

THE UNIVERSITY OF CALGARY

DEVELOPMENT AND EVALUATION OF A CAREER DECISION-MAKING PROGRAM

FOR ADULTS

by



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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

CALGARY, ALBERTA

JUNE, 1980



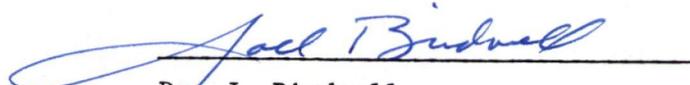
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THE UNIVERSITY OF CALGARY
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled, "Development and Evaluation of a Career Decision-Making Program for Adults." submitted by Patricia Lynne Pitsel in partial fulfillment of the requirements for the degree of Doctor of Philosophy.



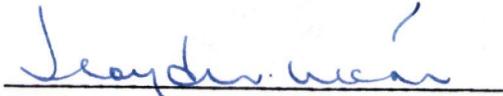
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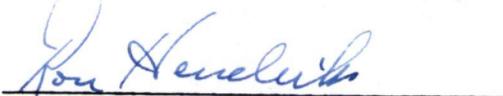
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Abstract

The purpose of this study was to design and evaluate a career decision-making program for adults based on a theoretical model of decision-making proposed by Janis and Mann (1977).

Three fundamental questions were posed: (1) Does the career decision-making program "Deciding Tomorrow Today" accurately translate the theoretical model proposed by Janis and Mann? (2) Does the program based on this model teach adults the process of career decision-making in a situation that is real and immediate to them? (3) If it is shown that adults taking this program do learn the process of career decision-making, can the results be attributed to the program (treatment)?

The study was run with a group of adults who responded to advertisements for a career decision-making workshop at the Alberta Career Center, Calgary. The subjects were randomly assigned to an experimental group (N = 24) and a wait-list control group (N = 25). The experimental group took the workshop during a four-week period in September, 1979, the control group, October, 1979. Data were collected using the "I" scale of the Personal Orientation Inventory (POI), a Decision-Making Scale (DMS), Program Evaluation Form (PEF) and follow-up questionnaire, as well as participant session evaluation forms and audio-tapes of each session.

The assessment of whether the program accurately translated the theoretical model was conducted by specifying the antecedent conditions and accompanying cognitive mediations hypothesized as existing if a high quality decision-making process were to occur and examining the comments made on the session evaluation forms. Participants' comments indicated that over the course of the workshop, the mediating cognitions suggested by Janis and Mann, were in evidence and found expression in the open-ended session evaluation forms.

The assessment of whether or not the program did teach a process of career decision-making was conducted by formulating seven behavioral objectives that are indicative of high quality decision-making. The participants, through completion of the activities comprising the program met the behavioral objectives.

Finally, to assess whether the results could be attributed to the program, six hypotheses were generated comparing the scores of the experimental group and wait-list control group on the "I" scale of the POI and the five scales of the DMS. The results showed that the experimental group increased their scores significantly on the "I" scale of the POI and on scales 3, 4, and 5 of the DMS.

In addition, scores for the experimental group on these instruments were compared with their scores after a six week follow-up. Results showed that the experimental group continued to increase significantly on the "I" scale of the POI and on scale 4 of the DMS.

Acknowledgements

The completion of a study such as this is not possible without the cooperation and support of a great many people. I wish to extend my gratitude.

. to Dr. A. Herman whose direction and comments were skillful and insightful. You kept me moving, and offered me the time and support I needed.

. to Dr. L. West who always provided intellectual stimulation. You challenged, supported, and created a true learning environment.

. to Dr. J. Birdwell who has the ability to make difficult things make sense. Your help and concern with statistics are greatly appreciated.

. to Dr. M. Manley and Dr. R. Hendricks for serving on the examination committee. Your time and effort in this capacity are appreciated.

. to Ms. B. MacKeen and the staff of the Alberta Career Center who provided support and encouragement in running the workshops.

. to Rob Black who gave his skill and time in decoding the mysteries of the computer. Your generosity and patience is gratefully acknowledged.

. to Bill Lang and Kathy Ingraham for serving as raters for the validation work on the D.M.S. Thank you for your time and efforts.

. to Donna Hollingsworth for the typing. Your fast, efficient work helped in meeting deadlines.

. to the participants in all the career workshops. Without your cooperation this study would not have been conducted.

. to Brad Harris for acting as a group leader. Your skill and enthusiasm in running the group contributed to the effectiveness of the program.

. to Ann McGill for acting as a group leader. Your skill in running the group and your personal support throughout the program has been a greater help than you will ever know.

Dedication

To my mother, Virginia, and in memory of my father, Joe, who started me on the topic of career decision-making. You always made me know that I could be anything that I wanted to be.

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CHAPTER ONE

STATEMENT OF THE PROBLEM

Career planning and vocational counselling programs, strategies and methods have, since the days of Frank Parsons, formed an integral part of the school counselling and guidance programs. At the time of Parson's writings, it was recognized by educators and counsellors that young people completing their formal education were faced with an increasingly complex array of job opportunities. If this were the only change in society, then perhaps Parson's presentation of a trait-factor approach would have sufficed. However, along with rapidly advancing technology that was in part responsible for the creation of new jobs came a shift in the attitudes and value systems surrounding work and its place in the life of an individual.

