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TIPPETT, THELMA JEAN BROOKINS

THE EFFECT OF A SHORT-TERM DECISION-MAKING WORKSHOP ON CAREER DECIDEDNESS OF FRESHMAN AND SOPHOMORE TEACHER EDUCATION STUDENTS

The Ohio State University

Ph.D.

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THE EFFECT OF A SHORT-TERM
DECISION-MAKING WORKSHOP ON CAREER DECIDEDNESS
OF FRESHMAN AND SOPHOMORE TEACHER EDUCATION STUDENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

Thelma Jean Brookins Tippett, B.S., M.A.

* * * * *

The Ohio State University
1979

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This effort is dedicated in loving memory to my parents, Guy and Nellie Brookins, who provided a foundation for learning with love and support.
ACKNOWLEDGMENTS

I want to sincerely thank my adviser and my friend, Dr. Joseph J. Quaranta, for his guidance and assistance in the preparation of this dissertation, and for his encouragement and support throughout the process.

A sincere thank-you to Dr. James E. Kerber, a friend throughout all my graduate school years, who served on my dissertation committee. Sincere thanks to Dr. James Wigtil and to Dr. Jack Douglas who also served on my dissertation committee.

I would like to thank Dr. Robert Warmbrod for his kindness and his assistance.

Special thanks to Judy Johnson who generously gave of her time.

My heartfelt thanks to Dr. Suzanne Burkholder, Dr. Betty Melragon and Ms. Vicki Dalmasso, friends and colleagues, for their continued encouragement and their editorial assistance.

I wish to express my love and my gratitude to my husband, Neil, my daughter, Susan, and my son, David, for their continued love, confidence, patience and support.
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CHAPTER I

INTRODUCTION

Education faces a continual dilemma. While theorists and technicians are discussing possible future means and modes of communication, of transportation and living styles, education is struggling to maintain its current place in life. It is struggling to be economically sound and to be accountable—both in what is being taught and in how well it is being taught. For education there is simultaneously the cry of "back to the basics" and the cry of "prepare for the twenty-first century." This unrest is evidencing itself among those involved in the process of education—teachers, administrators, students, parents and community. Values are being challenged, roles are being redefined and identity is being sought.

In education and in other professions people often find themselves in work settings that do not fit. This situation can create various problems not only within the individual, but also within the work setting. Problem-solving focuses on the need for exploration; not only for exploration in careers, but exploration into one's own
values and needs. Only after becoming aware of and exploring the meanings of values and needs can one more effectively select a career within a life-long continuing process.

In the teaching profession, if exploration has not been adequate and viable, the problem of ineffective decision-making results not only in unsatisfactory adjustment within a total life style, but also inadequate perception of societal needs. Therefore, those persons who are thinking of selecting education as a profession need to have explored not only the role of teacher, but also the role and the place of education in today's society. Realistic and effective career decision-making is of the utmost importance. Within the last decade, opportunities for various kinds of careers have opened. People are more aware of the stereotyping of careers and of roles that has existed for many years, and are now trying to alter this situation.

As technology advances and living becomes more complex, the skills and the knowledge people need have a different focus and emphasis than they had a few generations ago. The skill of effective decision-making is vital to both personal and career planning. Although this has always been important, only recently has the process itself, as it relates to the human element, been consciously examined and perceived as a teachable skill.
In the past, age was considered one criterion of making "good" decisions; another criterion was experience. Today it is thought age and experience as criteria have little value in, and of, themselves. Only as we are able to accurately process the experiences in terms of meaning and information are we able to use these experiences to their fullest.

The "goodness" of a decision is related to how well the process of decision-making is used. Realistically investigating values and their meaning, locating and using information, looking at alternatives and their consequences, setting goals and taking the necessary action are the critical skills in using the process. Looked at in this light, age and experience become important, but not exclusive, elements. Therefore, teaching the process of decision-making needs to begin early in life. Learning to make a decision, and to accept the responsibility for it, is judicious to one's growth process.

The scope and sequence of teacher education is being looked at critically in light of the demands of today and of the future. It is being studied from the role of the teacher as a person and from the role of the teacher as an educator. Decision-making is a necessary component in exploring teacher education and is specifically addressed to the Freshman Early Experiencing Program, Faculty of Special Services, College of Education, The Ohio State University.
Statement of Purpose

It was the purpose of this study to examine the effect of a short-term Career Decision-Making Workshop on the level of decidedness and perceived need for decision-making skills of freshman and sophomore teacher education students enrolled in a field based career exploration program. Specifically the study sought to answer the following questions:

Question 1: What differences exist between students (a) who ask for and receive assistance in choice of academic major and occupation and (b) who ask for and do not receive assistance in choice of major and occupation and (c) who do not ask for assistance in choice of major and occupation and their selected characteristics of (1) sex, (2) age, (3) university rank, (4) field based placement and (5) personality type as measured by the Myers-Briggs Type Indicator?

Question 2: Does a short-term Career Decision-Making Workshop have a significant effect on pre-education students who asked for assistance and received it, as measured pre and post by two instruments—the Career Exploration Survey and the Career Decision Scale in terms of (1) the perceived need for assistance in choice of major, (2) the perceived need for assistance in choice of occupation, (3) the level of decidedness of career decision, (4) the persistence of first choice of selected major and (5) the
perceived need for help with decision-making skills?

**Importance of the Study**

In recent years our society has been experiencing living in a world of change—change in values, in life styles, in roles, in occupations and in education. These changes not only provide new challenges and new opportunities, but also new kinds of problems and concerns. It is a common perception that what once was is no longer; it no longer fits, it is no longer applicable. Many people are confused by this ever-present reality that becomes increasingly complex and more vast.

Miller and Tiedeman (1974) state that "we live at a rapid pace unequaled since the beginning of time. Cognitively and technologically, though not emotionally, we are propelling ourselves through time at an amazing speed, and the 'action and the reaction occur almost at the same time'." (p. 382)

The new era calls for an understanding of transiency and the centering of one's self in the process, the individual coming into control of the processes affecting his life, not being victimized by this motion. (Miller and Tiedeman, 1974, p. 395)

These changes in the outer lives of people cause much stress upon inner lives. Some years ago one's life role was predictable and dependable. This is no longer true. As technology advances the fields of communication, medicine, travel and ease of living, the effects are felt in
our lives. People must have a tool, i.e., a skill for dealing effectively with this phenomena. This study was conducted in the belief that decision-making is such a tool.

The mobility of our current society increases the need for skill in decision-making. Often the larger family unit or supportive significant others are not close at hand to help with decision-making. Individuals, and particularly young persons, must then rely on themselves or someone else for their decision-making whether that decision involves a moral or a value judgment in their personal lives, or an academic/career decision in their professional lives.

Stripling (1967) draws attention to the opposite phenomena, stating that within two decades 75 percent of the freshman and sophomore college students may be attending community colleges in or near their homes. The students will probably be living at home, thus creating the possibility of additional stress on all persons involved.

Changes in the world of work and of leisure brought about in part by rapid technological advances are dictating new ways of looking at career planning and at decision-making. Peters (1977) reports data showing that in the United States, 25 percent of the current work force is in occupations that were non-existent twenty-five years ago. It is also predicted that by 1990, 75 percent of the American population will be in jobs that do not currently exist.
This prediction has implications for both the personal and the professional life of university students and in particular pre-service education students. The students may find themselves in a non-teaching role, or as a professional educator helping guide students in the process of living in a world of new knowledge.

Decision-making is an important skill and one of the key processes in living life fully and of making maximum use of one's potential as a human being. Since decision-making is not an inherent skill, it must be learned. Until recently decision-making was a skill reserved for those involved in business and management. Within the last decade psychologists, sociologists and educators have become aware of the necessity for teaching decision-making skills to all persons.

Forces which indicate this need are the increasing awareness of the individual, i.e., the uniqueness and the value inherent within the uniqueness of each individual and the conflicts and the opportunities affecting the lives of people brought about by the rapid advances of technology and changes in values, in roles and in life styles. Tyler (1978) states,

More than on anything else, one's individuality depends on the choices one makes.... All of them, little or big, influence the development of individuality in at least three ways. First, they determine what will be learned, what cognitive structures will
take shape. Secondly, choices affect the development of individuality by determining what situations will be included in one's personal world. Thirdly, the choices determine the people with whom one's lot will be cast. To refuse to make decisions is to hand over the direction of one's life to other people or to chance circumstances. (pp. 204-205)

The uniqueness of individuals in the human process of living is being researched by persons in areas of human development. The constant interaction of the individual with the environment in creating personal reality is a growing concern to persons interested in facilitation of this process.

One of the most fundamental aspects of an individual's personality, according to Tyler, is the way the individual selects and organizes the information and the possibilities with which he is confronted. She states that, "Enabling people to anticipate the consequences of their own acts is a different and ethically much more attractive aim than enabling some persons to predict and control the behavior of others." (Tyler, 1978, p. 4)

Woodring (1957) says that the ability of a person to choose—his right to choose—is the essence of freedom. His self-determination and freedom of choice are dependent on his decision-making skills. The aim of education, therefore, is to prepare individuals to make wise decisions.

Stanford and Roark (1974) identify three general principles of education and three competencies man must have
if society is to survive.

- Man must learn to live in a human way. He places the welfare of others on par with himself.
- Man must learn skills necessary to live effectively. He must have the ability to know and to satisfy his personal needs.
- Man must learn to live in the physical world. Burgeoning numbers, leverages—machines/explosives—make the world uninhabitable through "normal living." Man has the power to turn Earth into a paradise. Man has a choice. (p. 6)

Too many students leave educational settings ill-equipped for the world of work. They often lack vocational skills, self-understanding, career decision-making skills and work attitude skills that are necessary not only to make the transition from school to work, but to establish and maintain an effective work role.

Peters (1977) citing additional research states that at the rate knowledge is accumulating, by the time a child born now completes his education, the amount of knowledge in the world will be four times greater than it is now. By the time the person is fifty years old, knowledge will be thirty-two times greater, and 97 percent of everything known in the world will have been acquired within the person's lifetime.

If this prediction is realistic, the role of the teacher will need to be one of facilitator—facilitating learning, growth and understanding of a curriculum which emphasizes the process of living instead of the
accumulation of facts. Education must expand its usage of technological hardware not only for the advantages of storage and retrievability of information, but also to accustom students with the usage of this kind of equipment and to use time more wisely with "people processes."

Osipow (1973), based on the writings of Gross (1964, 1967), states that people must prepare for career cycles. This will require them to maintain flexibility in occupations, in adapting to new friends, to communities and to ways of life. The career decision-making process will need to be sharpened and people must strive to identify as many career alternatives as possible in their career progression, recognizing that they may increase their chances of choosing wisely but cannot expect perfection or finality to result from their decisions.

Gelatt et al., (1972) believe that in recent years young people have been confronted with many more options related to their futures and have been given more opportunities to make their own decisions. He suggests that it has become increasingly apparent that young people, in addition to receiving relevant information about the options available to them, need to learn how to make effective decisions.

Decisions about post-secondary education and what major or occupation to pursue are pressing concerns for many students. Peters (1977) cites research showing 40-50
percent of entering university freshmen will not complete college. Of those who remain to complete their degree 30-50 percent will have changed their majors at least once and 15-20 percent will have changed their majors two or more times by graduation.

This study supports the fact each person is different and as such has varied interests, likes and dislikes, abilities and desires. It is of particular importance that students who are participating in the Freshman Early Experiencing Program become aware of and experience the career decision-making process, not only for their own personal career decisions, but as pre-service education students who will at some later time be helping others with this process.

The Freshman Early Experiencing Program is a field based exploratory experience in education. Its primary purpose is to provide university students with opportunity for career exploration in education prior to the decision-making or program commitment stage of their academic plans. The program is focused on three areas of human development 1) personal-social development, 2) educational development and 3) career development.

Career Decision-Making Workshop

The Career Decision-Making Workshop was conceived, developed and implemented because it is important to the
healthy growth of individuals that they thoroughly explore career options, that they know and are able to use decision-making skills, and that they are satisfied with a decision made at a given point in time.

Gelatt (1973) says, "Decision-making can be defined as a process in which a person selects from two or more possible choices. A decision does not exist unless there is more than one course of action, alternatives or possibility to consider." (p. 2)

Continuing, Gelatt theorizes that the potential value of the process is that the person will be more satisfied with decisions that are made. Being more satisfied one feels better about himself, more positive and more confident. He states,

A skillful decision-maker has more personal freedom in his life because he is more likely to recognize, discover or create new opportunities and alternatives. He also has greater control over his life, because he can reduce the uncertainty in his choices and limit the degree to which chance or other people determine his future. (p. 3)

Decisions differ because of values held by individuals, by the capabilities of individuals, what an individual is willing to do and the individual's environment. Gelatt lists three major requirements of skillful decision-making:

1) Examination and recognition of personal values.
2) Knowledge and use of adequate, relevant information.

3) Knowledge and use of an effective strategy for converting this information into an action. (Gelatt, 1973, p. 3)

The workshop was based on much of Gelatt's work from *Decisions and Outcomes*. It was designed to be presented in a four-hour block of time. After the introduction to decision-making and to the workshop, the following areas were developed:

1) Values - those values important to the individual and values that might influence Academic Major/Career choice.

2) Information - information from the Self Directed Search, Personality Research Form, Myers-Briggs Type Indicator and American College Test and any other information the individual knows about himself, i.e., competencies, interest, abilities.
   a) Sources of Information - People to talk to, Things to do, Things to read

3) Work Values - values important to the individual in a work setting.

4) Risks and Strategies - how to look at risks involved in decision-making, and how to pick a strategy for making decisions.

5) Making a tentative Academic Major and/or Career Decision.
6) Rating the level of Decidedness with the Academic Major and/or Career Decision

7) Rating the level of Satisfaction with the decision made.

If institutions of higher education are going to prepare students to be vital effective teachers and if students are to be effective persons, the need for emphasis on career decision-making and the decision-making process is critical. Combs (1974) defines an effective teacher as "A unique human being who has learned to use himself effectively and efficiently to carry out his own and society's purposes in the education of others." (p. 8)

He describes the teacher as one who uses himself, his knowledge and the resources at hand to solve the problem for which he is responsible. This requires that the student's education be regarded as a problem in becoming—personal discovery.

Combs (1974) further states,

No teacher's college can make a teacher—only provide students with problems, resources, information and opportunities to explore what they mean. Beyond that the student is his own pilot and must find his own best ways of working. He must make a commitment to the process of learning. After all, the self is unlikely to change if it is not permitted to 'get into the act'. (p. 8)

The model of the Freshman Early Experiencing Program focuses on the self and the interaction of self and the
environment and the meanings that are ascribed to experiences. As a guidance based program it views people as growing, dynamic organisms. Career decision-making is a vital aspect of that growth.

Definition of Terms

1) Process of Decision-Making - Gelatt (1973) states, "Decision-making can be defined as a process in which a person selects from two or more possible choices." (p. 2) Gelatt theorizes that when decision-making is skillfully used the outcome will be more satisfying and the individual will have more freedom and more control over his life. According to Gelatt decisions are limited by: a) what a person is capable of doing, b) what a person is willing to do and c) the environment in which a person finds himself.

2) Career Decision-Making Workshop - The Career Decision-Making Workshop was designed by the researcher and consisted of lecturettes and seven activities completed by the participants within a four-hour block of time. Participants were in groups with a ratio of not more than fourteen students to one trained facilitator.

3) Need for Assistance - The need for assistance with decision-making skills concerning choice of major and choice of occupation was determined by the student's responding "yes" to such a statement. The statement appeared in two places on the Career Exploration Survey.
4) **Level of Decidedness** - The level of decidedness about choice of major and choice of occupation was measured by the score as determined by the student's response. The range of scores was 0 to 10, with 10 being most decided. These two measures were obtained from the Career Exploration Survey. The Career Decision Scale was also used to measure the decidedness of students about their majors and their careers. The respondents rate statements from "Exactly like me" (4) to "Not at all like me" (1). The lower the score, the more decided the respondent.

5) **Extraversion-Introversion** - The EI index is intended to reflect whether the person is an extravert or an introvert in the sense intended by Jung. The extraverted person is oriented primarily to the outer world and tends to focus his perception and judgment upon people and things. The introvert is oriented primarily to the inner world postulated in Jungian theory and tends to focus his perceptions and judgment upon concepts and ideas. (Myers, 1962, p. 1)

6) **Sensing-Intuition** - The SN index is intended to reflect the person's preference between two opposite ways of perceiving, i.e., whether he depends primarily on the process of sensing, by which he becomes aware of things directly through one or another of his five senses or primarily on the process of intuition, which is understood as indirect perception by way of the unconscious, with the
emphasis on ideas or associations which the unconscious adds to the outside things perceived. (Myers, 1962, pp. 1-2)

7) **Thinking-Feeling** - The TF index is intended to reflect the person's preference between two opposite ways of judging, i.e., whether the person depends primarily upon thinking, which discriminates impersonally between true and false, or primarily upon feeling which discriminates between valued and not valued. (Myers, 1966, p. 2)

8) **Judging-Perceiving** - The JP index is intended to reflect whether the person depends primarily upon a judging process (T or F) or upon a perceptive process (S or N) in his dealings with the outer world, in the extroverted part of his life. (Myers, 1962, p. 2)

**Limitations of the Study**

The sample consisted of 460 students who were enrolled in the teacher-aide component of the Freshman Early Experiencing Program. Those students who reported a perceived need for assistance with decision-making skills in determining both their academic major and their occupation were invited to participate in the Career Decision-Making Workshop. A total of 165 students were asked and of that number 106 chose to participate in the workshop. Three groups were then established: a Non-Treatment Group, a Non-Participant Group, and a Treatment Group. The sample,
therefore, is representative of students in the Freshman Early Experiencing Program who express interest in, and attend, a workshop designed to provide decision-making assistance.

