding.	Sometimes we got quite involved with a person but mostly to get it over with.	Most of the time it was boring, or we were pushed into it. At the first I didn't have the faintest idea what was going on. It should have been explained more.
Boy	It helped me to understand problems I will face later in life.	It will help them to make the right choices in high school.	It was fun. It will help to make my choices in high school easier.	Too much having to look up points and things.

Girl	I did in a way because we made Mary drop out of school in Gr. 10 and get a job. It was hard to get a job because she was uneducated.	I think it would be so they might realize they should finish school.	They encourage you to go to school and they describe many jobs in the job cataloge (sic).	Players didn't take game too serious and we were too hurried.
Girl	I did not find this useful because I already know what I'm going to do and why.	It may be only useful to the undecided ones or unconcerned. For the rest it will be useless.	It took up a few boring subject periods.	It was boring to the ones who didn't need it. You can't plan your life by chance - through spinners.
Girl	Not very useful because you didn't care what the answers were as long as you got it done.	It would just be a waste of time.	-- gave an idea ahead of time what the courses are like.	-- Some marks didn't work out according to person's past. -- Most people gave the same courses as taken before.
Boy	I do not really think it did me much good since I did not learn anything new.	I think it should be used with future grade 9 students since for many people it gives a view of courses and schools, etc.	Gives insight into possibilities for future life.	It relyies (sic) too much on chance, this would be improved by the persons marks, etc. be determined by the person and not spinners.
Boy	I didn't think the game was any use. For Mary, I didn't believe she was good for 10, 11, 12. But I am.	It may help some people who are in the same problem as Mary or Bob but not all grade 9 students.	I learned how to use credits in grade 10. I was encouraged to go to school.	It was boring to some people so they didn't take it seriously.

APPENDIX E

ATTITUDE SCALE OF

VOCATIONAL DEVELOPMENT INVENTORY

AND

SCORING KEY

BY

JOHN O. CRITES

Vocational Development Inventory

VDI

Attitude Scale

JOHN O. CRITES, Ph.D.
THE UNIVERSITY OF IOWA

DIRECTIONS:

There are a number of statements about occupational choice and work listed in this booklet. Occupational choice means the kind of job or work that you think you will probably be doing when you finish all of your schooling.

If you agree or mostly agree with the statement, use your pencil to blacken the circle in the column headed *T* on the separate answer sheet. If you disagree or mostly disagree with the statement, blacken the circle in the column headed *F* on the answer sheet. Be sure your marks are heavy and black. Erase completely any answer you wish to change.

FORM IV: FOR RESEARCH PURPOSES ONLY

Part I

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 which occupation 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, until now 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. Why try to decide upon a job when the future is so uncertain.
18. I spend a lot of time wishing I could do work that I know I cannot ever possibly 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, and 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 set 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 lots 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. Choose an occupation which gives you a chance to help others.
40. When I am trying to study, I often find myself daydreaming about what it will be like when I start working.
41. I have little or no idea of what working will be like.
42. Choose an occupation, then plan how to enter it.
43. I really can't find any work that has much appeal to me.
44. Choose a job in which you can someday become famous.
45. If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.
46. 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. Why worry about choosing a job when you don't have anything to say about it anyway.

SCORING KEY

FOR

ATTITUDE SCALE

Of

VOCATIONAL DEVELOPMENT INVENTORY

By

JOHN O. CRITES

All items are scored "False" for the more vocationally mature response, except items 2, 22, 38, 42, 45, 46 and 47, which are scored "True".