C. Wright Mills (1973) traces the meaning of work and notes the decline of the two prevalent philosophical approaches to work that existed in North America prior to the twentieth century, namely, the Calvinistic-Protestant work ethic and the Renaissance view which saw work as intrinsically meaningful. The change in philosophy, either caused or accompanied by, or more likely because of, an interaction of increased industrialization, expanding technology, and shifting ethnic balance caused by large scale immigration at the beginning of the century, resulted in a society that had not only an ever increasing number of job choices, but which had to

accommodate a growing diversity of values. It seems that not only the concept of what constitutes "the good life" has changed for society, but that there is a wide variety of opinion among people as to what constitutes "the good life" for them. The "good life" now has, as part of its definition, included the right and necessity to make decisions. It is obvious that there are some preconditions necessary before a decision can be made: there must be more than one possible outcome, there must be alternatives, and there must be freedom of choice. The first precondition may not be obvious. Preference or choice of method should be distinguished from decisions concerning desired outcomes. If the outcome is fixed and singular, as for example, the death penalty upon conviction of a capital crime, then the choice of method may be death by electrocution rather than by hanging. However, to assert that the condemned person is able to make a decision denies the fact that the decision really at issue is one of life versus death. So with the possibility of only one outcome occurring, in this example, death, there is no true decision situation.

The existence of alternatives and freedom to choose is a more straightforward concept. Though popular usage contains the phrase, "there is only one alternative", the meaning of the word alternative is that it is a choice between two or more things. The antonym for alternative is "no alternative", not "one alternative". If there is no alternative, then there does not exist a decision situation. Similarly, coercion results in a no-decision situation in cases where

one is compelled to follow a course of action. Whether or not one is ever truly free, of course, is a question that belongs in the realm of metaphysics or religion. As far as freedom is concerned in the context of decision-making, it is sufficient to identify freedom as the absence of external force(s) that would reduce a decision situation to one of "no alternative".

Twentieth century American society sees these preconditions for decision-situations in career choice met to a greater extent than ever before. While there have always been alternatives in terms of there being a number of different occupations, the rapid increase in technology has contributed greatly to the number of occupations in existence today. What has perhaps been the most significant change is in the amount of freedom available to make career choices. Universal education, human rights legislation, and in some areas of North America, legislated affirmative action programs for minority groups and women, have, if not totally removed, at least greatly reduced formerly coercive forces that denied free choice to various groups.

Not only, then, are the preconditions present for decision-making in the area of careers, but the almost overwhelming increase in information and alternatives requires that individuals be instructed as to how to make those decisions. Our society today is one of highly developed division of labor (Williams, 1974) and from a view of efficiency, the specialization required to produce and maintain our standard of living is achieved by obtaining the best fit between abilities and tasks.

Given that we now have a society where it is both possible and necessary to engage in career planning, the next step is to consider briefly the development and history of formal instruction in career planning.

After Parson's work in the first decade of this century when he advocated a scientific approach to vocational counselling based on the psychology of individual differences, Proctor, in 1920, determined that intelligence level was a significant predictor of students' success in school subjects and could be used as a basis for selecting school subjects (Bailey and Stadt, 1973). It is understandable that schools would be a primary agency for dealing with vocational counselling. Not only was there some evidence that future academic success could be predicted on the basis of mental ability but the availability of tests to measure this ability was also present. While much of the research carried on from the 1920's to the 1950's used army populations and adult workers, the information garnered from these kinds of research were used in schools to aid in career planning. Since a case was being made for the relationship between abilities and occupational success, it was natural that schools would use this kind of information. As early as 1917, in the United States, the Smith-Hughes Act required each State to prepare a plan for vocational (industrial-technical) education (Gallinelli, 1979). The establishment of these kinds of programs in schools required that some kind of help be provided so that students would be in the "appropriate" program. Using the best information available at

the time, schools, then, in attempting to provide career direction (vocational counselling) continued to use Parson's suggested approach to vocational counselling by matching student aptitudes with job requirements.

As educational options multiplied, the emphasis in school guidance programs became one of supplying students with appropriate information. The role of the counsellor was to help the student effect the "right" choice by matching self data and occupational data, and this remained the role of the majority of vocational counsellors until the late 1940's (Pietrofesa and Splete, 1975.)

The first major shift in focus began with Ginzberg and associates' (1951) work Occupational Choice: An Approach to a General Theory, when they outlined what they saw as a process of occupational decision-making. The change in direction toward a developmental approach was endorsed by Donald Super who became a leading proponent of "vocational development". As the emphasis on vocational counselling, at least during childhood and adolescence, became increasingly one of development rather than a choice-at-one-point-in-time, the concept of how decisions were made as well as how decisions should be made began to receive attention in the literature.

Blau, Gustad, Jesson, Parnes, and Wilcock, (1956) proposed a "conceptual framework" that considers both the process of choice and the process of selection. Tiedeman (1961) concentrated on the process of decision-making within the area of career development. Several vocational theorists (Gelatt, 1962, Hilton, 1962, Katz, 1963;

Hershenson and Roth, 1966) proposed their own models for conceptualizing the place and role of decision-making within vocational development.

Guidance programs in schools reflected the change in focus to a developmental approach, and the majority of research in vocational development and counselling has occurred with public or post-secondary students reflecting both the ease of accessibility of these populations for research as well as an implicit view that development is something that occurs until adulthood is reached. This has been challenged in recent years as more work with adult populations has been carried out. Writings in the 1970's by authors such as Levinson (1978) and Sheehy (1976), and Ginzberg's reformulation in 1972 of his earlier theory to indicate that occupational choice is a life-long process, have refocused attention on the vocational planning and direction of adults.