All students enrolled in the Freshman Early Experiencing Program Autumn Quarter, 1977, were administered two instruments—the Career Exploration Survey and the Career Decision Scale—in the beginning of the quarter and at the end of the quarter.

The Career Exploration Survey was designed from two instruments, the Career Development Survey (1977) developed by Wm. Dale Goodson, Brigham Young University, and a Pre-Commitment Questionnaire used by the Freshman Early Experiencing Program. The Career Exploration Survey instrument sought a) demographic information about the students, b) information about their perceived need for assistance with decision-making skills, c) their level of decidedness about choice of major and choice of occupation, and d) their selection of major first or occupation first as their plan to approach a career decision.

The second instrument was the Career Decision Scale, developed by Samuel H. Osipow, et al., The Ohio State University. This scale measures antecedents of educational and vocational indecision, with each indecision type designed to be independent of the others. The instrument asks the student to respond to a series of descriptive
statements about his career decidedness by ranking his responses from "Exactly like me" (4) to "Not at all like me" (1). The student's level of career decidedness is measured by this instrument.

The Myers-Briggs Type Indicator is a forced-choice personality inventory. It is based on Jungian theory which states that seemingly random behavior is indeed orderly and consistent. The Indicator measures the subject's preferred use of his perception process and judgment process. These processes are measured on four separate indices: extraversion or introversion, sensing or intuition, thinking or feeling and judgment or perception. This instrument was administered to the Freshman Early Experiencing Program students during the first week of the quarter.

The Career Decision-Making Workshop was designed to help students become knowledgable about the process of decision-making and to help them become more effective decision-makers. The workshop was conducted within a four-hour time period with groups of not more than fourteen participants with one trained facilitator. Seven activities were completed during the course of the workshop. These involved introduction to decision-making, value clarification, information, work values, risks and strategies, decision, decidedness and satisfaction.

The four-hour time period might tend to limit the impact of the Career Decision-Making Workshop. Students did
report satisfaction with the workshop and with the knowledge they had gained. Further, similar short-term workshops have been found to be effective when offered at a significant time in the decision-making process of the participant.

Organization of the Remainder of the Dissertation

This chapter has included an introduction, statement of purpose, description of terms and limitations of the study. Chapter II presents a review of literature and research pertinent to the study. Chapter III describes the procedures used and Chapter IV is a discussion of the research findings. Chapter V contains a summary, implications and recommendations for further study.
CHAPTER II

REVIEW OF THE LITERATURE

This chapter presents a review of the literature on decision-making. The first section examines definitions of the decision-making process. Decision-making theories are explored generally, then specifically as they relate to education and teacher education in particular. The importance of decision-making as a life-long skill and as a process requires the examination of the definition of the development of the process itself, and of selected decision-making models.

The second section focuses on teaching the decision-making process. It reviews models for teaching decision-making skills and emphasizes decision-making in education.

Definitions of the Decision-Making Process

The Living Webster Encyclopedic Dictionary (Kellerman, 1973) defines decision as "The act of deciding a question or issue; final judgment or opinion; determination or conclusion as of a contest or event; a statement or a conclusion; unwavering firmness." (p. 259)
G. L. S. Shackle (1961) states,

Decision...is a cut between past and future, an introduction of an essentially new strand into the merging pattern of history. (p. 1)

Decision...is choice, but not choice in the face of perfect foreknowledge, not choice in face of complete ignorance. Decision, therefore, is choice in face of bounded uncertainty. (p. 5)

Bartsch, et al., (1967) in describing the decision-making process point to the alternatives that are evaluated, selected and then committed to action. Continuing, they state that effective decision-making involves consciously and systematically processing all information relevant to the individual and to the situation. Movement toward long term goals can be accomplished with a minimum of personal and social cost.

Peters (1970) looks at decision-making as a part of the developmental process, stating that at one time decision-making was thought to be singular in nature. As a part of the developmental process, however, the results of openness, creativity, centering and integrating blend to help determine the decision-making.

Looking at decision-making from a biological stance, Bross (1953) states that because of this trait man as a decision-making animal is set apart from the rest of the animal world. He theorizes that man's being able to make decisions is probably the reason he dominates the planet.
This ability might also be responsible for his ulcers and neuroses. Bross continues by saying that to a limited extent all living organisms must make decisions, even the amoeba must act, but this decision is made automatically by a biological mechanism.

As organisms become more complex, Bross believes they have a biological "decision-maker" which enables them to function under natural conditions. With mammals most behavior apparently is learned or modeled from parental behavior, or by experience from trial and error. He states, "...man is a decision-making animal because of a biological deficiency." (Bross, 1953, p. 8)

To help in the task of teaching decision-making, man looked to patterns in cultures. These patterns had the advantage of combining the experiences of many people. As man increased in specialization he turned to "specialists" to make, or to help make, his decisions.

Currently, man seems to be more self-reliant and less willing to have his life and his destiny governed by specialists. If man is going to proceed thusly, he needs to know how— he needs the skills.

Defining decision-making as the most critical and fundamental process in all human behavior, Cassell (1973) states that it is the one vehicle which incites and directs all the psychological locomotion within an individual's life space. Decision-making is a nucleus from which spring
all the individual's satisfactions, disappointments, successes and failures.

Scholz, et al., (1975) in describing the decision-making process focus on the commitment made when a decision is reached. Attention is drawn to the commitment of personal resources such as time, money, career, relationships and beliefs. These personal resources cannot be replaced once a commitment is made.

Gelatt (1973) states,

Decision-making can be defined as a process in which a person selects from two or more possible choices. A decision is not required unless there is more than one course of action, alternatives, or possibilities to consider. If a choice exists, the process of deciding may be utilized. (p. 2)

Distinction has been made between decision and the process of decision-making. The process as described by many theorists enumerates the components of the process, discusses the interrelationship of each component, and the implications and effects of the components on the individual making the decision. The very elements that cause persons to be different and to be individuals can also serve to constrain their choices. However, within those constraints an individual does have the freedom to choose and must do so in order to optimize his own self. The decision then is the act, the result of the process.
Psychological decision theory is relatively new in the field of sciences. Statistical decision theory was its predecessor and dealt with rational behavior relating to the field of mathematics. Early psychological decision theory began with models of the statistical decision theory. As research continued into the process of decision-making by humans other elements such as values, feelings, information and commitment began to surface. Thus, decision-making models began to change and as research continues new information is being added to that which is already known.

Theoretical Foundations

Cronbach and Gleser cite the following by a leading contributor to decision theory, M. A. Girshick:

...Decision theory is in the process of development and is not yet a completed science. It takes for its domain the problem of rational behavior in the face of unknown states of nature. It gives a logical foundation and framework to mathematical statistics which it has never had before. It grapples with the problem of design of experiments in a manner never before attempted in statistics. It insists that cost considerations and consequences of decisions be taken into account in every statistical investigation. In doing so, it has brought sequential theory into the general framework and has made sequential decision procedures the rule rather than the exception. It bridges the gap existing in classical statistics between testing hypotheses and estimation by showing that the distinction
lies mainly in (the collection of alterna-
tive actions to be taken)..., which in one
case is finite and the other infinite.
In its attempt to clarify the nature of
the statistical decision process, it ex-
poses the limitations as to what is attain-
able in the face of ignorance, and raises
serious problems concerning rational be-
havior....Finally because decision theory
deals with the problem of decision making
in its greatest generality, every particular
statistical problem can be immediately placed
in a general framework and thus exhibit its
ramifications and implications. (Cronbach
and Gleser, 1965, p. 2)

Bross (1953) states that statistical decision is
closely related to science. Both disciplines view the
real world in the same manner. However, statistical de-
cision attempts to deal with action in the real world.

Presumably the outcome depends upon which action is
taken because of the decision made. Bross believes that
before one makes a decision one must determine the conse-
quences of each alternative action and consider each
alternative future.

Bross theorizes that past experiences play an important
part in the process of decision-making. They contribute
information, which can and should be used when making a de-
cision. Therefore, "...(one) must consider not only the
present and the future but also the past." (Bross, 1953,
p. 22)

Continuing, he states that the process of decision
contains three basic steps:

1) The outcomes for each action are
   predicted (predictive system).
2) The outcomes are evaluated in terms of some scale of desirability (value system).

3) A criterion for decision, based on purposes, is then used to make the actual selection (decision criterion). (The criterion--does it accomplish the purpose?) (Bross, 1953, p. 22)

From a philosophical foundation, Bross sees the model (Figure 1) as a way of viewing the real world.

Bross sees the mechanism as having three basic components: 1) the Prediction System dealing with alternative futures, 2) the Value System dealing with various conflicting purposes and 3) the Criterion integrating the other
two components and selecting appropriate action. The decision-maker is thought of as a machine into which flows information and out of which flows the recommended course of action.

In a review and comparative analysis of vocational decision-making models, Jepson and Dilley (1975) state that psychological decision theory provides a practical framework for clarifying relationships among the various vocational decision-making theories and between these theories and the kinds of decision situations with which people are faced.

Griffiths (1969) states that decisions are interrelated with the action taken. He posits that they may alter or change a direction, or it may remain stable. He believes decisions are pragmatic in nature, that their value lies in the success of the action which follows the decision. The value of the decision is related to the degree to which the pre-determined goals are attained. The concept of decision-making process means not only the decision but also the actions necessary to put the decision into operation and thus affect the course of the enterprise.

Griffiths also discusses the sequence of a decision, stating that often it is difficult to determine the original decision because each seems to be based on one previously made. He cites as a pointed illustration, the sequential decision-making found in law.
Janis and Mann (1977) believe that each decision gives rise to another—a continual branching out of new subdecisions—a "decision tree." The decision maker is committed to a specific course of action as he confronts a series of succeeding choices over a relatively long period of time. Decisions are also socially committing as they demand efforts be made for implementation if the decision maker is to fulfill his role in the community and maintain his reputation and his self-image as a reliable person.

The authors also theorize that the psychological laws which effect change in opinion and attitude are not necessarily the same as those used in decision-making. They believe that there is an essential difference in the principles that govern consequential decision-making and those that govern verbalized choices on non-consequential issues.

Gelatt (1973) theorizes that the value of the decision-making process is that the individual will be more satisfied with his decision. Teachable skills that can be learned, applied and evaluated are used in the process. A basic element of the process is determining one's own values and in so doing the implication of "right" answers or outcomes is removed. The effective use of the process then results in satisfying consequences.

Continuing, Gelatt sees the effective decision maker as having more personal freedom in his life and greater control over his life. With effective use of the process,
the individual can recognize and create new opportunities and alternatives, can reduce the uncertainty in his choices and the degree chance and other people will determine his future.

During the early 1960's Gelatt (1962) developed a framework for counseling students. The framework was based on decision-making because he felt: 1) most secondary guidance programs have minimal direction to either the focus, the organization or the evaluation of it, 2) there is often an absence of a theoretical framework for secondary guidance services and 3) decision theory seemed to have the most promise for such a framework based on research from other theorists such as Tyler, Ginzberg, Super and Tiedeman.

Gelatt theorized counseling based on decision-making would require students to learn more about themselves and their environment, and secondly, students would learn how to use information more effectively in making decisions and in accepting the responsibility for those decisions.

Selected Decision-Making Models

Building on the work and theory of others such as Girshick and Chernoff and Moses, Gelatt (1962) proposed a decision-making frame of reference requiring 1) clearly defined objectives, 2) collection of data and analyzing its relevancy, 3) considering alternatives and 4)
evaluating the consequence.

The model (Figure 2) provided the basis of subsequent development by Gelatt and others in decision-making theory and strategies. Interpretation of the model operation is as follows:

Purpose or Objective -- Selection of an appropriate program for courses.

Data -- Information related to the objective, such as test results, previous course grades and interests would be organized.

Strategy --

Prediction System -- degree of relevancy for each alternative. Can success be predicted?

Value System -- outcomes are evaluated on a scale of desirability. (Gelatt cautions that the decision maker must be careful not to equate the desired with the desirable.)

Criterion -- based on the purpose (of the decision), referring to Bross, "Does it work?"

Terminal Decision -- final decision for a specific purpose - an immediate goal

Investigatory Decision -- this becomes a cycle, involving gathering information and decision-making until a terminal decision is made.

Method of Investigation -- resulting from an investigatory decision, thus seeking new information.

Outcome -- result(s) of the decision. (In more recent publications, Gelatt states that the evaluation of the
Figure 2

Gelatt's Decision-Making Model

"goodness" or "rightness" of the outcome is not the most important consideration. The most important consideration is the way the individual goes through the process of decision making.) (Gelatt, 1962, pp. 241, 243-244)

Focusing on the process of decision-making and on teaching the skills of decision-making, Gelatt and Varenhorst (1973) authored a series of books—one of which was a major resource in this researcher's study.

The decision-making process as proposed by these theorists has been expanded and is presented in more detail.

Building on his earlier model, Gelatt and Varenhorst have elaborated on some of the components.

In Decisions and Outcomes A Leader's Guide, they list three major requirements of skillful decision-making:

a. Examination and recognition of personal values. ("The Deciding Self")

b. Knowledge and use of adequate, relevant information. ("Before Deciding")

c. Knowledge and use of an effective strategy for converting this information into an action. ("Applying Skills")

In citing examination and recognition of personal values as a major requirement for effective decision-making, Gelatt and Varenhorst (1973) see this as basic to the complete process. Only as an individual knows his values and
acts upon them can he set objectives, evaluate information and be satisfied with decisions. Theoretically, an individual's values are determined by what he prizes, cherishes or esteems. One's actions express his values more than his interests or attitudes. Values cannot be categorized as "right" or "wrong."

Continuing with the second requirement for effective decision-making the authors again state that it is the process one goes through, in securing pertinent information and in evaluating this information, that makes the difference in decision-making. They divide the gathering and evaluating of information into four parts: 1) possible alternatives, 2) possible outcomes, 3) probability of outcomes and 4) desirability of outcomes.

The last phase of the decision-making process involves looking at the alternatives and considering the risks associated with each alternative and cycling back through the process. As has been stated earlier, decisions are seldom made with complete certainty. Gelatt and Varenhorst further state that the circumstances under which decisions are made can be put into four classifications: 1) certainty—each choice leads to a known outcome, 2) risk—each choice leads to many possible outcomes each with known probabilities, 3) uncertainty—each choice leads to many possible outcomes each with unknown probabilities and 4) combination—the combining of both risk and uncertainty.
Each individual uses a strategy when making a decision. Some people decide at random and some people use a plan based on values, information, objectives and risks. Gelatt and Varenhorst have identified the following four strategies an individual may use: 1) wish—select what you desire the most, 2) safe—choose only what you know will succeed, 3) escape—choose something to avoid the worst and 4) combination—choose what is most likely and most desirable.

Varenhorst and Gelatt (1971) believe that as a person daily behaves on the basis of unconsciously made decisions, either by habit or by whim, these decisions literally shape the manner and mode of his life and of his personality. Continuing, the authors state,

It is when these habitually made decisions, or undirected decisions begin to limit the freedom of future choices, or when the person faces conflict that cannot be resolved passively that the conscious consideration of decision-making takes on significant importance. (p. 107)

Generally the more important the decision, the more difficulty people have in deciding. Information, values, wants, and needs play their own role in our individual process—we cannot have all or do all. Selecting one alternative eliminates another, and stress is the concomitant element.

Some concepts, as identified by Varenhorst and Gelatt (1971), that affect these choices we make are: 1) the
freedom to decide—each is free to make some decisions, however, external factors such as lack of desire and lack of knowledge can limit or prohibit making some decisions, 2) personal involvement—the individual must become involved in the deliberation, the conflict and the commitment thus, making the decision a personal act, 3) the emotional contingencies of decision-making—the affective aspect of decision-making must be taken into consideration if one is to be an effective decision maker and 4) values—the final decision is based on one's values, his actions are an indication of what he values most highly.

Cassell (1973) approaches decision-making in a slightly different manner. He believes efficiency in the decision-making process is not acquired simply by growing older. He believes goal setting and goal striving, involved in decision-making, are present in infancy and are present on the conscious level; however, generally individuals learn what they know about decision-making through the trial-and-error process of everyday life situations. This kind of decision-making can be ineffective and can cause stress and dissatisfaction within the individual, thus learning more about effective decision-making is vital.

Cassell believes the following fundamentals are contained in the process of decision-making.

1) At the moment of deciding, the individual alone elects choices which impel and direct all the
psychological movement in his own life-space.

2) Productive and non-productive endeavors are direct products of man's own decision process.

3) Selection of choices from alternatives clearly represents a psychological process that is learned.

4) Man is essentially a rational human being capable of making deliberated choices, however, he frequently accepts choices imposed on him by others.

5) An individual increases his personal decision success when he uses decision-making models that emphasize success of others and avoids the failures.

6) An individual decision represents a balancing of one's own needs in relation to one's values for that particular point in time.

7) An individual's happiness is a direct result of his personal goal setting and goal striving. It is proportional to the amount of ego-involvement that is present.

8) Alternative courses of action imply the individual may select from conformity with society to the antithesis, with intervening positions available to him.

9) To attain more lasting values the individual is often required to forego some immediate pleasure
and this requires ego-strength.

10) By a process of comparing risks and possible consequences, the most promising of alternatives is selected.

11) The selection of choices by an individual is unique to that individual, and one seeks to relate alternatives to one's own immediate and long-range personal goals.

12) The ego-ideal and the conscience serve both to reward and to punish man in relation to the degree to which choices agree with the individual's personal value system.

13) The degree to which an individual's personal decisions promote his own self-expectations represents the only real freedom he will ever know.

14) Social and organizational climates originate from the decisions of top management and serve to engender "grass roots" attitudes that are related to production.

15) Group power is determined in large measure by the degree to which there is "grass roots" in-put into decisions involving these persons.

16) All personal decisions are unique to the individual, at that time in place, and need to be oriented toward continuous cause and effect relationships.
Cassell cites the human adaptation structure described by Piaget and theorizes this may be involved in the dynamic implementation of elected choices or decisions. He draws these parallels:

1 - Association - relating emerging behavior to past experiences.