The increased opportunities for retraining that exist today, either through company programs or the increased number of adult education programs offered at post-secondary institutions, plus a number of sociological and economic factors, has resulted in not only people holding more than one job or practising one career during a life time, but in their seeking help and direction to make these career changes. This implies that programs need to be developed that will focus on the needs of the adult who wishes to change careers, or perhaps (as is the case for many women) who wish to enter the paid labor force for the first time.

Before considering types of adult career decision-making programs,

it is useful to look at the development of decision theory and how it has affected career decision-making theories.

Decision theory was developed primarily by economists and mathematicians (Edwards and Tversky, 1967). Their writings describe "economic man" and how he should operate in both risky and riskless situations. Economic man is seen to have three properties: he is completely informed, he is infinitely sensitive and he is rational (Edwards, 1961). Of these three properties, the concept of rationality is crucial. Rationality implies two things: first that economic man can order all alternatives and that the preference for the alternatives are transitive, and second that selection is made in such a way as to maximize utility or expected utility. Writers concerned with Game Theory have suggested a different rule than maximizing utility, namely minimizing the maximum loss, or minimax loss.

Prior to the mid 1950's, little attention was paid to personality variables that could influence decision-making (Edwards, 1967). The work of Atkinson (1957) focused on the motive to achieve success and to avoid failure as well as on a consideration of subjective probability of achieving success and the incentive value of achieving success or avoiding failure. The movement toward consideration of subjective elements, both for utility and probability, was increased by writers such as Mosteller and Nogu (1967) and Tversky (1967) in their examination and consideration of decision-making.

With the roots of decision-making theory coming from economic and mathematics theory, it is not surprising to see the early models

and approaches to career decision-making incorporating the basic notions of utility and probability in their formulations. One of the early formulations of how decision-makers behave in occupational choice situations considers the interrelationships between the individuals' evaluation of rewards associated with the various alternatives and the possibility of attaining each of the alternatives (Blau, et al., 1956). In a footnote, the authors note the merging of economic theory with psychological theory and refer to studies and reports by Hays, von Neumann and Mogenstern and Katona.

Tiedeman (1961) presented career decision-making from a developmental viewpoint following Super's lead in presenting a vocational development approach. Tiedeman outlined the stages an individual goes through in reaching a decision as well as the environment that both precedes and accompanies the choice situation. In doing so he also implicitly identified the two key variables posited by the economists -- utility and probability -- under the names of goals and fields.

Roe (1956) and Holland (1959), dwelt on the topic of vocational choice from the viewpoint of trying to determine why the individual selected the occupation s/he did with an overall goal of trying to present a theory that would be able to predict choices and, of course, indicate how better choices could be made. Bordin, Nachman, and Segal (1963), saw the difference between the two approaches as being more apparent than real in that both orientations see vocational choice as occupying a place in what is a continuous process and

that the choice is not the process.

Brayfield (1964) noted the inclusion of what he termed formal decision theory in vocational counselling and identified the two components, utility and subjective probability, combining in a maximizing strategy as forming the foundation on which career decision-making models are based, and cited Gelatt's and Hilton's models as examples.

Zytowski (1968), in his introduction to the section on "Decision-Making concepts of Occupational Determinants", presented a selection of articles and studies dealing with decision-making but noted that decision theory is the least consistently developed position.

By 1974, in an article reviewing and comparing vocational (career) decision-making models, Jepsen and Dilley conclude that there is a problem with respect to clarity of models and research surrounding them so that it is not possible to determine which of the models is the better explainer or predictor. The various theorists do not use similar frameworks or language in their formulations making it very difficult to determine whether they are talking about common basic concepts, whether the theories are applicable to similar populations, and whether they share the same assumptions about characteristics and resources of decision-makers. Current models of career decision-making continue to suffer from a lack of clarity, and while models have some similarity to one another, the similarities do not exist to a point where parts of one model can be interchanged with another. In addition, the authors point out that the models differ substantially on underlying assumptions

both about the decision-maker and the conditions surrounding the decision.

As Peavy (1979), has noted, the application of conventional decision-making theories in counselling situations, suffers from two main drawbacks. First, much of the early work on decision theory was done in the context of considering simple, repeatable choice situations such as flipping a coin or rolling dice. There is more difficulty in assigning probability units to situations that are far more complex and which often are not repeatable. Second, while the essential elements of decision-making are identified in classical decision theory, they are presented to a degree of abstraction that makes it difficult to derive intervention strategies that would insure the presence of those elements.

Theories of decision-making, both economic and psychological models, attempted to explain how decisions were made and the necessary conditions for good decision-making. In the area of career decision-making, however, an additional aspect began to receive attention, namely, career indecision. Attention began to move from considering those who made good decisions versus those who made poor decisions toward looking at the differences between those who made career decisions versus those who did (or could) not.

One of the underlying assumptions inherent in much of the work on career indecision is that the indecision is a consequence of psychological attributes. The impetus, provided initially by Super, to consider self-concept in relation to career development

has led researchers to investigate various psychological constructs which may affect decision-making and career development. Self-concept (Barrett and Tinsley, 1977; Dillar, 1976; Jones, Hansen and Putnam, 1976; Lawrence and Brown, 1976; Richardson, 1975), anxiety (Grimm and Nachmias, 1977; Hawkins, Bradley and White, 1977; Kimes and Troth, 1974; McGowan, 1977; Mendonca and Siess, 1976), self-esteem (Leonard, Walsh and Osipow, 1973), dogmatism and self-esteem (Maier and Herman, 1974), work values (Greenhaus and Simon, 1977) have all been examined with a view toward determining their role, if any, in career indecisiveness or career choice. The career models, on the other hand (which give rise to research), from either a prescriptive or descriptive position, attempt to articulate both process and information. The research on career indecisiveness, then, seems to focus on psychological constructs that appear to affect decision-making.