2 - Assimilation - relating new experiences to old information.

3 - Accommodation - solving new problems by use of old experiences.

4 - Alienation or disequilibrium - achieving the peak of motivation where maximum effort is marshalled for the resolution of a problem, confrontation or crisis. (Cassell, 1973, p. 94)

Janis and Mann (1977) theorize that humans spend much energy in evading the making of decisions. If the issue is pressing, or the consequences widespread, persons can often find some way to avoid making a choice. An individual under pressure to make a vital decision usually finds it difficult to commit himself because of the unexpected costs and risks no matter what course of action is chosen. In trying to assess the quality of a decision, one is confronted with either single objective decisions or with multiple objective decisions which are generally the decisions that affect most persons. In the multiple objective decision success is difficult to measure unless we examine the quality of the procedures used by the individual in selecting a course of action.
From the extensive literature of many theorists, Janis and Mann extracted seven major criteria that can be used to determine whether decision-making procedures are of high quality.

The decision maker, to the best of his ability and within his information-processing capabilities,

1) thoroughly canvasses a wide range of alternative courses of action;

2) surveys the full range of objectives to be fulfilled and the values implicated by the choice;

3) carefully weighs whatever he knows about the costs and risks of negative consequences, as well as the positive consequences that could flow from each alternative;

4) intensively searches for new information relevant to further evaluation of the alternatives;

5) correctly assimilates and takes account of any new information or expert judgment to which he is exposed, even when the information or judgment does not support the course of action he initially prefers;

6) reexamines the positive and negative consequences of all known alternatives, including those originally regarded as unacceptable, before making a final choice;

7) makes detailed provisions for implementing or executing the chosen course of action, with special attention to contingency plans that might be required if various known risks were to materialize. (Janis & Mann, 1977, p. 11)
The authors theorize that the more defects (failure to meet any of the seven criteria) in the decision-making process, the greater the risk of unanticipated setbacks or postdecisional regret. However, depending upon the significance of the decision, one must be selective and assess how much time and energy will be invested in searching for information and looking at alternatives.

Janis and Mann (1977) label attending to the seven criteria as vigilant information processing. In their book, Decision-Making, they focus on causes and on consequences when an individual chooses not to attend to the seven criteria. The authors refer to the work of Kurt Lewin (1951) who researched the psychological consequences of social commitment to a decision and described this as having a "freezing effect" on an individual. Leo Festinger's (1964) work on cognitive dissonance is also referenced.

The authors, like Lewin,

see man not as a cold fish but as a warm-blooded mammal, not as a rational calculator always ready to work out the best solution but as a reluctant decision maker—beset by conflict, doubts, and worries struggling with incongruous longings, antipathies and loyalties and seeking relief by procrastinating, rationalizing or denying responsibility for his own choices. (Janis & Mann, 1977, p. 15)

Continuing, Janis and Mann see a new trend appearing in psychological research on processing information as it
relates to social behavior. The tendency seems to be that of making fewer attempts to extract deductions from broad theoretical bases about the individual's proneness to the highest internal consistency of his cognitions, instead more effort is being expended to find hitherto unexplored flaws and limitations in human information processing. Examples of such flaws are: 1) the inclination of decision makers to be diverted by irrelevant aspects of alternatives, 2) the likelihood that decision makers might be swayed by the way information about risks is presented, 3) their relying on faulty categories and stereotypes and 4) their illusion of control which causes optimistic appraisals of outcomes that are really a matter of chance or of luck.

In addition to cognitive complexity, other major sources of stress in decision-making include threats to social status and to self-esteem. The authors using the terminology of Robert P. Abelson (1963), state, "...thinking about vital, affect-laden issues generally involves hot cognitions, in contrast to the cold cognitions of routine problem solving." (Janis & Mann, 1977, p. 45)

The theory attempts to identify the different conditions that determine whether the stress caused by decisional conflict will facilitate or will interfere with vigilant information processing. Janis and Mann use "psychological stress" as a generic term to identify disagreeable
emotional states triggered by environmental events or stimuli that threaten the individual. The functional relationships between psychological stress and decisional conflict are given here as propositions that Janis and Mann use as their basic assumptions:

1) The degree of stress generated by any decisional conflict is a direct function of the goal strivings that the decision maker expects to remain unsatisfied: the more goals expected to be unfulfilled and the more important the needs to which those goals correspond, the greater the stress....

2) When a person encounters new threats or opportunities that motivate him to consider a new course of action, the degree of decisional stress is a function of the degree to which he is committed to adhere to his present course of action....

3) When decisional conflict is severe because each alternative poses a threat of serious risks, loss of hope about finding a better solution than the least objectionable one will lead to defensive avoidance of threat cues....

4) In a severe decisional conflict, when threat cues are salient and the decision maker anticipates having insufficient time to find an adequate means of escaping serious losses, his level of stress remains extremely high and the likelihood increases that his dominant pattern of response will be hypervigilence....

5) A moderate degree of stress in response to a challenging threat induces a vigilant effort to scrutinize the alternative courses of action carefully and
to work out a good solution, provided the decision maker expects to find a satisfactory way to resolve the decisional dilemma... (Janis & Mann, 1977, pp. 50-51)

The authors theorize that generally the best-quality decision-making performances, based on the seven criteria, occur when the decision maker's level of psychological stress is in the intermediate range throughout all stages of decision-making.

In their conflict-theory model, Janis and Mann incorporate additional assumptions to broaden the analysis of decisional conflict by enumerating the conditions that reduce the chances the decision-maker will meet the criteria for vigilant information processing. Five coping patterns predicated on the assumptions about decisional stress are listed here and are shown in the conflict-theory model (Figure 3).

1) unconflicted inertia--after considering the data presented, the individual decides to remain in his present state.

2) unconflicted change--the individual will consider the consequences of a change action, if these are positive he will execute the change.

3) defensive avoidance--the individual may show a lack of interest, may distract himself, may develop fatalistic beliefs, or may engage in buck passing.

4) hypervigilance--the individual feels panic and acts accordingly, often making snap judgments.
Figure 3
A Conflict-Theory Model Showing Basic Patterns of Emergency Decision Making Evoked by Warnings of Impending Danger

Source: Janis and Mann, 1977, p. 55.
5) vigilance—the individual thoroughly searches for information and generally engages in high quality decision-making.

The conflict-theory model specifies four conditions as prerequisites for the pattern of vigilance:

1) awareness of serious threat if no protective action is taken (i.e., low confidence in the prior course of action or inaction);

2) awareness of serious risks if the most salient protective action is taken (i.e., low confidence in whatever new course of action is being considered);

3) moderate or high degree of hope that a search for information and advice will lead to a better (i.e., less risky) escape route (i.e., high confidence that a satisfactory solution exists and can be discovered);

4) belief that there is sufficient time to search and deliberate before any serious threat will materialize (i.e., high confidence that the as yet undiscovered satisfactory solution can be found within the time available). (Janis & Mann, 1977, p. 62)

Stating that most analyses of personal decision-making indicate a distinction between the time preceding the announcement of the decision and the time following the announcement, the authors believe individuals go through more than two distinct stages.

Janis (1968a) describes five stages in the process of making a stable decision, a decision that would be effective and satisfying as long as the individual did not receive threat of unbearable loss from doing so. The stages
represent progressive changes that take place within the individual as he responds to new information and deliberates about his choice of alternative actions.

The five stages and the major concerns associated with each are:

<table>
<thead>
<tr>
<th>STAGE</th>
<th>KEY QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Appraising the Challenge</td>
<td>Are the risks serious if I don't change?</td>
</tr>
<tr>
<td>2. Surveying Alternatives</td>
<td>Is this (salient) alternative an acceptable means for dealing with the challenge?</td>
</tr>
<tr>
<td></td>
<td>Have I sufficiently surveyed the available alternatives?</td>
</tr>
<tr>
<td>3. Weighing Alternatives</td>
<td>Which alternative is best?</td>
</tr>
<tr>
<td></td>
<td>Could the best alternative meet the essential requirements?</td>
</tr>
<tr>
<td>4. Deliberating about Commitment</td>
<td>Shall I implement the best alternative and allow others to know?</td>
</tr>
<tr>
<td>5. Adhering despite Negative Feed-</td>
<td>Are the risks serious if I don't change?</td>
</tr>
<tr>
<td>back</td>
<td>Are the risks serious if I do change?</td>
</tr>
</tbody>
</table>

(Janis and Mann, 1977, p. 172)

Elaboration of the stages is as follows:

Stage 1: Appraising the Challenge

An individual will maintain contentment with his status quo until he is challenged or threatened by some new information or event. If the individual's current course
of action is effectively challenged, the decision-making process is begun. When confronted with this new information, the individual quickly considers it to assess whether or not the information applies to him and its relevance to him. To effectively initiate the steps leading to the act of deciding, the information or event must be strong enough to cause the decision maker to imagine himself as possibly failing to attain his goals.

Stage 2: Surveying Alternatives

When an individual questions the desirability of an old policy, he begins to seek new alternatives. Having accepted this challenge, he begins to search his memory for past experiences or information to help devise alternative plans of action. He also seeks advice and information from other people about ways of coping with the threat. Stage 2 is generally devoted to discovering and to selecting viable alternatives.

Stage 3: Weighing Alternatives

The individual now focuses on a more complete search and evaluation of the pros and cons of the available alternatives in an effort to choose the best possible course of action. Considering the possibility of future regret, the individual is careful in his evaluation of the alternatives. An important step in this stage is the "trying on" mentally of the alternatives and their concomitant effects on the individual and on his situation. The decision maker
sometimes returns to Stage 2 if he is dissatisfied with the alternatives that are available to him.

Stage 4: Deliberating about Commitment

Having privately decided to adopt a new course of action, the individual then begins to consider how he will implement this change and how he will tell others of his intentions. As the time nears for the implementing of the decision and for revealing it to others, the individual becomes more cognizant of his commitment. Once his decision is made public, it will be more difficult for him to reverse it, he will seem to be "locked into" it. Not continuing with the proposed course of action might involve loss of self-esteem if he does not keep his word, and loss of social esteem if he does not pursue the new course of action.

Stage 5: Adhering despite Negative Feedback

Frequently decisions go through a "honeymoon period" during which time the individual is happy with the decision and implements it without any hesitation. However, the feeling of satisfaction with this choice may be short-lived. The decision maker may receive negative feedback, may feel new threats or may see new opportunities. When, and if, this happens the individual may cycle back to Stage 1 or he may decide the new information is not of such importance as to cause him to change at this time. The decision maker will then remain at Stage 5 until he encounters a challenge
that is powerful enough to provoke dissatisfaction with his selected course of action. The stability of the decision is frequently dependent on the amount and the intensity of negative feedback the individual receives, and secondly on the individual's tolerance level for such feedback.

Janis and Mann state that the five stages are fully developed only when the person's dominant coping pattern is vigilance. They further state that incomplete working through of any of the first four stages of the decision-making process will leave the individual open to negative feedback in the final stage of decision-making.

In adapting their conflict-theory model to be used in all consequential decision-making, Janis and Mann replaced two key terms appearing in the crucial questions shown in Figure 3. The phrase "take protective action" is replaced in Figure 4 by "change" (meaning to adapt a new plan of action). The second key term "means of escape" is replaced by "better solution" (a course of action perceived by the individual as having a more satisfactory outcome).

The authors state that they do not assume their conflict theory will replace all other psychological theories that purport to explain and predict decision-making behavior; however, they believe that as an integrated decision-making theory emerges their basic assumptions will become some of the key postulates of such a theory.
Figure 4
A Conflict-Theory Model of Decision Making
Applicable to All Consequential Decisions
Source: Janis and Mann, 1977, p. 70.
Decision-Making in Education

Education is now finding itself in a dilemma. The question seems to be how best to prepare students for an ever-changing and increasingly more complicated society.

Rubin (1969) calls for a new frame of reference. He identifies two kinds of skills—primary and secondary. Primary skills are those that define the whole realm of human potential and underlie the secondary skills. Primary skills are rooted in indispensable rather than accessory knowledge. Secondary skills are those learned to accomplish a task, such as repairing a faucet or playing a musical instrument. Primary skills provide individuals with a method for perceiving and responding to life's significant events. They are the skills necessary for the physical and emotional well-being of an individual.

Seeley (1969) addresses the need for a change in the focus of the role of teacher and of student. He sees the role of teacher as one of modeling and facilitating growth of the individual in the skills of "being." He sees the decline of the role of teacher as one who transmits substantive knowledge. Rubin theorizes,

The deepening of perception, the application of analysis and synthesis, 'mind stretching,' and the conversion of knowledge into wisdom may become the teacher's predominant task. (Rubin, 1969, p. 29)

Based on this conception of skills, schools must go beyond the development of literacy and the task of making
youth employable.

In the times to come it is likely that worthwhile citizenship and a rewarding life will depend...on the ability to interpret human events and correspondingly order one's life according to a sound set of values. Thus, the skills to love and to be loved, to make sense out of human experience, to find personal meaning in one's daily ventures, and to live imaginatively represent the real skills toward which schools must aspire. (Rubin, 1969, p. 29)

Miller and Tiedeman (1974) reflecting on our rapidly changing society refer to Pierce's suggestion that today's toddler must be so educated that he can adapt and effectively live in the 21st century world. The number of times he may have to be vocationally retrained will demand that he have a certain flexibility of mind and flexibility of attitudes toward obsolence.

Rubin succinctly states the focus of education "...while education for work will be relatively unimportant, education for life will be crucial. Man will need to understand rather than know, and the educational target will be to set free the mind of each child who enters the classroom." (p. 10)

Peters and Aubrey (1975) believe that educational guidance must come before vocational guidance and that it is the foundation of career education. They also believe that career education awareness areas can be of little value without examining the nature of learning and educational guidance. Referring to Platt (1966) who states that
the maturing child begins to become aware of who he is when his imagination and planning turn toward the person he will become; Peters and Aubrey ask if this is not the real goal of education. They see the role of teacher and/or counselor as one of lending support to the learner and in facilitating the development of awareness of what the learner is becoming.

Rubin (1969) postulates that historically Western Culture has had the ability to exchange new practices for old as evidenced in science, technology and social conventions. However, this does not seem to hold true for schools. Boys and girls continue to learn values and behave much like previous generations. Scholars say educational objectives are more relevant to 17th and 18th centuries than to the present. Yet society is developing a new kind of life, one characterized by affluences, by increased leisure, by technological convenience and concern for loss of individuality.

In discussing an evolutionary view of the object of schooling, Rubin states, "One way of conceptualizing the complexity of our changing times is to think of education as a skein winding through society relating human needs to past experiences and future aspirations." (p. 15) There is much debate as to how the young shall be taught. Education has undergone many changes, having begun with basic skills of reading and writing, moving to the "whole man" concept, then to the specialist/technological skills of
the Sputnik age, and now to the person and society.

One of the key components of the process of decision-making is that of knowing one's own values. Moustakas (1966) states,

Self-values are in jeopardy in any climate where freedom and choice are denied, in any situation where the individual rejects his own senses and substitutes for his own perceptions the standards and expectations of others....In the process the unique child as a growing person is cancelled out and what remains is a definition, a role, a mechanical man, that takes its direction from external judgments to cues....The ultimate consequence of betrayal of self-value is alienation and inauthenticity. (pp. 4-6)

Carlson and Dinkmeyer (1975) address the subject of a new curriculum. They discuss the need to develop ways to teach the process through which an individual can change himself. Current potential uses of the computer indicate that intellectual knowledge is not, and will not be, in facts alone; but is, and will be, in the process of locating and handling facts and information. The new curriculum would not concentrate on any particular subject, content or basic concept but would center on the processes of thinking and of learning and acting upon information. These skills will apply to all disciplines and will be useful in life-long learning.

Berman (1968), in New Priorities in the Curriculum, reasons that because persons are required to make many changes in their life for which they are not adequately
prepared, the intent and the substance of curriculum should be focused on two major theses: 1) The major concern is with the continuity, the process, of life rather than the staticism; 2) The core of the curriculum is related to human processes such as perceiving, knowing and organizing; and the program is designed for children and youth to study and to experience these processes in a meaningful and a systematic way. She states, "The development of the individual selfhood means that the person garners the courage and resources to live comfortably within his own skin." (p. 6)

Berman sees man as a process-oriented being, and assumes it is "good" for individual's to have some degree of this orientation. The process skills have an element of continuity about them and they are relevant and applicable to most, if not all, situations. Learning these skills involves the opportunity to experience using the skills, and opportunities to verbalize the meaning attached to the skill. Thus, integration occurs between the experiencing and the meaning.

Reference has been made to the need for individuals and for programs to be future oriented. A school curriculum focusing on the teaching of process skills is helping to provide students with opportunities to plan and to prepare for the future rather than just ruminating upon the past.
Delineating eight process skills she feels should be given emphasis within the school curriculum, Berman states that her purpose is to enhance the possibility of the development of process-oriented individuals within the schools.

The eight process skills are as follows:

1) Perceiving
2) Communicating
3) Loving
4) Decision Making
5) Knowing
6) Patterning
7) Creating
8) Valuing

The high rate of unemployment, the number of students dropping out of school, dissatisfaction with careers, with relationships and with oneself demonstrate the need for effective decision-making skills within our current society. Yet these skills are not generally addressed in a systematic way by the schools.

Berman believes the teaching of decision-making skills must be an integral part of the school curriculum. She states, "Decisions vary in complexity... yet if children have not had the opportunity to begin to make them and to analyze the process, they may reach adult life with inadequate resources to wisely make the vital decisions of life."
The author sees a critical need for teaching decision-making skills within the schools. Citing reasons similar to previously quoted theorists such as Gelatt (1973) and Janis and Mann (1977) Berman identifies the following:

1) Decision-making is a complex process. Being aware of this complexity may help a person be more tolerant of ambiguity, and better able to accept the consequences of an occasional poorly made decision.