Another way of looking at career indecision from a process point of view is to examine whether or not individuals possess the skills that are necessary to effect a satisfactory decision process. That is, could a reason for career indecisiveness be that some people do not have an adequate knowledge of how to go about making decisions that involve dealing with many pieces of information and large numbers of possible alternatives, rather than because of anxiety, poor self-concept, etc?

A great number of career planning programs (reviewed in chapter two) are content programs rather than process programs; that is,

the major emphasis is on providing information so that an informed decision can be made. Studies involving the concept of career indecision, however, suggest that for some individuals at least, it is not sufficient to provide them with information alone. Writers on career indecision have examined various personality constructs that correlate with indecision, but there did not seem to be any attention paid to the question if those who were indecisive had adequate decision-making skills in the first place. Nor did there appear to be many programs available that concentrated on the process of decision-making in a career planning situation with adults as a specific target population. Those programs which were in existence for adults (Kirn and Kirn, 1978; Bartsch and Sandmeyer, 1979) and which incorporated decision-making as a primary process, did so without reference to the theory underlying their model.

It seemed desirable, then, to approach career decision-making from a skill teaching approach, and devise a program that would have as its major focus teaching a process of career decision-making. If it could be ascertained that individuals could be taught to understand the process, then those who remain in a state of indecisiveness might well receive additional counselling to examine the psychological state that rendered them unable to make a decision.

In selecting a theoretical model upon which to base a career decision-making program, several assumptions guide the selection process:

1. The model should be of such a nature that it can explain, predict or control decision making at a complex level - that is, at

more than a yes-no, either-or level. This assumption was set because career selection involves choosing from a wide number of alternatives and involves integrating a number of informational components.

2. The model should be of such a nature that it can explain, predict or control the process of decision-making. This assumption was set because one of the goals of the program to be developed was to teach clients a process and to use content as a means of illustrating the process.

3. The model should be of such a nature that it can explain, predict or control the process of decision-making in general, transi-tuationally. This assumption was set in order to aid transfer-ability for those clients whose immediate concerns lay in the area of life choice as opposed to specific occupational choice.

4. The model should have research associated with it indicating its potential for explanation, prediction or control of decision-making.

5. The model, should be of such a nature as to offer specific intervention strategies that will aid in promoting good decision-making. This assumption was set in order to be able to maintain fidelity to the model in implementing the program and in order to generate testable hypotheses in subsequent work designed to validate the programs in terms of adherence to the model.

6. The model should be of such a nature that the focus is primarily on the process of decision-making rather than on the content. This

assumption was set in order to promote transferability, and also in order to provide a clear approach to viewing the skill component of decision-making as opposed to psychological constructs that presumably influence the use of the process.

THE JANIS AND MANN MODEL

The model selected upon which a career decision-making program (CDM) would be based was that proposed by Janis and Mann (1977). Their model meets the criteria selected, and their own stated goal coincides with the objectives of this study, to improve the quality of career decision-making:

We expect the conflict theory presented in this book to be useful not only for generating basic studies of psychological processes involved in conflict, choice and commitment, but also for developing practical means to improve the quality of decisions made by individuals and groups ... our aim is to fill a long existing gap in the behavioral sciences -- to provide a comprehensive descriptive theory of how people actually cope with decision conflicts" (p.iv)

Janis and Mann suggest, as do others (Oliver, 1979), that "good" decision-making be evaluated from a process rather than an outcome base. They formulated seven procedural criteria, which, if followed, give the best chance of ensuring that a high quality decision will be made. Their first assumption is that failure to meet any one of them in a decision situation that has major consequences constitutes a defect in the decision-making process. The seven criteria are:

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

1. thoroughly canvasses a wide range of alternate courses of action;

2. surveys the full range of objectives to be fulfilled and the values implicated by the choice.
3. carefully weights 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 judgement to which he is exposed, even when the information or judgement 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. (p. 11)

Meeting these seven criteria is indicative of being in a state of what Janis and Mann refer to as "vigilant information processing" (p. 12).

Janis and Mann pose a "conflict model" of decision-making that seeks to explain decision-making behaviors that interfere with vigilant information processing. Their model is an attempt to understand decisional conflicts that occur whenever a decision arises that has potentially serious consequences involving possible serious loss, and how the stress generated interferes with cognitive processes. An individual dealing with "hot" cognitions, that is, cognitions that involve thinking about important, vital and affect-laden issues, is under a degree of stress that is not present in "cold" cognition situations that involve routine problem solving

matters. The stress generated by the "hot" cognitions may be of such magnitude that the criteria for vigilant information processing are ignored or avoided resulting in a deficient decision-making process. From Janis and Mann's own work (Hoyt and Janis, 1975; Janis, 1968; Janis and Mann, 1968 and 1976; Mann, 1972) with clients at the Yale Smokers' Clinic, draft resisters, and from analysis of research literature on how people react to emergency warnings and situations, a five stage schema was developed along with a specification of conditions that determine or mediate various coping patterns. Janis and Mann (1977) believe that people will be in a vigilant information processing pattern when: "1. serious risks are associated with the key alternatives, 2. a satisfying solution can be found and 3. there is sufficient time in which to find it." (p. 660). The five stages they posit are:

1. appraising the challenge
2. surveying the alternatives
3. weighing the alternatives
4. deliberating after commitment
5. adhering despite negative feedback

The model is presented schematically in Figure 1. In this model they present the antecedent conditions that give rise to key questions or "mediating processes". They hypothesize five possible coping patterns in decision-making situations, one of which, vigilance, employs the seven process criteria mentioned above. Other coping patterns -- unconflicted change, unconflicted adherence, defensive avoidance or

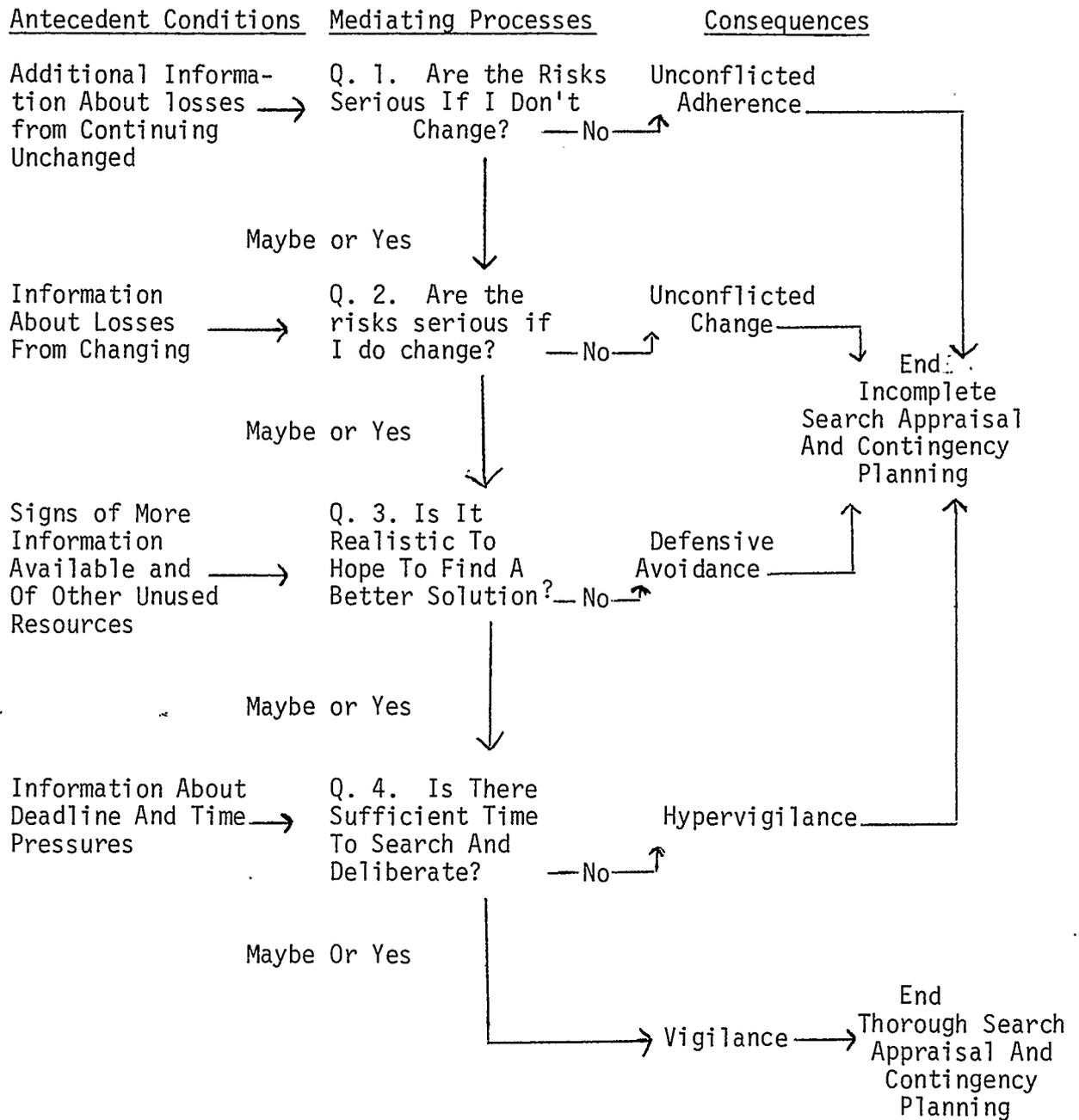


Figure 1. A conflict-model of decision-making. (from Janis & Mann, 1977, p. 70).

hypervigilance represent a deficit decision-making process in which one or more of the criteria are not met.

Janis and Mann (1979) stress that their model is applicable only to decisions that have real consequences and as such, produce visible psychological stress. Referring to research done on comparing real consequential choice-making behaviors ("hot" cognitions) as opposed to hypothetical laboratory exercises ("cold" cognitions), they indicate that consequentiality has a major role as a determinant, both on psychological reactions and information processing. The objective of this study was to design and evaluate a career decision-making program that was based on Janis and Mann's model with respect to following the stages suggested, and providing the antecedent conditions required for vigilant information processing in order to elicit the mediating responses required to reach a pattern of vigilance and meet the seven criteria.

The program entitled "Deciding Tomorrow Today" was designed for use with adults seeking vocational counselling services from the Alberta Career Center, Calgary, Alberta.