2) The correct use of data is critical to effective decision-making. The individual needs to know when to, and when not to, seek information. Time, energy and money can be lost in searching for useless and non-existent data.

3) Learning the decision-making process helps one to better understand the relationship between goals, actions and decision.

4) Individuals need to know how to determine the quality of a decision. Learning how to anticipate, and how to evaluate, the consequences of a decision is critical. Decisions should not be viewed as separate entities, but in relationship to the whole.

5) Learning decision-making improves relationships with others. Accepting the principle that an individual has freedom of choice, helps one realize
that he himself cannot be a part of another's decision except as the other person chooses to let him be a part of it.

6) Understanding decision-making is a basic element in understanding other human processes and functions such as being grateful, aspiring and caring.

7) Thought must be given to the kinds of decisions that are better made by humans, and the kinds of decisions that can better be made by machines. Technology is useful in implementing a decision; however, it lacks the human creative process.

In summarizing the need for teaching decision-making skills, Berman states that individuals need to learn decision-making skills to lead a more vital life and a life not routinized by narrowly defined boundaries.

One way teachers can help students become aware—and become more aware themselves—of the decision-making process taking place within the classroom is to look at the language that is being used. This can be done with tape recorders, videotape machines and sound cameras. Behaviors can be categorized as they relate to decision-making, and observations can then be recorded within these categories. Some questions to begin the study might be:

1) Who is making the decisions within the classroom?
2) Do teachers and children have the same perception of who is making decisions within the classroom?

3) What opportunities are provided to clarify or explain the decision making process?

4) Are children aware of the factors they take into account in making various kinds of decisions? (p. 111)

Addressing the direct teaching of decision-making, Berman lists three kinds of activities that might be included in the curriculum: 1) the students should have direct experience in decision-making, 2) the students should be helped to become aware of some of the factors entering into the decision-making process and 3) the students should experience components of the process such as responsibility and choice making.

The setting for this direct teaching would need to provide a supportive atmosphere where risk taking is not only tolerated, but is invited. Working and deciding together in group situations is also a necessary part of the learning process, brainstorming for creative ideas and cooperating to implement these ideas is also important.

Berman believes the school of the future will have decision-making as a central focus. She states, "Children will learn to prize the moment of now, for they will learn that how it is used can mean the difference between a full, worthwhile life or a safe, but dull, existence." (p. 116)
An individual's life style is defined by his career and is central to everything he does, the people with whom he associates and the setting in which he works. Work plays an important role in the life of an individual, and now more than ever before a person needs to be satisfied with his career and needs to realize that he will probably change jobs five or six times within his lifetime.

Peters (1977) in applying decision-making skills to career planning and the world of work, theorizes that personal changes occurring in each individual as part of the natural growth and environmental changes due to mobility and technology make career planning an ongoing lifelong process. He believes "...no one finds himself anywhere without first of all putting himself there or allowing himself to be put there." (p. 3) This kind of career planning begins with the premise that the individual can have an impact on a yielding world, and that action is better than inaction. The action evolves into a commitment which in turn narrows the boundaries and adds constraints to freedom of action.

The author states that the career decision-making process is set in motion when we ask ourselves:

- Who am I?
- What do I want out of life and what do I want to put into it?
- What am I prepared to do to achieve what I want?
- How do I achieve what I want? (p. 3)

The life-long process of career planning involves continual expansion of one's perception of himself and of his interactions with the ever-changing world of work. Peters states,

The continuous interaction reflects a tentative balance between our need for security and our need to take risks. The product of this process is a personal and productive relationship with work that meets the needs of a developing individual immersed within a transient society. (p. 5)

Peter's statement that career planning is a life-long process, and is continually changing as one grows and interacts with his environment, can and does relate to all persons.

Substantial changes and vast new opportunities are in the "now" and in the future, especially for women and for minorities and education must play a vital role. Bailey and Stadt (1973) believe that one of the roles of education is to reduce the time lag between the new reality and the awareness and the response to it. Focusing on women they state, "The fundamental implication of labor force participation of women and the theories of occupational decision-making point to the need for young women to prepare for multiple roles during different periods in their lives." (p. 143) As women search for their identity and their
role in society, they experience conflicts in values, in needs and in feelings.

The model (Figure 5) delineates elements which may cause role conflicts. Viewed from this perspective, occupational decision-making is not an easy choice among the alternatives that are available; however, selecting choices for a more comprehensive life plan is necessary.

Career planning is not an easy task and the options now open to young persons, especially women, make career planning even more difficult. Thus, the process of becoming aware of alternative career choices, of experiencing these choices, of exploring the life style associated with them and of mentally "trying on" these careers must be initiated early and continued as the person proceeds through this ongoing process.

Bailey and Stadt believe that women need to make more personal, occupational and professional decisions than men; choosing not only between marriage and a career, but between various patterns of education, employment and marriage. Complicating the situation is the fact that decision or choice points arrive earlier for the young woman of today than they did for the young woman of previous generations.

The authors believe the initial choice of a young woman is the determining factor that affects her ultimate career pattern. The choice to drop out of school, or to
Retraining

Family

Community

Marriage

Total Life Planning

Work

Education

Figure 5

Components of Total Life Planning

marry without first getting additional education and/or work experience, narrows the job opportunities available to those women. Jobs available to these women when, and if, they choose to work are generally ones with lower pay and lower status.

Education's role is to advise and to facilitate the career decision-making process. Girls need to be made aware of the duality of careers such as homemaking and wage earning. The ensurance of requisite employment skills for girls to enter the labor force, when and if they choose, is imperative before they leave secondary school.

Hansen (1971), in addressing the career development of women draws attention to the belief that as long as women are not optimizing their potential men are also being limited in optimizing their potential. She sees women at this point in time as having special needs with regard to planning careers and with regard to decision-making. Hansen believes counselors and teachers in the school setting have a responsibility to assist young women in career planning and to bring about change in the school program through the curriculum.

Changing patterns in work, in families and in society have helped change the roles of women. Hansen cites such trends as: 1) advances in technology which have freed women from full-time housework, 2) the population explosion and birth control, 3) legislation improving the status of
women in education and work, 4) the Women's Movement, 5) changing life styles and the woman's sense of identity, 6) the increased availability of part-time jobs and child care facilities, 7) the focus on continuing education for women to re-enter education and/or work and 8) the acceptability of dual partnership marriage patterns.

The author states that while there is no complete theory of female career development, research has been, and is being, directed toward this concern. This kind of research is important to the understanding of women in other than traditional stereotypic roles.

Continued awareness of the programming of girls and boys and how this affects their self-concept is important to the maximum development of each person's potential. As teachers and counselors, in the school setting, and girls themselves, become more aware of the options open to them their career planning is changing. More young women are now planning for a dual role of career and marriage, instead of one or the other.

Hansen cites statistics indicating there are 32 million working women who comprise one-third of the labor force. Forty-two percent of all women are working, over half of them are married and most women work for economic reasons.
Hansen states,

One of the hard realities is that women who are working are concentrated in a few occupations; many of them low-paying, low-level and dead-end. Although the Dictionary of Occupational Titles has classified approximately 23,000 different occupations in the United States, one-third of all working women are concentrated in only seven of them: retail sales clerk, secretary, household worker, elementary school teacher, bookkeeper, waitress, and nurse. (p. 458)

Statistics such as these point to the importance of effective decision-making skills and career planning not only for young women, but also for young men. This statement is not intended to infer that these seven occupations are not acceptable or worthwhile; quite the contrary, the statement is intended to focus on the need for young persons to become aware of, and to explore, many career options.

Scholz, et al., (1975) in their book How To Decide: A Guide For Women address the needs of women as they confront new and challenging conflicts--both internal and external--as more options become available to them in education and in work. They believe that although the freedom to choose may be apparent to the individual, the ability to choose may not be so apparent. Many women currently find themselves in situations for which they are ill-prepared. Due to divorce, separation, death or a poorly made initial decision women are making decisions that are vital to their
present and their future lives. Often these women are not knowledgable about the substantive portion of the decision nor the process involved in making an effective decision. It was for this purpose that the book was produced.

The authors present their decision-making process as one that is applicable to any decision, whether it is personal or whether it relates to a career. It is based on the premise that individuals who learn to decide effectively can effectively direct their lives.

The decision-making process, as developed by Scholz, et al., is presented here in an abbreviated form.

I. WHAT KEEPS YOU FROM DECIDING?

perception of self
perception of what others think
exploring lifelines of self and older "significant other," such as mother
(exploring) how decisions affect your lifeline

II. WHO ARE YOU?

what do you really want in your life
daydream—a work setting/an occupation
clarifying values
exploring alternatives
clarifying work values

III. SETTING GOALS

exploring two kinds of barriers
personal (internal) — aptitudes, abilities, physical strengths, personality
obstacles outside self (external) — race or sex discrimination, financial needs, educational opportunities, job market, family
responsibilities, educational background

IV. WHAT DO YOU NEED TO KNOW?

power -- having the right information
mistakes in gathering and using information
exploring myths and facts
others as gatekeepers
yourself as your own gatekeeper
resources for information
persons to talk to
materials to read
experiences
collecting and assess information
select pertinent information
expand alternatives
learn about risk taking
strategy of deciding

V. HOW DO YOU TAKE ACTION?

assessing own rights as a decider
looking at assertiveness
developing a self-profile
evaluating roles and options
making a decision...developing a plan of action

This decision-making process is a more detailed, "working-through" approach than other processes or models that have been presented. The process can be effectively used with many different populations.

Tyler (1978) and others (Krumboltz, 1979; Gelatt, 1973) acknowledge that everyone operates under some constraints--genetic determinism, social-cultural determinism, availability of opportunities and religious beliefs; however, each individual has freedom of choice. These theorists believe the potentiality of human choice is possible, even mandated, by the many options available at a given
point in time. Given this premise, the assertion is made that individuals have the opportunity to make choices to mold the pattern of their lives. These choices not only include actions, but also thoughts and feelings.

Bartsch, et al., (1969) state that one needs more than information to make an effective decision. They list two important variables which distinguish effective decision makers from ineffective decision makers. The variables are:

1) Their mental set (personal orientation, frame of mind);

2) The skills which they bring to bear on the situation.

The authors identify the relevant skills as:

1) Those which enable individuals to understand themselves in terms of their
   a) Values
   b) Interests
   c) Abilities
   d) Goals

2) Self-management skills which enable persons to:
   a) Make accurate appraisal of their present situation
   b) Set concrete objectives
   c) Manage fears
   d) Select or restructure the environment so as to meet their goals. (p. 7)

Bartsch, et al., state that evidence from research shows effective decision makers have a mental set different from ineffective decision makers. Effective decision
makers are optimistic, they believe problems are part of the process of living and disappointments are taken in stride. The ability to function autonomously is also a critical attribute of an effective decision maker, the autonomous individual being more self-directing and controlling his life in accordance with his own values. In the process of making a decision he may ask for the advice of others; however, he will make the final decision himself.

The authors (Bartsch, et al.) believe all sound investigation and thinking is rooted in the scientific method and they demonstrate it in the following manner.

<table>
<thead>
<tr>
<th>Scientific Method</th>
<th>Decision-Making</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Define the problem</td>
<td>I. State the decision you want to make</td>
</tr>
<tr>
<td>II. Formulate hypotheses</td>
<td>II. List alternative courses of action</td>
</tr>
<tr>
<td>III. Consider possible outcomes</td>
<td>III. List desired outcomes and establish priorities</td>
</tr>
<tr>
<td>IV. Test the hypotheses</td>
<td>IV. Test alternatives by:</td>
</tr>
</tbody>
</table>

A. Estimating your capabilities and

B. Estimating the probability of being able to reach your desired outcomes
Scientific Method

V. Draw conclusions

Decision-Making

V. Draw conclusions and take action (p. 85)

The authors state that they originally designed their book for college and university freshmen and sophomores; however, they have found that it is applicable and useful for many populations.

Decision-Making for Teachers

Bowles (1973) discusses the importance of the teacher variable in the educational settings, and the critical nature of the teacher as a decision-maker. He states that the current teaching strategy evolved from the model of the teacher as one who gathered, selected and dispersed information, then evaluated the effect, modified the output as needed and established a learning climate with the major emphasis on direction and control. Bowles sees the need for a more relevant emerging teacher model which includes all the preceding points plus management skills in working with paraprofessionals, in coordinating materials and equipment and being knowledgable in human relations. The teacher variable is seen as being critical in present and future educational settings.

It is believed that in addition to knowledge of content, the teacher must develop process skills for effective teaching. In the teaching model Bowles envisions, there
are ten decision points. Seven points are implicit to the contemporary model. The points are:

1. Gathering data
2. Selecting the appropriate information
3. Dispersing this information
4. Evaluating its effect
5. Modifying instruction
6. Maintaining a learning climate
7. Controlling student behavior

In the prototype, the following three points are added.

1. Managing
2. Coordinating
3. Human relateioneering (p. 38)

Bowles declares, "...decision making surfaces as the major skill in this concept of the teaching task and should rank first among the priorities for skill development in teacher training." (p. 38)

Citing economic decision-making, military decision-making, industrial decision-making and instructional decision-making Bowles sees little commonality among them. Instructional decision-making generally does not contain the threat of physical danger, the impact of an error in economic judgment nor does it result in a readily observable measured product. In the instructional setting, error in decision-making is not readily apparent and responsibility for inadequate decision-making is generally not assumed. Bowles theorizes that in a given teaching task, decision-making results from a rapid adjustment
by the individual, to different cues on almost an intuitive level.

To improve instructional decision-making, personal characteristics that increase perceptiveness and objectivity and result in flexibility and creativity in the teaching task need to be developed. Secondly, the skills and knowledge necessary to use technical equipment to gather and analyze data need to be taught.

In outlining a paradigm of the decision process Bowles lists: preactive-deliberation (planning), active-implementation (acting), and postactive-reflection (feedback). He parallels this to a managerial model by Marcus and Wilson which delineates: intelligence, design and choice and emphasizes these stages occur simultaneously as well as in an ordered fashion. Continuing Bowles theorizes,

Instructional decision-making lies predominantly within the active stage but is also a synthesis of all three stages, so we can describe it as preactive, active and post-active behavior. Here too, the emphasis is on an ordered process that occurs almost simultaneously. (Bowles, 1973, p. 39)

Because the teacher is holistic and the cognitive and the affective function together, the effective teacher needs to be open to information and be able to synthesize the data. Bowles states,
Prospective teachers should not only have a working intelligence, but they should be able to develop a high degree of self-respect. Therefore, the training program must be designed to provide an opportunity for the teacher to attain a maximum level of technical competence. This in turn will enhance his self-respect so that his decision making skills operate at an acute level. The prototype model of tomorrow's teacher magnifies his role as decision maker. Whenever the consequences of his decision will affect human beings, it is imperative that these decisions be reached and implemented as skillfully as possible. Educators need to recognize that decision making is the critical skill in instruction. (p. 40)

Short-Term Interventions

Research specifically addressing a short-term Career Decision-Making Workshop such as the one in this study is limited. There are, however, studies of the effectiveness of short-term interventions on the topic and examples of studies dealing with other techniques of the decision-making process. The diversity of studies which pertain to some phase of decision-making or career decision-making, points to the importance of the decision-making process in the lives of people.

Sedlacek, et al., (1977) report a research study dealing with the effects of a two-hour workshop on racism and sexism. The participants were incoming university freshmen students and this workshop was part of their orientation program. The purpose of the study was to compare the effectiveness of three interventions—a Model Workshop, a
Starpower Workshop and a Movie Workshop—each had been designed to help eliminate racism and sexism among those participating. Each workshop was composed of approximately 20 members.

Findings of the study showed that those participants in the Starpower Workshop enjoyed it more and were more knowledgable about sexism and felt the exercise was more worthwhile compared with the Model Workshop participants. When compared with the Movie Workshop participants they rated Starpower as more enjoyable, felt it gave more information about racism and sexism, but they planned to take less action about the topics. The students felt the Movie Workshop compared with the Model Workshop was more enjoyable and they planned to do more about sexism. Model Workshop participants generated, from open-ended items, more examples of racism and sexism than did participants in either of the other two workshops. There was no significant difference between the Starpower Workshop and the Movie Workshop participants on the examples of racism and sexism. All the students reported liking the mutual exchange of views and reported an increased awareness of the issues.

The researchers state that within this short-time exposure the participants were able to specify some problems relating to minorities and women, particularly those participating in the Model Workshop. Therefore, the
researchers felt there was evidence that a short-term workshop can be of value. They consider one criterion of an effective intervention as being changes in the thought processes and in the actions of those individuals involved.

Smaby and Tamminen (1978) stress the importance of effective decision-making and believe that counselors, if they themselves are skilled in the decision-making process, can help clients work with their feelings as well as their thoughts in making decisions.

The authors present a training model and the results of a 12-hour training session, for teachers and counselors, using the model. The assumption is made that an individual can learn the decision-making process while being helped to make a decision.

In the study reported, each of the 22 experienced teachers and counselors had experienced 20 hours of micro-counseling, and empathy and confrontation training. The decision-helping training was conducted in four three-hour sessions by two trained instructors. The participants, after a brief description of the program, were asked to identify important decisions they would share and process.

Before and after the training session each participant completed a written decision-making test and a five-minute videotaped interview with a coached client. Participants were asked to indicate steps they would take to help the counselee make a decision, and they were to give examples
of what they would say for each step.

The written tests and interviews were independently rated and a point was assigned for each step used. As a group, the trainees increased the number of written decision-making steps from about zero to almost four. The videotaped interviews showed similar results, increasing from about one to almost four.

Smaby and Tamminen believe the use of this training model not only improves the counselor's skills in facilitating counselee decision-making, but also improves the counselor's own decision-making process.

This study cites the importance of persons in the educational setting not only being effective in their own decision-making, but also in being able to help others with the affective as well as the cognitive aspects of the decision-making process. The study also points to the belief that as an individual experiences the process, improvement is made in his own decision-making.

Gordon (1977) reports the result of a research study which examined the levels of undecidedness and levels of satisfaction among college freshmen about college major and career choice, and the effects of a concentrated five-hour career planning treatment on the decidedness and the satisfaction of major and career of participating students.

The sample consisted of 921 entering freshmen, however, ACT data was available for only 525 students and the
treatment group consisted of 62 students.

The study was based on the assumptions that undecided students are heterogeneous and should be treated as such, and that students who undergo a concentrated (five-hour) informational career planning treatment are better prepared to make a more satisfying decision about their major and career upon their matriculation into the university.

Both assumptions were supported by the data. Gordon found the student's level of decidedness and satisfaction with choice of major and career seemed to be determined by variables such as; interest in creative arts and technical fields, interest in social services, involvement in community services, ACT scores, and in addition personal characteristics and background variables. She also found that students who experienced the concentrated career planning treatment were helped in their decision-making process. Although these students who attended the workshop had different personal characteristics than those students who did not attend, the participants increased their levels of decidedness and satisfaction.

Velcich and Mitchell (1976) review a career exploration program, identified as "Mini-Term" that was in operation at the University of Tennessee. This is a short-term, out-of-school, field experience and not part of any course or curriculum. The students may spend a day, or a part of a day with resource people. The Mini-Term is just one part
of career planning, various other resources and programs are available to assist the students.

In the three years this program has been in operation the number of students participating, the number of resource persons and the number of university personnel has increased due to the receptivity of the program.

This study helps validate not only the need for exploration of alternative careers, but also the effectiveness of short-term explorations when linked with other kinds of facilitative services.

Summary

Decision-making has been defined in various ways by different theorists. Bross (1953) and Girshick (1965) address statistical decision and its similarity to science in the way both view the real world. Statistical decision uses two graduated scales—value and probability. The criterion of a decision being, "Does it work?"

Psychological decision theory was explored as it is seen by Peters (1970), Gelatt (1973), Janis and Mann (1977) and others. The value and the necessity of knowing decision-making skills was stressed. Gelatt stating that the skillful decision maker has more personal freedom in his life and has more control over it. The criterion of the decision is not necessarily the outcome, but the process. If one works through the process, then one is more
satisfied with the outcome. Peters states that decision-making is part of the developmental process using creativity, the centering of one's self and integration as flowing into the process.

Cassell (1973) states that one does not get more efficient in the decision-making process because one grows older. He further states that individuals seem to acquire what they know about the process simply by trial-and-error and that this is totally inadequate. Goals are critical to the process, as he sees it, and he lists several fundamentals involved in the process of decision-making.

Examples of decision-making models have been presented. These models have varied as they describe a specific theory. A Block Design by Bross (1953) was presented showing statistical decision-making. Gelatt's (1962) models of psychological decision-making demonstrating a more humanistic approach were set forth. Janis and Mann (1977) establish seven major criteria with which to evaluate the decision-making process.

The problem confronting education and individuals—that of being effective in a rapidly changing world—was addressed. Many educators are calling for changes in the curriculum. Rubin (1969) asks for a new frame of reference identifying two kinds of skills—primary and secondary. Primary skills are indispensable because they provide the individual with a method for perceiving and responding to
significant events.

Moustakas (1966) speaks to knowing one's own values and speaks to the climate of learning that is necessary for this growth of authenticity to occur. Berman (1968) cites several processes deemed necessary for the effective education of students in this era, and decision-making is one of these. Berman not only gives her rationale for this, but describes the process operating within the teaching/learning setting.

Bailey and Stadt (1973) focus on the special needs of women. They emphasize the fact that while girls are in school they must be given a realistic approach to personal and career choices. Bailey and Stadt believe girls must have skills for the labor force before they leave high school.

Hansen (1971) states that as long as women are not optimizing their potential, men are limited in optimizing their potential. She cites trends that are, and have been, a contributing factor to the career planning of women today. Hansen emphasizes, as does Bailey and Stadt, the importance of preparing young women for the labor force, and of helping them become aware of the opportunities available to them in the world of work.

Acknowledging that everyone has some constraints on the choices he may select, the researcher's position is that within a given framework the individual can decide
and this he must do.

Bartsch, Yost and Girrell (1967) in developing a decision-making program for college students state that satisfaction with what one is and is becoming is indicative of good decision-making.

Carlson and Dinkmeyer (1975) address the need for a new focus in curriculum. They theorize students will need to know how to locate and how to use information, they will need the skills of thinking and of learning. Bowles (1973) talks to this when he cites the teacher as being the critical variable in the teaching/learning process. Because of this critical role, Bowles proposes a new model for effective teaching. Bowles declares, "...decision-making surfaces as the major skill in this concept of the teaching task and should rank first among the priorities for skill development in teacher training." (Bowles, 1973, p. 38)

The studies on short-term interventions lend credence to the effectiveness of such treatments. They also substantiate the need for research such as the present study.

This chapter has contained a review of literature relevant to this study. Chapter III sets forth the procedures used in the study.
CHAPTER III

METHODOLOGY

This chapter presents methodology used to conduct the study. It contains a description of the setting, procedures, instruments and method of data analysis.

The purpose of this study was to examine the effect of a short-term Career Decision-Making Workshop on the level of decidedness and the perceived need for decision-making skills of freshman and sophomore teacher education students enrolled in a field-based career exploration program. Specifically, the following questions were posed:

Question 1: What differences exist between students (a) who ask for and receive assistance in choice of major and occupation and (b) who ask for and do not receive assistance in choice of major and occupation and (c) who do not ask for assistance in choice of major and occupation and their selected characteristics of (1) sex, (2) age, (3) university rank, (4) field-based placement, and (5) personality type as measured by the Myers-Briggs Type Indicator?
Question 2: Does a short-term Career Decision-Making Workshop have a significant effect on pre-education students who asked for assistance and received it, as measured pre and post by two instruments—the Career Exploration Survey and the Career Decision Scale in terms of (1) the perceived need for assistance in choice of major, (2) the perceived need for assistance in the choice of occupation, (3) the level of decidedness of career decision, (4) the persistence of first choice of selected major and (5) the perceived need for help with decision-making skills?

Setting

The Freshman Early Experiencing Program is a guidance-based field program housed in the Faculty of Special Services, College of Education, The Ohio State University, Columbus, Ohio. The program, or its equivalent, is a requirement of the College of Education and those students seeking admission to, or those interested in, the College enroll in the program. The students may select to work as a teacher aide in a field based school placement or as an aide in a field based social agency. One purpose of the teacher aide component of the program is to help undecided and decided students explore the field of education through activities involved in the role of teacher. An equally important component of the program is providing opportunities for students to investigate alternative careers.
The activities, both planned and unplanned, are engaged in by the students in their field based setting. The meanings attached to these activities are attended to in the seminar setting. The seminars consist of not more than 14 students and a seminar leader to insure the possibility of individually focused activities.

As a student-centered exploration program, the Freshman Early Experiencing Program is committed to attending to the educational, the career, and the personal-social needs of all persons participating in the program. This includes assistance with study skills, remediation if needed, exploration of personal values and needs, and skill building.

At the time of the study six school systems, in the surrounding area, were participating in the Freshman Early Experiencing Program. Those school systems were: Worthington City Schools, Whitehall City Schools, Scioto Darby City Schools, South-Western City Schools, Columbus City Schools and Upper Arlington City Schools. Students from each of these field based school placements were invited to participate in the Career Decision-Making Workshop as an extra aspect of the program.

Research Sample

The population for this study at The Ohio State University was drawn from enrollment in the Freshman Early
Experiencing Program during Autumn Quarter, 1977. Only teacher education students were included providing a total population of four hundred and sixty (460) for the study. The majority of the population were entering freshman students who had made a tentative career commitment to education. There were 184 sophomore students, and 52 upper class students who were undecided about a career choice.

Two questions seeking the student's perceived need for assistance with decision-making skills in choice of major and in choice of occupation were included in the Career Exploration Survey instrument that was administered to the students in the beginning of the quarter.

Those students who responded "no" to one, or to both of the following questions made up the Non-Treatment Group. This group numbered 295.

1) I need to learn good decision-making procedures so I will be able to make the decision about my major and feel good about it.

2) I need to learn good decision-making procedures so I will be able to make a decision about my occupation and feel good about it.

The 165 students who responded "yes" to both the above questions were invited to participate in the Career Decision-Making Workshop. Fifty-nine of the 165 students, for a variety of reasons, chose not to participate in the Career Decision-Making Workshop. These students made up the Non-Participant Group. The 106 remaining students did
participate in the Career Decision-Making Workshop and thus became the Treatment Group. The total number of students in the study was 460. Some tables will indicate fewer subjects because the respondents did not complete all the needed information for the variables. (See Table 1)

Instruments

Three instruments were used in this study: the Myers-Briggs Type Indicator, the Career Exploration Survey and the Career Decision Scale (see Appendix A).

Myers-Briggs Type Indicator

One of the important elements of decision-making is having information about one's self. The Myers-Briggs Type Indicator is a forced choice questionnaire. It was developed by Isabel Briggs Myers over a thirty-year period beginning in the early 1940's. The Indicator was developed to implement that part of the theory of C. G. Jung which describes psychological types. The substance of the theory being that variations in behaviors which seem random are actually consistent and orderly, owing to differences in the way people prefer to use their perception and judgment.

Isabel Briggs Myers believed four preferences (EI, SN, TF, JP) combine to establish 16 types, each producing different sets of characteristics--different interests, different values, different needs, different habits of mind and different surface traits. Thus, an individual's
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<td>134</td>
<td>100%</td>
<td>47</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

TABLE 1

NUMBER AND PERCENTAGE BY STUDENT STATUS AND STUDY GROUPS
own combination of preferences determines the kind of work
he ought to do best and will enjoy doing the most.

Myers (1962) explains the indices as follows:

The EI index is designed to reflect whether
the person is an extravert or an introvert
in the sense intended by Jung, who coined
the terms. The extravert is oriented pri-
marily to the outer world, and thus tends
to focus his perception and judgment upon
people and things. The introvert is ori-
ented primarily to the inner world postu-
lated in Jungian theory, and thus tends to
focus his perception and judgment upon con-
cepts and ideas.

The SN index is designed to reflect the
person's preferences between two opposite
ways of perceiving, i.e., whether he relies
primarily on the familiar process of sens-
ing, by which he is made aware of things
directly through one or another of his five
senses, or primarily on the less obvious
process of intuition, which is understood
as indirect perception by way of the un-
conscious, with the emphasis on ideas or
associations which the unconscious tacks
onto the outside things perceived.

The TF index is designed to reflect the
person's preference as between two opposite
ways of judging, i.e., whether he relies
primarily upon thinking, which discrimi-
nates impersonally between true and false,
or primarily upon feeling, which discrimi-
nates between valued and not valued.

The JP index is designed to reflect whether
the person relies primarily upon a judging
process (T or F) or a perceptive (S or N)
process in his dealing with the outer world,
that is, in the extraverted part of his life.

In terms of the theory, a person may reason-
ably be expected to develop most skill with
the processes he prefers to use and in the
areas where he prefers to use them. If he
prefers E, he should be more adult and effective in dealing with his environment than with ideas. If he prefers S, he should be more effective in perceiving facts than possibilities. If he prefers T, he should be more adult in his thinking judgments than in his feeling judgments. If he prefers J, he should be more skillful at ordering his environment than in adapting to it, and conversely. (pp. 1-2)

The reliability of this instrument is being continuously evaluated, this is especially true with the, as yet; unmeasurable variable of "type of development"—i.e., the extent to which the person actually has developed the processing and the attitudes which he prefers. The mean level of type development is unknown for different samples tested. The number of expected persons to be answering at random because of an undeveloped typology is also unknown.

Carlyn (1977), in reporting on the reliability of the MBTI, states that internal consistency reliability and test-retest reliability have been investigated. She further states that estimates of the internal consistency of continuous MBTI scores seem to be quite adequate for a self-report instrument, ranging with few exceptions between .70 and .90. Estimating the internal consistency of the type categories has been more difficult because existing statistical procedures can provide only low and high estimates. Nevertheless, the type categories appear to be adequately reliable for adult samples.
Test-retest experiments have shown that consistency between the original and the retest type classification has been significantly higher than would be predicted by chance.

The MBTI purports to measure abstract variables or constructs. To evaluate the measurement of these variables, related behaviors need to be specified and test administered to establish any correlation. Myers (1962) states that as the type preferences are found to correlate in suitable directions, with interests, values and need determined by other instruments, or correlate appropriately with other external evidence of internal differences, support is given for the validity of the theory and the Indicator. It can be evidenced the Indicator reflects the Jungian theory on which it is based.

Career Exploration Survey

The Career Exploration Survey asks for personal data such as age, marital status and university rank. It also asks the student to give his preference in level placement, subject placement and school (urban, suburban, public, parochial) placement. In addition, the Career Exploration Survey asks questions concerning the student's plan to approach a career decision—whether he plans to choose a major first or an occupation first. It also asks the student to indicate his perceived need for assistance with choice of major and/or choice of occupation.
The Career Exploration Survey was developed from two instruments. The first instrument was the Freshman Early Experiencing Commitment Form which asks the student for personal data, first choice of major and tentative commitment to education. The second instrument was the Career Development Survey by Goodson of Brigham Young University.

Goodson (1977) states the purpose of the instrument as follows:

To provide an instrument to measure high school to college student career development toward their educational choice and occupational choice within 10 to 15 minutes, and something that would be sensitive enough to be used for experimental research in career development and evaluation of career development programs....To provide an efficient way of obtaining from students the types of help they need in making their educational and occupational choices. (p. 1)

The Career Development Survey (CDS) is a relatively new (1975) instrument. In a paper presented at the 1976 American Personnel and Guidance Association Convention, Goodson stated that the purpose of the study was to find out how college students approach their career decisions. Do they 1) choose their major first, 2) select their occupation first or 3) use some other career decision approach?

The Career Development Survey design was based on research by Dole (1963) and Miller and Thomas (1966), indicating that educational choice and occupational choice are
similar but should be handled separately when working with students. The work of Biondi (1972) and Osborn (1957) was also used. This work suggests the first step in the career decision-making process is to break the problem into parts (major and occupation) so that it can be dealt with specifically and creatively.

The Career Development Survey asks simple, direct questions of students concerning their approach to career decisions. It asks whether the student plans to choose a major first or an occupation first, and if the student perceives a need for assistance with choice of major and/or choice of occupation. A score can be determined to indicate the student's level of decidedness in choice of major and in choice of occupation. The survey was used in this research study for these reasons.

Results of a 1976 study (Goodson) show students at Brigham Young University who were enrolled in a career course (CE116) meeting two days a week for eight weeks and covering career values, personal assessment, educational and occupational exploration, and the narrowing down of training and occupational choices made significantly greater gain than the students in any other career experience. Students who took a career course (CE115) meeting two days a week for eight weeks and covering creative thinking, goals, values and decision-making steps made greater progress if they also took the previous career
even though the decision-making students (CE115) made significantly less career growth than the Educational and Occupational Laboratory (CE116) students, they did make significantly greater growth than the students with no structured career class assistance. No significant differences existed between the Reference Groups meeting two hours a week for sixteen weeks and dealing with typical problems confronting college students and the Control Group, made up of open major students from the College of General Studies who had the normal college experiences without formal career class assistance, on any of the measures.

Career Decision Scale

The Career Decision Scale was designed to measure antecedents of educational-vocational indecision. It is a questionnaire measuring sixteen distinctive antecedents of educational and/or vocational indecision based on interview experience with clients. Each of the indecision types is designed to be independent of the others, although an individual may theoretically experience the stresses of more than one of these different antecedents simultaneously. The respondent is asked to rank the degree ("exactly like me" to "not at all like me") of each indecision type as it pertains to him.

Osipow (1979) states, "This instrument has as its rationale the notion that a finite number of relatively
discrete circumstances are responsible for problems people have in reaching appropriate closure and implementation of educational and vocational decisions." (p. 1)

Citing studies dealing with reasons for and problems of persons who are undecided about their careers, Osipow began investigative research to more clearly define and identify antecedents of indecision. Osipow theorized,

A better model of indecision and improved instruction to measure various aspects of vocational indecision than those currently available might, first, increase our capacity to make diagnostic statements about the nature of an individual's particular decision problems, second, enhance the adequacy of the resulting program or individual counseling intervention and, third, provide a criterion by which the intervention efforts might be evaluated. (Osipow, 1976, p. 234)

The Career Decision Scale was designed to develop a differentiated model of vocational indecision and as an instrument to measure the indecision. A system proposal of interventions designed for specific indecision needs is also envisioned.

The study (Osipow, 1976) conducted to help validate the Career Decision Scale sought to test the following hypotheses:

1) Students requesting help in vocational decision-making will score higher on the indecision scale than college students not requesting such help.
2) After experiencing a counseling intervention designed to reduce vocational/educational indecision, students requesting help in vocational decision-making will have lower indecision scores, comparable in magnitude to those of the students not requesting help. (p. 234)

The study used seven groups of students enrolled in The Ohio State University representing a range of career decidedness, some of whom were involved in intervention strategies and were available for post-testing and some who were not.

An item by item test-retest Pearson correlation for the scale and an overall test-retest Pearson correlation for the two groups of non-treated students was conducted. Item testing correlation was generally fairly high, ranging from .343 to .820. The overall score test-retest correlations were .902 and .819.

Pre-and post-test scores from two groups not receiving specific treatment for educational and vocational indecision remained the same. Pre-and post-test scores from two groups receiving specific treatment for their educational and vocational indecision were significantly lower, thus supporting the second hypothesis. The first hypothesis was partially supported.
Data Collection

The Career Exploration Survey and the Career Decision Scale were administered during the second and the final week of Autumn Quarter, 1977. The instruments were administered within the seminar setting, (a maximum of fourteen students) by the coordinator of the school system, by the seminar leader, or by the researcher.