Alberta Career Centers (A. C. C.) were established by the Alberta Department of Advanced Educational and Manpower in 1972, with a mandate to provide career counselling services to adult Albertans. They provide individual and group counselling in areas of educational opportunities, testing, finance (identifying and recommending clients for various kinds of financial assistance), specific career information and publications through their resource center, and make referrals to other agencies where appropriate.

A.C.C. clients attending career planning workshops had a high percentage of their number concerned with life choices in general, including among other equally pressing concerns career choices. That is, clients were often not only looking for help in making career decisions, but also for help in making decisions in other areas of their lives. This population seemed suitable for a career decision-making program that would focus on the process of decision-making with emphasis on career decision, but which would be of sufficient flexibility to allow clients to work on decisions that they felt needed to be made prior to a career decision. The career decision-making program evaluated in this study was piloted over a five month period with eight different groups of adult clients at A.C.C. Modifications in some of the exercises and order of presentation were made after receiving feedback from the participants as to their usefulness and timing.

SUMMARY

This chapter has briefly traced the development of career counselling and its change in focus from a trait-factor, choice-at-one-point-in-time approach to a developmental approach that considers the needs of adult career planning. The origins of career decision-making theory were traced from their beginnings in the fields of economics and mathematics, through the work of early theoreticians in the area of career counselling to the presentation of a theoretical model of Janis and Mann (1977) that seeks to describe how

individuals do make decisions in situations involving stress and anxiety.

The purpose of this study was to design and evaluate a career decision-making program, based on that theoretical model as presented to adults seeking help in making career decisions.

CHAPTER TWO

REVIEW OF THE LITERATURE

In reviews of vocational behavior, career development and research literature authors note the following: more work is needed in understanding the interventions in career development (Zytowski, 1978) a better understanding of indecision about careers is required (Osipow, 1976), exploratory field studies are required (Betz, 1977), and that attitudes and processes necessary to make a vocational decision need to be investigated (Holcomb and Anderson, 1977). Holcomb and Anderson go on to point out that comparatively little research has been done in the five year period 1971-76, in the areas of processes, methods and outcomes, and that program evaluation research in community government agencies was almost non existent. From their search of the literature, drawn from four journals, Vocational Guidance Quarterly, Journal of Vocational Behavior, Journal of Employment Counseling and Journal of Counseling Psychology, and from a search of the Psychological Abstracts, they identify program and agency evaluation as comprising only 8.3% of the total references gathered. Outcomes, techniques and methods, and training, all subsumed under the subtitles "Counseling process" totalled 11.2% of total research. In addition, the bulk of the research is carried out with school children or college/university populations (52.5%). Twenty-five percent of the research articles use college/university students as subjects.

Kroll, Dinklage et al. (1970) state that:

Current understanding of how decisions are made is insufficient to warrant full-fledged institutionalized programs based solely upon existing theories of decision-making. Consequently, a strong plea is here entered for further research in this area. (p. 97).

Their analysis of models of career decision-making (CDM), identifies the elements that have received the most attention in general terms:

1. the phases of the decision process
2. outcome probabilities and structural components of decisions
3. dimensions of decision plans and traits of deciders
4. decision strategies
5. inner needs and drives
6. the societal context of the decider.

What has not received much attention in the literature, however, is research conducted to test theoretical CDM models, research conducted with adult populations, or research on the effectiveness of CDM programs.

The purpose of this chapter is to review CDM models in order to determine what theoretical propositions have been advanced and how various reviewers have attempted to categorize them. In addition, the review of literature will examine the direction research has taken with respect to studies investigating career decision and/or indecision; and finally, an overview of CDM programs will be given. As the focus of this study is on the development and evaluation of a program in career decision-making for adults who are undecided, the above three areas are relevant in a literature review.

CAREER DECISION-MAKING MODELS

Writers in the area of CDM (Herr and Cramer, 1979; Jepsen and Dilley, 1977; Kroll, Dinklage, et al., 1970) have analyzed CDM models from a variety of perspectives. By constructing categories and assigning models to specific categories for purposes of comparison and analysis, two things become obvious: the reviewers are aware that models, while dealing with one phenomena, focus on different aspects of that phenomena to a degree that it is very difficult to construct a system of analysis labels that are relevant to all models; and secondly, the process of CDM is a convenient linguistic fiction which implies a common understanding of a singular entity but which is more likely a series of processes which may differ in sequence, cognitive complexity, or behaviors. Harren (1979) makes a cogent observation and useful distinction in this regard. First he defines decision-making models as

conceptual frameworks for understanding how decision-makers process information and arrive at conclusions. . . Thus a decision-making model is a description of a psychological process in which one organizes information, deliberates among alternatives and makes a commitment to a course of action. (p. 119).

He then goes on to differentiate between CDM models and career development models. He sees the latter as

broader in scope, and as a result they pay less attention to the internal processes the person

uses to successfully resolve the developmental tasks. (p. 120)

However, he also sees CDM models failing to specify "how the decision-making process varies, depending on the type of decision involved, and the personality and level of maturity of the decision maker." (p. 120).

Kroll, Dinklage (1970), identify models that fit under a phase or stage approach and which use the scientific method as a core theme, those which focus on an economic theory approach (risk behaviors, goals, pay-offs), those that stress the psychological dimensions of the decision maker, and those that focus on strategies employed by decision makers.

Herr and Cramer (1979) formulate a different set of categories by which to consider the various models. They propose a set of categories that are distinct from one another, but which provide a bi-polar dimension for internal analysis within categories: institutional versus individual decisions which incorporate management and administration theories and models; decision-making methodology in terms of looking at mathematical versus non-mathematical models; and conditions for decision-making in terms of certainty versus risk. This schema permits them to formulate their own CDM model which focuses on prediction of model preference by decision makers.