All who administered the two instruments had been instructed in this process, either directly by the researcher or by the system coordinator who was knowledgeable in the process.

The instruments were administered at the beginning of each seminar session so the students could complete them without feeling the need to hurry and secondly, to eliminate the factor of "tiredness."

A brief introduction concerning the instruments was given before they were distributed to the students. This introduction included a statement about the purposes of the instruments, to better help the coordinators in working with the students, to provide input into the program and to be used in dissertation research.

The directions for each instrument were read aloud to the group. The students were asked to give thorough consideration to the statements and/or questions on each of the two instruments. Any questions asked by the students were answered by the person monitoring the process. There
was no specified order as to which of the two instruments was to be completed first. Upon completion, the instruments were collected and alphabetized by the seminar leader and returned to the researcher. Those students who enrolled late, or were absent, were individually given the instruments and asked to complete them at that point in time.

The Myers-Briggs Type Indicator was administered to the total group of students participating in The Freshman Early Experiencing Program. This was completed during the first week of the quarter. The instrument was administered to the total group of students participating within a given school system, by the coordinator of that system.

An introduction to the inventory was given by the coordinator. The introduction dealt with the following points: 1) the theoretical basis of the instrument, 2) the way the instrument was developed, 3) the person who developed it, 4) the rationale for using in in The Freshman Early Experiencing Program, 5) that there were no "right" or "wrong" answers, 6) that the results would be interpreted to the students later in the quarter during a seminar, and 7) that the results would only be used for research purposes and would not be given to any other Faculty.
Treatment

The Career Decision-Making Workshop was designed to help meet the needs of those students who had indicated a need for more decision-making skills. Several of the activities and much of the material used in the intervention is based on, or extracted from, the work of H. B. Gelatt (1972).

Prior to the Career Decision-Making Workshop, letters giving information about the workshop were sent to all students who had indicated need for decision-making skills. Letters excusing the students from their school placement for one of two workshop dates were sent to the students' respective cooperating teachers.

The Self-Directed Search (1971) was sent to each participant with directions for completing it before the Career Decision-Making Workshop. These were collected by the researcher and placed in the participant's folder ready to be used in the Information Activity during the Career Decision-Making Workshop.

It was determined that the maximum number of students in each group would be fourteen. Due to a larger number of students participating in the morning workshop, nine sessions were held in the morning and five sessions were held in the afternoon. Nine people volunteered to help with the facilitation of the sessions for the Career Decision-Making Workshop. These people were other coordinators
in The Freshman Early Experiencing Program, or graduate students from Guidance and Counseling. Five people facilitated both a morning and an afternoon group.

A training session for the group facilitators was held. As a result of this session, points were clarified and revisions were made in directions and in the format of the activity sheets.

Consistency within the group sessions of the Career Decision-Making Workshop was controlled in the following manner: (1) each facilitator was experienced as a group leader, (2) each facilitator had participated in a specially designed training session for the workshop, (3) each facilitator followed a prescribed outline of materials, (4) a debriefing followed the session and (5) the activities within the workshop were for a prescribed amount of time which filled the four-hour block of time.

The Career Decision-Making Workshop for The Freshman Early Experiencing Program students was held late in the quarter. Those students assigned to the schools in the morning participated in the workshop from 8:00 a.m. to 12:00 noon. For those students assigned to the schools in the afternoon, the workshop was held from 12:00 noon to 4:00 p.m.

Each participant received a folder containing the workshop materials (1) Career Decision-Making Worksheet, (2) Activity Sheets, (3) The Self-Directed Search,
(4) **Occupational Finder** and (5) name tags and pencil. The participants retained these materials for future reference and use.

The Format of the workshop was as follows:

A. **Activity I - Introduction** (20 minutes)
   1) Introduction given by the group facilitator to the Career Decision-Making Workshop
   2) Get acquainted exercise
   3) Lecturette on decision-making given by facilitator
   4) Respond on Career Decision-Making Worksheet

B. **Activity II - Values** (40 minutes)
   1) Lecturette on the values clarification process
   2) Value clarification activity
   3) Respond on Career Decision-Making Worksheet

C. **Activity III - Information** (60 minutes)
   1) Lecturette on Holland's theory and the **Self-Directed Search**
   2) Relating the **Self-Directed Search** typology to academic majors and career choices
   3) Evaluating other kinds of information students already know about themselves
   4) Enumerating:
      a) people to talk to
b) things to read

c) things to do to get more needed information

5) Respond on Career Decision-Making Worksheet

Break - 15 minutes

D. Activity IV - Work Values (15 minutes)
   1) Ideal Job Activity
   2) Group discussion of work values and their ranking in the activity
   3) Respond on Career Decision-Making Worksheet

E. Activity V - Risks and Strategies (60 minutes)
   1) Lecturette, by facilitator, on Risks and Strategies in the process of Career Decision-Making
   2) Case Study read aloud by facilitator
   3) Completion of accompanying activity sheet dealing with risks and the strategies that might be used in this case study
   4) Group discussion of the individual responses
   5) Respond on Career Decision-Making Worksheet

F. Activity VI - Decision (10 minutes)
   1) Participant will respond to, "My tentative Academic Major and/or Career Decision at this point in time is"
   2) Respond on Career Decision-Making Worksheet
G. Activity VII - Level of Decidedness/Satisfaction (15 minutes)

1) Participants rank their Decidedness about their decision

Data Analysis

The data was subjected to the following statistical procedures:

1) One way analysis of variance was used on the pre-and-post test measures—the Major Assistance Scale, the Occupation Assistance Scale, and the Career Decision Scale. These procedures were used to address:

(a) Describing the three groups on pre-test measures.

(b) Does a short-term Career Decision-Making Workshop have a significant effect on pre-education students who asked for assistance and received it as measured pre and post by two instruments, the Career Exploration Survey and the Career Decision Scale in terms of the following: the perceived need for assistance in choice of major, the perceived need for assistance in the choice of occupation, the level of decidedness of career decision, the persistence of first choice of selected major and the perceived need for help with decision-making skills.
2) The t-test was used to determine any relationship between the Myers-Briggs Type Indicator and the students who planned to select their major first and those who planned to select their occupation as their plan to approach a career decision.

3) Cross tabulation and chi square were used to describe the three groups on pre-test measures. What differences exist between students (a) who ask for and receive assistance in choice of major and occupation (b) who ask for and do not receive assistance in choice of major and occupation and (c) who do not ask for assistance in choice of major and occupation and their selected characteristics of sex, age, university rank, field based placement and personality type as measured by the Myers-Briggs Type Indicator?

This chapter has presented the methodology used to conduct the research study. The analyses of the data and the findings are presented in Chapter IV.
CHAPTER IV
FINDINGS

Chapter four presents the findings of the study. They are presented as they relate to the questions posed.

The first section contains a description of the research sample. Frequency and percent are given for characteristics within the groups. The second section contains statistical analyses as they relate to the research questions presented in the study.

The data in Table 2 show that the distribution of males and females among these groups is very similar. Approximately 80 percent in each group are female and 20 percent are male. This is similar to the distribution in the College of Education over the past 7 years. A number of implications for decision-making workshops can be drawn from the distribution and the possibility of differential decision-making between male and female.

Table 3 data reveal that about half the student sample was in the combined 17-18 year old category. About one-fourth the sample was twenty years old or older, and the remaining students were in the 19 year old category.
### TABLE 2

**PRETEST FREQUENCY AND PERCENT OF PARTICIPANTS BY GROUP AND SEX**

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### TABLE 3

**PRETEST FREQUENCY AND PERCENT OF PARTICIPANTS BY GROUP AND AGE**

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<td>102</td>
<td>77</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>295</td>
<td>58</td>
<td>106</td>
<td>100</td>
</tr>
</tbody>
</table>
Those in the Non-Treatment Group were almost evenly divided between the 17-18 year old category and the 20+ category. The majority of students in the Treatment Group were in the 17-18 year old category and the remainder nearly evenly divided between the 19 year old category and the 20+ category. The Non-Participant Group had very few 20+ students and was almost evenly divided between the other two categories.

These data reflect the fact that since the Freshman Early Experiencing Program is recommended to incoming Freshman students it is generally taken during mid adolescence. Factors influencing decision-making in careers has been found to differ according to age. Implications regarding age can be drawn from these data for further study and programming.

The data in Table 4 demonstrate that slightly over half the student sample was of Freshman rank. Nearly half the total Freshman sample perceived a need for assistance with decision-making skills. Of this number about two-thirds participated in the Career Decision-Making Workshop. Nearly three-fourths of the Sophomore sample perceived no need for assistance with decision-making skills. This group reflects a condition that seems to be changing somewhat. Since the age range is 17-19 and the university level is Freshman and Sophomore it seems that most of these students entered college right out of high school.
TABLE 4
PRETEST FREQUENCY AND PERCENT OF PARTICIPANTS
BY GROUP AND UNIVERSITY RANK

<table>
<thead>
<tr>
<th>University Rank</th>
<th>Group</th>
<th>Non-Treatment</th>
<th>Non-Participant</th>
<th>Treatment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Treatment</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Fresh.</td>
<td>159</td>
<td>59</td>
<td>39</td>
<td>15</td>
<td>70</td>
</tr>
<tr>
<td>Soph.</td>
<td>136</td>
<td>71</td>
<td>20</td>
<td>10</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>295</td>
<td>59</td>
<td>106</td>
<td>460</td>
<td></td>
</tr>
</tbody>
</table>

This is not currently so strong a trend today. Implications for career development can also be drawn from age and "age-appropriate" college status.

The data in Table 5 indicate that only 6 percent of the total population is married. Most of the married students did not perceive need for assistance with their choice of major or occupation. These data validate previous demographic data, about the Freshman Early Experiencing Program student enrollment, indicating the majority of the students are single.

The data in Table 6 indicates that over half the students selected an elementary field based placement. Nearly one-third of the students selected a secondary
### TABLE 5
PRETEST FREQUENCY AND PERCENT OF PARTICIPANTS
BY GROUP AND MARITAL STATUS

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Treatment</td>
<td>Non-Participant</td>
<td>Treatment</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>Married</td>
<td>22</td>
<td>85</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Single</td>
<td>273</td>
<td>63</td>
<td>58</td>
<td>13</td>
<td>102</td>
</tr>
<tr>
<td>Total</td>
<td>295</td>
<td>59</td>
<td>105</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TABLE 6
PRETEST FREQUENCY AND PERCENT OF PARTICIPANTS
BY GROUP AND FIELD BASED PLACEMENT

<table>
<thead>
<tr>
<th>Placement</th>
<th>Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Treatment</td>
<td>Non-Participant</td>
<td>Treatment</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>Primary Elementary</td>
<td>10</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Jr. High</td>
<td>168</td>
<td>65</td>
<td>34</td>
<td>13</td>
<td>56</td>
</tr>
<tr>
<td>Sr. High</td>
<td>34</td>
<td>60</td>
<td>8</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>295</td>
<td>58</td>
<td>105</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
field based placement, approximately one-eighth selected a junior high placement and the remaining selected a primary placement. The three groups were fairly consistent with this percentage distribution. This reflects a consistent college pattern for at least the past 5 years.

Table 7 illustrates the student's decidedness and perceived need for assistance with choice of major as

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>f-ratio</th>
<th>f prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>938.735</td>
<td>469.367</td>
<td>126.672</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>455</td>
<td>1685.952</td>
<td>3.705</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>457</td>
<td>2624.687</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MEANS FOR PRETEST MAJOR ASSISTANCE SCALE

<table>
<thead>
<tr>
<th>Group</th>
<th>Non-Treatment</th>
<th>Non-Participant</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>293</td>
<td>59</td>
<td>106</td>
</tr>
<tr>
<td>m</td>
<td>8.386</td>
<td>5.169</td>
<td>5.547</td>
</tr>
<tr>
<td>sd</td>
<td>1.893</td>
<td>2.093</td>
<td>1.913</td>
</tr>
</tbody>
</table>
reflected by the pretest score obtained on the Major Assistance Scale. The Non-Treatment Group with a mean score of 8.386, exhibited a greater degree of decidedness and perceived less need for assistance than either the Treatment or Non-Participant Groups with mean scores of 5.547 and 5.170 respectively. (Range of scores 0-10.) Significance was beyond the .01 level. These data lend support to previous empirical data showing many students have already decided on choice of major before entering the Freshman Early Experiencing Program. It also validates the purpose of the Freshman Early Experiencing Program—that purpose being to provide students an opportunity to try on the role of teacher after the initial decision and to explore in depth the field of education. Further support can be cited for the development of alternative career plans since the decision reported here is made very early in the career development process of the student and career plans change during these vital years.

The student's decidedness and perceived need for assistance with choice of occupation is shown on Table 8 by the pretest score obtained on the Occupation Assistance Scale. The Non-Treatment Group with a mean score of 8.071 demonstrated a greater degree of decidedness and less perceived need for assistance than the Treatment Group with a mean score of 4.839, or the Non-Participant Group with a mean score of 4.707. (Range of scores 0-10.)
TABLE 8
ANALYSIS OF VARIANCE OF PRETEST OCCUPATION ASSISTANCE SCALE

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>f ratio</th>
<th>f prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>1132.385</td>
<td>566.192</td>
<td>138.522</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>455</td>
<td>1859.758</td>
<td>4.087</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>457</td>
<td>2992.143</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MEANS FOR PRETEST OCCUPATION ASSISTANCE SCALE

<table>
<thead>
<tr>
<th>Group</th>
<th>Non-Treatment</th>
<th>Non-Participant</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>294</td>
<td>58</td>
<td>106</td>
</tr>
<tr>
<td>m</td>
<td>8.071</td>
<td>4.706</td>
<td>4.839</td>
</tr>
<tr>
<td>sd</td>
<td>2.010</td>
<td>1.956</td>
<td>2.089</td>
</tr>
</tbody>
</table>

Significance was beyond the .01 level.

The fact of the higher level of decidedness in the Non-Treatment Group data is consistent with the data from the Major Assistance Scale. This in part explains the higher number who did not sign for the workshop. It does not necessarily mean, however, that the decision already made is either a sound one or a permanent one. It
does mean, however, other measures will have to be used to attract those students for decision reviews for alternative major areas and career choices.

Table 9 indicates the decidedness about career as measured by the pretest Career Decision Scale. The data

**TABLE 9**

ANALYSIS OF VARIANCE OF PRETEST CAREER DECISION SCALE

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>f ratio</th>
<th>f prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>3680.907</td>
<td>1840.453</td>
<td>45.449</td>
<td>0.01</td>
</tr>
<tr>
<td>Within Groups</td>
<td>452</td>
<td>18303.520</td>
<td>40.494</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>454</td>
<td>21984.425</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MEANS FOR PRETEST CAREER DECISION SCALE

<table>
<thead>
<tr>
<th>Group</th>
<th>Non-Treatment</th>
<th>Non-Participant</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>292</td>
<td>58</td>
<td>105</td>
</tr>
<tr>
<td>m</td>
<td>20.856</td>
<td>26.982</td>
<td>26.676</td>
</tr>
<tr>
<td>sd</td>
<td>6.101</td>
<td>6.605</td>
<td>1.925</td>
</tr>
</tbody>
</table>
show that the Non-Treatment Group with a mean score of 20.856 being more decided than either the Treatment or Non-Participant Group with mean scores of 26.676 and 26.983. (A lower score means the student is more decided.) Significance was beyond the .01 level.

Examination of the three measures of decidedness demonstrate a number of students enter the Freshman Early Experiencing Program perceiving their own decision-making process as complete. It may also be assumed, however, that many students still perceive need for assistance with career decision-making. Their current decision does not necessarily reflect a completed process of exploration.

The data in Table 10 indicate there is no significant difference between the Myers-Briggs Type Indicator Indices and the approaches the students plan to use in selecting a career—whether they plan to choose a major first or plan to choose an occupation first. The mean scores reveal the type of personality that students as the Myers-Briggs Type Indicator. A mean score of 90 on the E-I index, indicates the group to be primarily Extraverted. With regard to S-N, the mean score of 94 indicates Sensing. Feeling is a stronger group mean than Thinking, with a mean score of 114. Judging is stronger than Perceiving, with a mean score of 95.
<table>
<thead>
<tr>
<th>Myers-Briggs Indices</th>
<th>Approach</th>
<th>n</th>
<th>m</th>
<th>sd</th>
<th>t</th>
<th>2-tail prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion-Introversion</td>
<td>Major</td>
<td>118</td>
<td>90.712</td>
<td>22.032</td>
<td>0.53</td>
<td>0.598</td>
</tr>
<tr>
<td></td>
<td>Occupation</td>
<td>325</td>
<td>89.400</td>
<td>25.869</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensing-Intuition</td>
<td>Major</td>
<td>118</td>
<td>94.458</td>
<td>23.912</td>
<td>-0.04</td>
<td>0.969</td>
</tr>
<tr>
<td></td>
<td>Occupation</td>
<td>325</td>
<td>94.557</td>
<td>24.272</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinking-Feeling</td>
<td>Major</td>
<td>118</td>
<td>114.712</td>
<td>17.971</td>
<td>-0.61</td>
<td>0.539</td>
</tr>
<tr>
<td></td>
<td>Occupation</td>
<td>325</td>
<td>115.905</td>
<td>18.266</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judging-Perceiving</td>
<td>Major</td>
<td>118</td>
<td>94.847</td>
<td>22.861</td>
<td>0.15</td>
<td>0.877</td>
</tr>
<tr>
<td></td>
<td>Occupation</td>
<td>325</td>
<td>94.459</td>
<td>24.660</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Not significant
Summary

The findings of this study validate the empirical demographic data concerning the Freshman Early Experiencing Program. About eighty percent of the student population is female. The age span ranges from 17 years to over 20 years, with most of the students being 18 years old. There are about an equal number of 19 year olds and 20 year olds.

Almost half the students in the 18 year old group were Freshman students and perceived a need for assistance with decision-making skills. Of this number, two-thirds participated in the Career Decision-Making Workshop. Slightly over one-third the students in the 19 year old group perceived a need for assistance with decision-making skills and half of them participated in the Career Decision-Making Workshop.

Only 6 percent of the total sample was married. Most of these students did not perceive a need for assistance with decision-making skills and resulted in their placement in the Non-Treatment Group. The data also show that the majority of the students selected an elementary field based placement.

On the pretest Major Assistance Scale, with a possible total score of 10 meaning decided and perceiving no need for assistance, the Non-Treatment Group had a mean score of 8.4. The Treatment and the Non-Participant Groups had a mean score of 5.5 and 5.2 respectively. These means
validate the perceived need for assistance with decision-making skills as reflected in the decision to attend the workshop.

The pretest Occupation Assistance Scale asks the same kinds of questions, and has the same range of scores, as does the Major Assistance Scale. However, this scale addresses decision about occupation. The Treatment Group with a mean score of 4.8, and the Non-Participant Group with a mean score of 4.7, were both lower than the Non-Treatment Group with a mean score of 8.0.

Data from the Career Decision Scale corresponds to the data from the Career Exploration Survey. The scoring of the Career Decision Scale is the reverse of the scoring of the Career Exploration Survey which contains both the Major Assistance Scale and the Occupation Assistance Scale. A higher score on the Career Decision Scale indicates less decidedness by the student concerning his career decision. The Treatment Group demonstrated less decidedness about their career decision as shown by a mean score of 26.7, similar findings were indicated by the Non-Participant Group as evidenced by a mean score of 27.0. The Non-Treatment Group demonstrated more decidedness about their career decision as shown by a mean score of 21.0. These scores were significant at the .01 level.
Research question one was posed as follows:

What differences exist between students (a) who ask for and receive assistance in choice of major and occupation and (b) who ask for and do not receive assistance in choice of major and occupation and (c) who do not ask for assistance in choice of major and occupation and their selected characteristics of (1) sex, (2) age, (3) university rank, (4) field-based placement, and (5) personality type as measured by the Myers-Briggs Type Indicator?

The data from Table 11 indicates that of the Non-Treatment Group slightly over three-fourths of the females chose to select their occupation first, and over half the males chose to select their occupation first, indicating significantly more females than males selecting occupation first. Females in the Non-Participant and Treatment Group show the same percentage ratio in choosing their occupation and in choosing their major first. Sixty-seven percent chose to select their occupation first, and 33 percent their major first. In this group no difference is found between females and males.

Nearly all the males in both the Treatment Group and the Non-Participant Group plan to select their occupation first. These data would seem to indicate the majority of students have selected education as an occupation and are using the exploration of the Freshman Early Experiencing Program to validate their choice and to explore subject
### TABLE 11
FREQUENCY AND PERCENT FOR CHOICE OF MAJOR AND OCCUPATION BY SEX BY GROUP

#### Non-Treatment Group

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Major</td>
<td>52</td>
<td>23</td>
</tr>
<tr>
<td>Occupation</td>
<td>179</td>
<td>77</td>
</tr>
<tr>
<td>Total</td>
<td>231</td>
<td>100</td>
</tr>
</tbody>
</table>

\[ x^2 = 3.909 \quad \text{df} = 1 \quad \text{Significance} = .04 \]

#### Non-Participant Group

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Major</td>
<td>16</td>
<td>33</td>
</tr>
<tr>
<td>Occupation</td>
<td>32</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>100</td>
</tr>
</tbody>
</table>

\[ x^2 \text{ Not Significant} \]
<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Female</th>
<th></th>
<th>Male</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Major</td>
<td>28</td>
<td>33</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Occupation</td>
<td>56</td>
<td>67</td>
<td>20</td>
<td>91</td>
</tr>
<tr>
<td>Total</td>
<td>84</td>
<td>100</td>
<td>22</td>
<td>100</td>
</tr>
</tbody>
</table>

\[ x^2 = 3.925 \quad df = 1 \quad \text{Significance} = .0476 \]

Data from Table 12 indicate that in all three age categories and in all three groups, the majority of the students chose to select their occupation first as their plan to approach their career decision. The percentage of students selecting either major or occupation is fairly consistent in all age categories and in all groups. The span at the college level seems to be homogeneous. No significant differences were found between groups with regard to age and selection of occupation first.
TABLE 12
FREQUENCY AND PERCENT FOR CHOICE OF MAJOR AND OCCUPATION BY AGE BY GROUP

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Non-Treatment Group</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eighteen</td>
<td>Nineteen</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Major</td>
<td>27</td>
<td>22</td>
</tr>
<tr>
<td>Occupation</td>
<td>96</td>
<td>78</td>
</tr>
<tr>
<td>Total</td>
<td>123</td>
<td>100</td>
</tr>
</tbody>
</table>

X^2 Not significant

FREQUENCY AND PERCENT FOR CHOICE OF MAJOR AND OCCUPATION BY AGE BY GROUP

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Non-Participant Group</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eighteen</td>
<td>Nineteen</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Major</td>
<td>9</td>
<td>32</td>
</tr>
<tr>
<td>Occupation</td>
<td>19</td>
<td>68</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>100</td>
</tr>
</tbody>
</table>

X^2 Not significant
TABLE 12 (continued)

FREQUENCY AND PERCENT FOR CHOICE OF MAJOR AND OCCUPATION BY AGE BY GROUP

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Treatment Group</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Eighteen</td>
</tr>
<tr>
<td></td>
<td></td>
<td>#</td>
</tr>
<tr>
<td>Major</td>
<td>17 28</td>
<td>7 35</td>
</tr>
<tr>
<td>Occupation</td>
<td>44 72</td>
<td>13 65</td>
</tr>
<tr>
<td>Total</td>
<td>61 100</td>
<td>20 100</td>
</tr>
</tbody>
</table>

X^2 Not significant

Data in Table 13 indicate a majority of both the Freshman and Sophomore students selecting their occupation first as their plan to approach a career decision. These data show consistency with choice of major or occupation continuing from Freshman to Sophomore year. However, these data also indicate a large number of students perceiving a need for assistance with their selection of major or occupation as they pursue their education. No significant differences were found in selection of major or occupation first by these students.
TABLE 13
FREQUENCY AND PERCENT FOR CHOICE OF MAJOR OR OCCUPATION BY UNIVERSITY RANK BY GROUP

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>University Rank</th>
<th>Freshman #</th>
<th>Freshman %</th>
<th>Sophomore #</th>
<th>Sophomore %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>Non-Treatment Group</td>
<td>32</td>
<td>20</td>
<td>41</td>
<td>31</td>
</tr>
<tr>
<td>Occupation</td>
<td>Non-Treatment Group</td>
<td>124</td>
<td>80</td>
<td>92</td>
<td>69</td>
</tr>
<tr>
<td>Total</td>
<td>Non-Treatment Group</td>
<td>156</td>
<td>100</td>
<td>133</td>
<td>100</td>
</tr>
</tbody>
</table>

X^2 Not significant

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>University Rank</th>
<th>Freshman #</th>
<th>Freshman %</th>
<th>Sophomore #</th>
<th>Sophomore %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major</td>
<td>Non-Participant Group</td>
<td>11</td>
<td>31</td>
<td>6</td>
<td>32</td>
</tr>
<tr>
<td>Occupation</td>
<td>Non-Participant Group</td>
<td>25</td>
<td>69</td>
<td>13</td>
<td>68</td>
</tr>
<tr>
<td>Total</td>
<td>Non-Participant Group</td>
<td>36</td>
<td>100</td>
<td>19</td>
<td>100</td>
</tr>
</tbody>
</table>

X^2 Not significant
TABLE 13 (continued)

FREQUENCY AND PERCENT FOR CHOICE OF MAJOR AND OCCUPATION BY UNIVERSITY RANK BY GROUP

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Treatment Group</th>
<th>University Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Freshman</td>
<td>Sophomore</td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>---------------------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Major</td>
<td>18</td>
<td>26</td>
</tr>
<tr>
<td>Occupation</td>
<td>52</td>
<td>74</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>100</td>
</tr>
</tbody>
</table>

$X^2$ Not significant

The data in Table 14 reveal almost half the students who chose their occupation first as their plan to approach a career selected an elementary field based placement. Those students who planned to select their major first were evenly divided between elementary and secondary field based placements. This was significant at the .03 level. These data are consistent and perhaps are reflective of the large number of females selecting elementary teaching as a viable occupation. This has implications for further study and programming as the data in Table 10 indicated 179 females selecting their occupation first.

The percentage ratio between elementary and secondary field based placements in the Non-Participant Group and the Treatment Group were very similar. Neither of these
### TABLE 14
FREQUENCY AND PERCENT FOR CHOICE OF MAJOR AND OCCUPATION BY FIELD BASED PLACEMENT BY GROUP

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Level</th>
<th>Elementary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Non-Treatment Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td>36</td>
<td>21</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td>138</td>
<td>79</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>174</td>
<td>100</td>
</tr>
</tbody>
</table>

\[X^2 = 4.247 \text{ df = 1 Significance } = .0393\]

<table>
<thead>
<tr>
<th>Choice of Approach</th>
<th>Level</th>
<th>Elementary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Non-Participant Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major</td>
<td></td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td>24</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>32</td>
<td>100</td>
</tr>
</tbody>
</table>

\[X^2 \text{ Not significant}\]
### TABLE 14 (continued)

FREQUENCY AND PERCENT FOR CHOICE OF MAJOR AND OCCUPATION BY FIELD BASED PLACEMENT BY GROUP

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Choice of Approach</th>
<th>Level</th>
<th>Elementary</th>
<th>Secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Major</td>
<td>17</td>
<td>29</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>Occupation</td>
<td>41</td>
<td>71</td>
<td>35</td>
<td>73</td>
</tr>
<tr>
<td>Total</td>
<td>58</td>
<td>100</td>
<td>48</td>
<td>100</td>
</tr>
</tbody>
</table>

\( \chi^2 \) Not significant

was statistically significant. The assumption can be made that whether the student chose a major first as his plan to approach a career decision or chose an occupation first as his plan to approach a career decision, the student perceived a need for assistance with decision-making skills.

The data in Table 15 show almost three-fourths of the students had decided to select their occupation first as their plan to approach a career decision. Over half of the students selecting occupation first, and over half of those selecting major first, were in the Non-Treatment Group indicating they perceived no need for assistance with the plan they had chosen to approach a career decision.
Table 15 data reveal a greater number of students being characterized as the ESFJ Type. Approximately half as many students as characterized by the ESFJ Type are characterized by four other types: 1) the ESFP, 2) the ENFP, 3) the ENFJ and 4) the ISFJ. These five type categories account for 64 percent of the total number of students involved in the Freshman Early Experiencing Program. The data indicate a larger percentage of the students being characterized as Extraverted. The data show all the students, in these five groups, as Feeling type persons. The data also indicate a high percentage (80 percent) of the total population as Feeling type persons. These individuals are often described as persons who are more
open to experiences, more interested in human values and interpersonal relationships. This may help to account for these student's readiness to explore and to become involved in a helping relationship situation, such as teaching.

The data reveal that 66 percent of the students in the research study are Extraverted type persons. These people tend to like action and to become involved in new situations—which again, may account for their involvement in the Freshman Early Experiencing Program. These data would seem to be consistent with the expectations and the responsibilities of an individual in a teacher role.

More than half the students were Sensing type persons, having an interest in what is real and concrete. It can be theorized that these persons may be attracted to those areas of teaching such as business, office management and other vocational skill areas.

Thirty-eight percent of the students perceived their information Intuitively. These individuals are creative, like change and autonomy. The need for change may cause a higher rate of job turnover in this type person.

Slightly more of the students were Judging types who are industrious, steady workers and follow schedules. The remaining students were Perceptive types who are more spontaneous and flexible and have a high need for autonomy. There would seem to be a balance of these two types.
<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISTJ</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>ISFJ</td>
<td>49</td>
<td>11</td>
</tr>
<tr>
<td>INFJ</td>
<td>19</td>
<td>4</td>
</tr>
<tr>
<td>INTJ</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>ISTP</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>ISFP</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>INFP</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>INTP</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>ESTP</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>ESFP</td>
<td>47</td>
<td>10</td>
</tr>
<tr>
<td>ENFP</td>
<td>49</td>
<td>11</td>
</tr>
<tr>
<td>ENTP</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>ESTJ</td>
<td>38</td>
<td>8</td>
</tr>
<tr>
<td>ESFJ</td>
<td>98</td>
<td>22</td>
</tr>
<tr>
<td>ENFJ</td>
<td>45</td>
<td>10</td>
</tr>
<tr>
<td>ENTJ</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

One type appeared to be underrepresented in the group. The data seem to indicate that those students characterized as thinking types are not very highly represented in the sample. This is consistent with the MBTI typology pattern of the students who have been enrolled in the Freshman Early Experiencing Program.
Summary

The findings relating to the first research question indicate that of those students in the Treatment Group and in the Non-Participant Group 67 percent of the females chose to select their occupation first, and approximately 90 percent of the males chose to select their occupation first. These results differ only slightly from results reported by Goodson, who originated the instrument. Goodson (1978) reports results of 67.6 percent of the females and 80 percent of the males selecting their occupation first. The results are based on studies done at Brigham Young University. Students enrolled in the College of Education constituted the sample.

The data indicate the majority of students in all three age categories and in all three groups chose to select their occupation first as their plan to approach a career decision.

The data indicated no relationship between the student's age or university rank and his choice of major first or choice of occupation first as his plan to approach a career decision.

Significant findings showed that almost half the students in the Non-Treatment Group who chose their occupation first, selected an elementary field based placement. However, the percentage ratio between elementary and secondary field based placement in the Non-Participant and the
Treatment Group were very similar. It can be assumed that these student's perceived need for assistance with decision-making skills was not determined by their choice of approach to a career decision.

The data from the Myers-Briggs Type Indicator personality inventory disclosed that the majority of the Freshman Early Experiencing students are extraverted, however, approximately one-fourth of the students are introverted. Slightly more of the students are characterized by the sensing type than are characterized by the intuitive type. Only a few students are thinking types—being described as logical and analytical. Most students were feeling types attending to interpersonal relationships and human values. More of the students used the judging process in dealing with their outer world of people and things—again validating the decidedness demonstrated by many of the students.

The second research question posed was as follows:

Does a short-term Career Decision-Making Workshop have a significant effect on pre-education students who asked for assistance and received it, as measured pre and post by two instruments—the Career Exploration Survey and the Career Decision Scale in terms of (1) the perceived need for assistance in choice of major, (2) the perceived need for assistance in the choice of occupation, (3) the level of decidedness of career decision, (4) the persistence of
first choice of selected major and (5) the perceived need for help with decision-making skills?

The data in Table 17 indicate the Non-Treatment Group has a mean score of 8.928 demonstrating a greater degree of decidedness and perceiving less need for assistance than the Treatment Group with a mean score of 7.885 or the Non-Participant Group with a mean score of 7.685. (Range of scores 0 → 10, with 10 meaning the student is more decided

### TABLE 17

**ANALYSIS OF VARIANCE OF POSTTEST MAJOR ASSISTANCE SCALE**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>f ratio</th>
<th>f prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>124.007</td>
<td>62.003</td>
<td>19.59</td>
<td>0.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>421</td>
<td>1331.877</td>
<td>3.163</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>423</td>
<td>1455.884</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MEANS FOR POSTTEST MAJOR ASSISTANCE SCALE**

<table>
<thead>
<tr>
<th>Group</th>
<th>Non-Treatment</th>
<th>Non-Participant</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>266</td>
<td>54</td>
<td>104</td>
</tr>
<tr>
<td>m</td>
<td>8.928</td>
<td>7.685</td>
<td>7.885</td>
</tr>
<tr>
<td>sd</td>
<td>1.491</td>
<td>2.455</td>
<td>2.025</td>
</tr>
</tbody>
</table>
and perceives no need for assistance with choice of major.

The posttest data as compared with the pretest data (Table 7) indicate only a very slight increase in the decidedness of the Non-Treatment Group. These data lend support to the opinion that those students who perceive themselves as decided about their career and needing no further assistance with decision-making skills remain so throughout the quarter.

The posttest data as compared to the pretest data (Table 7) indicate both the Treatment Group and the Non-Participant Group became more decided and perceived less need for assistance with decision-making skills.

Table 18 indicates the student's decidedness and perceived need for assistance with choice of occupation as reflected by the posttest score obtained from the Occupation Assistance Scale. The Non-Treatment Group showed a mean score of 8.681. The Treatment Group showed a mean score of 7.601 while the Non-Participant Group yielded a score of 7.283. (The range of scores was 0 → 10, with 10 meaning decided and not perceiving any need for assistance with choice of occupation.)

The posttest data seem consistent with the data reported in Table 17 concerning decidedness about a major. The posttest data as compared with the pretest data (Table 8) show only a slight increase in decidedness about choice of occupation and need for assistance with decision-making
TABLE 18
ANALYSIS OF VARIANCE OF POSTTEST OCCUPATION ASSISTANCE SCALE

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>f ratio</th>
<th>f prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>142.54</td>
<td>71.27</td>
<td>18.30</td>
<td>0.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>420</td>
<td>1635.34</td>
<td>3.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>422</td>
<td>17777.89</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MEANS FOR POSTTEST OCCUPATION ASSISTANCE SCALE

<table>
<thead>
<tr>
<th>Group</th>
<th>Non-Treatment</th>
<th>Non-Participant</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>267</td>
<td>53</td>
<td>103</td>
</tr>
<tr>
<td>m</td>
<td>8.681</td>
<td>7.283</td>
<td>7.601</td>
</tr>
<tr>
<td>sd</td>
<td>1.707</td>
<td>2.597</td>
<td>2.233</td>
</tr>
</tbody>
</table>

skills. Both the Non-Participant Group and the Treatment Group demonstrated a considerable increase in their decidedness about their occupation and perceived less need for assistance with decision-making skills when the data in Table 18 was compared to the data in Table 8.