Jepsen and Dilley (1979) present yet a third category schema, namely using the descriptive versus prescriptive dichotomy to assign models for purposes of discussion. The comparison of the models is done under what they term assumptions, but which can be seen as

categories: the amount of information available, conditions of risk or uncertainty, decision strategy of either the classical or satisficing model, level of precision in combining information and ordering, and the relationship between outcome and the subjective probability of that outcome and the value attached to it.

Where would these various reviewers place the model of Janis and Mann? Jepsen and Dilley might place it under the descriptive category and thus place it in the company of models proposed by Tiedeman and O'Hara, Hilton, Vroom, Hsu and Fletcher, since the model was derived from how people do make decisions in times of stress and conflict. However, the model is also prescriptive since in outlining the process as they perceive it, Janis and Mann present both deficient and vigilant decision-making behaviors. Herr and Cramer's category structure only partially fits since the conflict model is applicable to both individual and institutional decisions. Nor does the model fit any better in Kroll and Dinklage et al.'s classification scheme since it uses a stage approach but also centrally incorporates risk behaviors as well as addressing the strategies employed by decision-makers in order to effect decisions.

This would suggest that there may be another categorization achema that has not yet been articulated that would provide a clearer classification of CDM models. Here Harren's description of the function of CDM models provides an alternative. A classification category system that would provide a method of comparative analysis for the conflict model of Janis and Mann and the models reviewed by

others is again a bi-polar one of considering the two dimensions on a continuum of process and content.

Process is an ambiguous and polymorphous term. It is polymorphous since it has several meanings -- a forward movement as in "his process was slow"; a set of changes in a special order as in "by what process is bronze made?"; a summons to appear in court and we speak of a "process" server in this connection; and a continuing development, as in "the process of digestion". The ambiguity arises in part from having "process" serve both as a noun and a verb which can give rise to a confusing, if semantically correct sentence, "I want to process the data so that I can see what the process is."

The Dictionary of Psychology (p. 211) defines process as follows:

1. a change or a transformation of activity in any object or organism as contr.w. the constitution or structure of that object or organism.
2. the manner in which change is effected.
3. any sensation or other content observable as a mere occurrence without reference to its meaning or value (Titchener). . . .

1&2 usually imply a progressive action or series of actions, events, or motions or occurrences leading to some specific results.

The process of decision-making referred to, although seldom defined by the model proposers (Harren being a notable exception) seems to be closest to definition 2, the manner in which change is effected. To that degree, all models address themselves to the question of how decisions should be or are made, and they are, at one level using that definition, all process models. However, the focus of the models, that is, the component(s) which the model builder identifies as answering the question "how" provides the means for

categorization. At one end of the process-content continuum are those models that focus on the informational or content aspect of career decision-making. Holland (1959) provides an example of a content approach. Although strictly speaking Holland does not present a model of decision-making, his approach to career selection is based on the assumption that there is a best fit between work and job environment and personal orientation according to his hexagonal model. "In a theoretical sense, the proposed schema are based on the assumption that vocational choice is an expression of personality." (Holland, 1966, p. 278). The assumption is, that given sufficient information about the work environment, and about his/her own preferences, a career decision-maker will be able to select an occupation s/he finds satisfying. It is obvious that those employing Holland's approach (basically a trait-factor approach) will direct their energies toward having the career decision-maker acquire the appropriate pieces of information. At this content end of the scale, though not to the same degree, fit models proposed by Clarke, Gelatt and Levine (1965), and Kalder and Zytowski (1969).

Clarke, Gelatt and Levine constructed a model which focuses on the information required for good decision-making. While they hypothesize stages, the stages are information based: when one acquires the information in stage one, s/he moves on to stage two to acquire more information.

Kalder and Zytowski look at CDM in terms of input, alternatives and outputs, with the decision-maker having to assess benefits,

costs and probabilities. This model is also information dependent in that it assumes the decision maker will have sufficient information about personal and intellectual abilities, time, capital (inputs), the possible actions (alternatives), and the probable consequences (outputs). The implied intervention strategies by a counselor would be those that would assist the career decision-maker in obtaining the necessary information. A central process in utilizing the model would be the ability to rank order values accruing to each alternative and then to assign a value (numerical) to the cost of attaining the alternative. The authors present detailed forms for assessing inputs and outcomes, but the use of the form is dependent upon the assumption that the career decision-maker can rank order and value the elements.

Closer toward the middle and moving toward the process end of the content-process continuum are those models which are developmental in nature or which present a step-phase approach.

There are those that assume that the stage is the process; that is, career decisions are effected by moving through a series of steps in a logical sequence. The content is presented as a method for clarifying the steps. Reilly (1953) typifies this kind of approach when he states: "Basically then, sound career planning is one-step-at-a-time planning based on what you know before you take that step" (p. 7). Reilly refers to his model as providing a method for thinking about career problems and for solving them. He presents four steps which he sees as sequential, thus implying a "best order",

and suggests activities designed to aid the decision-maker in gathering sufficient information so as to move from one step to the next.

Bergland, (1974) presents a sequence model that presents six steps that cover the same points as does Reilly, but does so in a different order.

It would appear that the emphasis on process and where the emphasis occurs in the model formulation is partly dependent upon the author's perception of the breadth of decision-making. If decision-making is seen as the actual choice point or selection activity, as presented by Kirn and Kirn (1978), then the process aspect will focus on those elements central to the actual choosing or selecting from among alternatives. The work done by Ziller (1957) looks at decision-making in terms of the selection process and the role and style of risk taking.