Table 19 demonstrates the decidedness about career as measured by the posttest Career Decision Scale. The data show the Non-Treatment Group with a mean score of 19.623, showing more decidedness than the Non-Participant Group.
TABLE 19
ANALYSIS OF VARIANCE OF POSTTEST CAREER DECISION SCALE

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>ss</th>
<th>ms</th>
<th>f ratio</th>
<th>f prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2</td>
<td>1568.81</td>
<td>786.40</td>
<td>16.955</td>
<td>0.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>408</td>
<td>18875.67</td>
<td>46.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>410</td>
<td>20444.48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MEANS FOR POSTTEST CAREER DECISION SCALE

<table>
<thead>
<tr>
<th>Group</th>
<th>Non-Treatment</th>
<th>Non-Participant</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>260</td>
<td>52</td>
<td>99</td>
</tr>
<tr>
<td>m</td>
<td>19.623</td>
<td>23.711</td>
<td>23.656</td>
</tr>
<tr>
<td>sd</td>
<td>5.814</td>
<td>8.711</td>
<td>7.984</td>
</tr>
</tbody>
</table>

and the Treatment Group with mean scores of 23.711 and 23.656 respectively. (The lower score indicates more decidedness.)

These data seem to be consistent with those previously reported. There was a slight increase in the decidedness of the Non-Treatment Group as compared to the pretest (Table 9). Both the Non-Participant Group and the Treatment Group showed greater increases as compared to the
pretest (Table 9) in decidedness about their career decision.

Data in Table 20 indicate approximately three-fourths of the students persisted with their first choice of major. Those students in the Non-Treatment Group were more consistent than the other two groups. These data correspond to the level of decidedness demonstrated by this group.

Almost half the students in the Treatment Group who selected a major first as their plan to approach a career decision did not persist with their first choice of major. This non-persistence was evidenced by approximately one-fourth to one-third of the remaining students in the Treatment Group and in the Non-Participant Group.

Summary

The results of the pre and post mean scores of the Major Assistance Scale of the Career Exploration Survey for all three groups display the following data. The Non-Treatment Group reported a pretest mean score of 8.4 showing more decidedness and less need for assistance in choice of major. This group had a gain score of only .5 on the posttest, thus yielding a mean score of 8.9. Showing a mean score of 5.5 on the pretest and a posttest mean score of 7.9 on the same Major Assistance Scale, the Treatment Group displayed a gain score of 2.3. On the same Scale, the Non-Participant Group reported a pretest mean
TABLE 20

FREQUENCY AND PERCENT FOR PERSISTENCE WITH FIRST CHOICE MAJOR BY GROUP

<table>
<thead>
<tr>
<th>Persist</th>
<th>Group</th>
<th>Major</th>
<th>Occupation</th>
<th>Major</th>
<th>Occupation</th>
<th>Major</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non-Treatment</td>
<td></td>
<td></td>
<td>Non-Participant</td>
<td></td>
<td></td>
<td>Treatment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>8</td>
<td>12</td>
<td>32</td>
<td>17</td>
<td>4</td>
<td>29</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>59</td>
<td>88</td>
<td>159</td>
<td>83</td>
<td>10</td>
<td>71</td>
</tr>
</tbody>
</table>
score of 5.2 and a posttest mean score of 7.7, showing a gain score of 2.5.

Both the pretest and the posttest mean scores of the Non-Participant and the Treatment Groups are very similar. This is to be expected with the pretest mean scores, however, the similarity of the posttest mean scores causes one to look at any common or shared experiences had by both groups.

The Occupation Assistance Scale of the Career Exploration Survey yielded mean score results similar to those on the Major Assistance Scale. The Non-Treatment Group exhibited a pretest mean score of 8.1 with a gain of .6 on the posttest. The Non-Participant Group with a pretest mean score of 4.7 demonstrated a gain of 3.6 on the posttest. Again, the Treatment Group was very similar with a pretest mean score of 4.9 and a gain score of 3.5 on the posttest.

Results from the Career Decision Scale validated those obtained on the other two measures. The Non-Treatment Group showed more decidedness at pretest time and gain score of only 1.2 yielding a posttest mean score of 19.6. Both the Non-Participant Group and the Treatment Group demonstrated less decidedness at pretest time, but reported gain scores of 2.7 and 3.2 respectively. This resulted in posttest mean scores of 23.8 and 23.7.
The results of the three measures would seem to indicate that those students who are fairly decided about their major and career and perceive no need for assistance at pretest time remain so throughout the quarter. Those students who exhibited a lesser degree of decidedness and perceived a need for assistance with choice of major and occupation demonstrated growth in these two areas.

Sixteen percent of the students in the Non-Treatment Group did not persist with their first choice of major. Almost twice as many of the students from the Non-Participant and the Treatment Group did not persist with their first choice of major. These results seem to be congruent with the findings of the instruments.
CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to examine the effect of a short-term Career Decision-Making Workshop on the level of decidedness and perceived need for decision-making skills of freshman and sophomore teacher education students enrolled in a field based career exploration program.

The Freshman Early Experiencing Program, or its equivalent, is a requirement of the College of Education; and those students seeking admission to, or those interested in the College, enroll in the program. The program focuses on three areas of human development: 1) personal-social development, 2) educational development and 3) career development. To facilitate the student's growth in these areas the student is placed, as a teacher aide, in one of six participating school systems. Working as a teacher aide the student has the opportunity to explore the career of teaching and, also, to explore alternative careers.

The population, totaling 460, consisted of the teacher education students enrolled in the Freshman Early Experiencing Program during Autumn Quarter, 1977. The
majority of the population were entering freshmen students, however, the population did include 184 sophomore students and 52 upper-class students. These students had either made a tentative commitment to education or were undecided about a career choice and had chosen to explore the field of education as a teacher aide.

One hundred and sixty-five students responded affirmatively to two questions indicating their perceived need for assistance with decision-making skills in choice of major and in choice of occupation. These students were invited to participate in the Career Decision-Making Workshop, which had been designed to help meet the needs of those students who had indicated they needed assistance with decision-making skills. Fifty-nine of the 165 students, for a variety of reasons, chose not to participate in the Career Decision-Making Workshop. These students constituted the Non-Participant Group. The remaining 106 students who did participate in the workshop composed the Treatment Group. Two hundred and ninety-five students did not perceive a need for assistance in choice of major and choice of occupation and thus became the Non-Treatment Group.

Working with a trained facilitator, in groups of not more than fourteen, the students completed activities that were specifically chosen for the Career Decision-Making Workshop. The workshop was designed to not only provide
information for the students, but more importantly, to involve them in activities of the decision-making process. The activities were: 1) Introduction to Decision-Making, 2) Value Clarification, 3) Information, 4) Work Values, 5) Risks and Strategies, 6) Student's own Tentative Academic Major and/or Career Decision and 7) his Satisfaction and Decidedness with the decision.

The instruments used in this study were the Myers-Briggs Type Indicator, the Career Exploration Survey and the Career Decision Scale. The Myers-Briggs Type Indicator is a forced choice personality inventory, developed to implement that part of the theory of C. J. Jung which describes psychological types, the theory being that apparent random behavior is indeed orderly and consistent. This instrument purports to measure the way individuals perceive information and then come to conclusions about data, people and things. This instrument is administered each quarter to those students enrolled in the Freshman Early Experiencing Program.

Two instruments were used both pre and post in the study—the Career Exploration Survey and the Career Decision Scale. The Career Exploration Survey measures the student's decidedness about choice of major and choice of occupation. In addition, it asks certain demographic data such as age, sex, university rank and field based placement.
The Career Decision Scale, designed by Samuel Osipow, et al., The Ohio State University, was developed to measure antecedents of educational-vocational indecision. This instrument measures sixteen distinctive antecedents of educational and/or vocational indecision, with each type being independent of the others.

The data from the pre and post instruments measuring the Major Assistance Scale, the Occupation Assistance Scale and the Career Decision Scale were analyzed by a one-way analysis of variance.

To explore any relationship that might exist, between personality types as measured by the Myers-Briggs Type Indicator and the way the student planned to approach his career planning—whether by selecting a major first or an occupation first, the data were submitted to statistical analysis by the t-test.

Cross tabulation and chi square statistical analysis were used to analyze the pretest data from the Non-Treatment Group, the Non-Participant Group and the Treatment Group that was used to describe the groups and selected characteristics of sex, age, university rank and field based placement as they related to the student's choice of major first, or occupation first, as a plan to approach a career decision.

The findings of the research study were presented as they related to the questions posed in the statement of the
problem. All three groups were described on the pretest measures to identify any similarities and any differences that might exist among them. The data indicate males and females were similarly distributed among the groups—approximately 80 percent female and 20 percent male. About half the students were in the 17-18 year old category, one-fourth of the students were 20 years old or older, and the remaining one-fourth were in the 19 year old category.

Slightly over half the students were of Freshman rank, and of this group nearly half perceived need for assistance with decision-making skills. Approximately two-thirds of this number participated in the Career Decision-Making Workshop. Nearly three-fourths of those students of the Sophomore rank perceived no need for assistance with decision-making skills.

Most of the students were single, only 6 percent of the total population was married and most of these students did not perceive themselves as needing assistance with their choice of major or choice of occupation.

More than half the students selected an elementary field based placement, about one-third selected a secondary placement and the remaining students selected either a junior high placement or a primary placement.

The Non-Treatment Group exhibited a greater degree of decidedness and perceived less need for assistance on all three measures—the Major Assistance Scale, the Occupation
Assistance Scale and the Career Decision Scale—than did the Non-Participant Group or the Treatment Group. Both of these groups showed a lesser, yet very similar, degree of decidedness on all three measures.

No significant differences were found in personality types as measured by the Myers-Briggs Type Indicator and the approach students planned to use in making their career decision—whether they selected their major first or their occupation first.

The first research question posed asked what differences exist among three groups of students—Non-Treatment, Non-Participant and Treatment—in relation to choice of major, choice of occupation and selected characteristics of sex, age, university rank, field based placement and personality type as measured by the Myers-Briggs Type Indicator?

One difference evidenced was that a higher percentage of females than males in the Non-Treatment Group selected their occupation first, and this was not consistent with the data from the other two groups. In the Non-Participant Group and in the Treatment Group a higher percentage of males selected their occupation first. Females in these two groups show the same percentage ratio in choosing their major and occupation first.

No differences existed among the three groups and the age categories. The majority of the students chose to
select their occupation first and this is consistent with their university rank. The student's initial choice seems to remain constant into the Sophomore year.

A higher percentage of the students in the Non-Treatment Group and in the Treatment Group who selected their occupation first chose an elementary field based placement. Students in the Non-Participant Group were almost evenly divided between elementary and secondary field based placements.

Nearly three-fourths of the students chose to select their occupation first as their plan to approach a career decision. The data also revealed that over half the students selecting their occupation first, and over half the students selecting their major first indicated they did not perceive any need for assistance with decision-making skills.

As earlier stated, no significant differences were found in personality types as measured by the Myers-Briggs Type Indicator and student's approach to planning a career, however, the data indicated a greater number of students being characterized as the ESFJ Type. The results also showed approximately 80 percent of the students were feeling type persons and approximately 66 percent were extraverted type persons.

The second research question posed asked if a short-term Career Decision-Making Workshop would have an effect
on the participant's perceived need for assistance with choice of major, perceived need for assistance with choice of occupation, level of decidedness about a career decision, persistence of first choice of selected major and perceived need for assistance with decision-making skills?

The posttest data from the Major Assistance Scale revealed the Treatment Group and the Non-Participant Group became significantly more decided and perceived less need for assistance with decision-making skills and assistance with choice of major. The Non-Treatment Group reported on the posttest measure a level of decidedness and perceived need for assistance very similar to that reported on the pretest measure.

Similar results were achieved by the Treatment Group and the Non-Participant Group on the posttest measure of the Occupation Assistance Scale. These students had been less decided about their occupation and had perceived more need for assistance with it than they had for their choice of major. Those students in the Non-Treatment Group remained at almost the same level of decidedness and perceived need for assistance as was reported on the pretest measure.

Results from the posttest Career Decision Scale were consistent with those from the other two measures. The Treatment Group and the Non-Participant Group were more decided about their career decision than they had been at
the beginning of the quarter. The Non-Treatment Group revealed only a slight increase in their decidedness about their career decision.

Persistence with first choice of major was higher for the Non-Treatment Group than for the other two groups. This corresponds to their level of decidedness as demonstrated on the other two measures. Of those students in the Treatment Group who selected their major first as their plan to approach a career decision, over half chose not to persist with their first choice.

Visual inspection of the evaluation sheets which were completed at the close of the Career Decision-Making Workshop, indicated that the majority of the participants found the workshop useful to them, felt they better understood the process of decision-making, and could use the process the next time they made a decision. Additionally, a majority of the participants found the Career Decision-Making Workshop enjoyable and stated, "I now know more about decision-making than I knew before the workshop."

Conclusions

The first conclusion drawn from this study is that a large number of the students enrolled in the Freshman Early Experiencing Program are uncertain about their career planning and perceive a need for assistance with decision-making skills. Being skilled in making effective decisions
is an important factor in an individual's personal and professional life. As pre-education students at the exploratory stage of professional development, the students are exploring the field of education and, in particular, the role of the teacher. The results of the study have demonstrated the need for exploration in selecting an academic major and/or occupation before a commitment is made. Exploration of alternative careers involves decision-making, value clarification, information gathering and experiencing and the interaction or transaction between the person and the experience.

A second conclusion drawn from this study is that of the number of students needing assistance with career planning many are in the 17-18 year old category. Approximately one-third of the students 20 years old and older also perceived such a need. Those students in the 17-18 year old category are generally enrolling in the Freshman Early Experiencing Program immediately following graduation from high school. Frequently these students have made the initial decision concerning their academic career plans early in their school years, and thus have not had opportunities to explore other career options. This early deciding can tend to narrow and limit career planning. Those students 20 years old and older have, for a variety of reasons, delayed enrolling in the Freshman Early Experiencing Program. The needs of this age group and the factors
influencing their career exploration and decision-making might be somewhat different than those affecting the 17-18 year old students.

Exploration and experiencing within the Freshman Early Experiencing Program is generally consistent and has commonality; however, the Program is student-centered and provision is made for individual differences. Offering different kinds of experiences, such as experiences with a broader focus of career exploration and decision-making interventions designed for this kind of exploration might prove more effective for the 17-18 year old undecided student. Although this same kind of exploration and decision-making might be useful to the older student, because of the delay in enrolling in the Program, he may have already experienced and explored several career options. The student's need for assistance may be for a more concentrated look at the field of education and the role of teacher. The decision-making intervention then would also have a different focus.

A third conclusion to be drawn from this study is that the majority of the students enrolling in the Freshman Early Experiencing Program believe they have already decided their career plans and they perceive no need for assistance with decision-making skills. It is possible that because this decision was made early in the student's developmental process it may not be a sound decision. This
has important implications for helping the students look objectively at their own decision-making process and their career selection. As has been previously stated early initial decision-making may tend to narrow the exploration process.

A fourth conclusion drawn from the study is that because a large majority of the student population in the Freshman Early Experiencing Program is female, this group of students may have special needs. This study has shown that new career opportunities for women are opening at an ever increasing pace, however, many women are unaware of these opportunities. It has also been shown that young women need to prepare for multiple roles at different times in their lives to help avoid some of the role conflicts that arise.

A Career Decision-Making Workshop designed for young women to specifically look at such concerns as: 1) duality of careers, 2) new career options, 3) statistics concerning working women and 4) their own interests and abilities, would seem to be important for this population.

A fifth conclusion to be drawn from this study is that since a majority of the students are selecting their occupation first, emphasis should be given to helping students explore not only the broad concept of occupation but, also, help in exploring majors within this broad context that could lead to alternative careers. Goodson (1978)
says those students who select their occupation first are more future-time oriented and value security more than those students who select, or plan to select, their major first. This theory is interesting and also infers, based on Goodson's data and the data from this study, that the male sample is accounting for this larger percentage of students selecting occupation first as their plan to approach a career decision.

A sixth conclusion drawn from the study is that based on visual inspection of the evaluation sheets from the Career Decision-Making Workshop, the majority of participants thought it had been useful to them, that they had become aware of some dimensions about themselves, that they had learned some skills, could use the decision-making process and they had found it an enjoyable experience. This study has shown that the skills in the decision-making process are teachable. It has also shown that the individual who is able to use an effective decision-making process has more control over his life and is more satisfied with it.

**Recommendations**

The following recommendations are made for additional study and for emphasis within the Freshman Early Experiencing Program.
1) Further study should be conducted to determine those factors that are effecting the undecidedness of students enrolled in the Program. These studies might include a review of the literature relating to internal/external factors as they effect the student, the effects of stress and anxiety and indecision as opposed to undecidedness. This has implications for Program implementation of workshops and specific study groups to meet the needs of these students.

2) Longitudinal studies of students who are consistent with their initial choice of occupation and/or academic major should be conducted to determine trends or patterns of selected characteristics of these students. This information would be useful not only at the exploratory or pre-professional stage of teacher education but, also, at the professional development stage and professional stage of teacher education.

3) Further study should be conducted into the effectiveness of a long-term Career Decision-Making Workshop with emphasis on exploration of alternative careers. Students who are undecided should be included; Program planning for career assistance should result.

4) Further study should be conducted to determine the extent to which the personal and professional needs and expectations of students who are in the 17-18 year old category differ from those students who are 20 years old.
and older. Characteristics such as needs, cognitive and moral development and work values should be included. Developmental needs of this age group should be studied and described.

5) Further study should be conducted to examine the most effective ways to help students who determine teaching is not the occupation they want to pursue. Guidance techniques, career education strategies and other career assistance methods should be applied and their usefulness evaluated.
APPENDIX A

Forms Used in the Study

Career Decision Scale
Pre-Commitment Form
Career Development Survey
Career Exploration Survey
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