Those who present a process approach and see decision-making as a term encompassing a range of activities do so from a developmental perspective but with a difference as to what is seen as central to the process. Gysbers and Moore (1974), using a developmental approach, identify the skills that comprise decision-making. The focus of the skills, however, is to help decision-makers become aware of and understand their own values. It is this awareness, understanding and ordering of values that Gysbers and Moore propose as constituting the central process in making good decisions, and they identify process data as those actions and resources needed to help students reach desired outcomes.

More directly addressing the question as to what the process might be are the models presented by Tiedeman (1961), Tiedeman and O'Hara (1963); Hershenson and Roth (1966); Knepfelkamp and Slepitzka (1976), Miller (1978) and Harren (1979).

Tiedeman and O'Hara (1963) consider the cognitive mechanisms of differentiation and integration. They present a two-period, seven stage model which outlines the kinds of behaviors and cognitions that occur within the decision-making process. In stating that ". . . the counselor hopes to bring each client in his responsibility to view his educational and vocational decisions as a means-end chain" (Tiedeman, 1961, p. 134), Tiedeman presents a picture of an on-going process where means become ends which in their turn becomes means in the sets of decisions that constitute vocational development. Harren (1979), drawing on the work of Tiedeman, Janis and Mann, and others, presents a CDM model that is composed of what he calls four interrelated "parameters". The process parameter, central to decision-making, envisaged as a four-stage sequential decision-making task, is influenced and modified by the other three parameters -- characteristics, tasks and conditions. However, Harren, in describing his model, presents a process category along with the "processes" that accompany and influence each of the parameters. He thus distinguishes "process" which is essentially the sequences of stages a decision-maker goes through, from "processes" which are the intra and interpersonal cognitions and emotions which affect the stages.

Hershenson and Roth (1966), in response to their perceptions that models presented prior to 1966 focused primarily on "antecedents, concomitants and sequelae of single decisions in the course of vocational development" (p. 368), identify a series of processes which they believe occur during career selection. Basically, two trends, a narrowing and strengthening, occur in something like an inverted pyramid form. Although theirs is a conceptualization of career selection rather than the decision-making process which occurs during and as part of career development, nevertheless they have attempted to identify a process that may explain how career selection is made. It is difficult to identify, however, the role they see career decision-making playing in the career selection process and whether there is a different set of processes involved in the actual decision-making activities.

Kneflekamp and Slepitzka (1976) propose a model of career development which addresses the issue of decision-making. Their work which is based on an adaptation of the Perry Scheme, looks at areas of qualitative cognitive change within a continuum of four categories. Working on the premise that levels of development are both sequential and hierarchal, they propose a method whereby the cognitive processes involved in decision-making can be identified. Some research has been carried out with college students and the authors report that the findings were consistent with the theoretical model.

Miller (1978) sees decision-making as ideally being a rational process and that the current need is to provide a process for deciding. He defines process as "some way of integrating available

information with . . . personal needs and priorities." (p.xiv)

He defines decision as "a choice between two or more courses of action, ideally made after a comparison of other possible actions and their possible consequences." (p.11). The crucial elements of all decisions are "Values, goals, alternatives and outcomes" (p.14), and Miller proposes a six phase model to help decision-makers in their task. What distinguishes Miller's work from some of the other phase/stage models, and thus places it closer to the process end of the continuum, are the questions that are posed in each phase. Although he implies that the steps are the process (p. 26), it is rather the questions associated with each stage that permit the individual to "Integrate available information with personal needs and priorities" thus meeting the definition of process he proposed. The implications for counselling in the use of such a model would be that if a decision-maker were unable to move from one step to another, an examination of the responses to the process questions could illuminate difficulties the decision-maker might be experiencing.

The model proposed by Janis and Mann (1977), along with that proposed by Knepfelkamp and Slepitza (1976) are probably the closest ones to the process end of the continuum: Knepfelkamp and Slepitza because their method focuses directly on the cognitive processes that occur, and Janis and Mann because theirs focuses on the cognitions that occur and how the cognitions affect the style of decision-making. They perceive poor decision-making as being due to a decline in

cognitive functioning due to anxiety generated by a stressful situation. Their theoretical framework focuses on how people cope with the stresses of decisional conflict and formulates "general propositions concerning the conditions under which decision-makers will fail to carry out search and appraisal activities essential for meeting the criteria specified for vigilant information processing" (Janis and Mann, 1978, p. 14). The conditions which are identified as contributing to a particular decision-making style (vigilance versus one of the defective patterns) are both situational and conceptual. The latter are identified by the "basic question" that is formulated in response to the perceived situational stimuli. It is the inclusion and specification of these cognitive considerations and their role in determining the progression through the stages of search and evaluation and selection (that is, decision-making) that identifies this model as being closest to the process end of the continuum, and which serves as a major point of departure from the other models presented above.

RESEARCH ON CAREER INDECISION

The writings of Ginzberg (1952) and Super (1953) initiated a change in focus from a primarily trait-factor approach to career counselling to an emphasis on vocational development. Ginzberg's assertion that "our basic assumption was that the individual reaches his ultimate decision, not at any single moment in time, but through a series of decisions over a period of many years" (in Peters and

Hansen, 1966, p. 95), and Super's (1953) ten propositions which outline his theory of vocational development, created new issues to be examined. A developmental approach implies progress through a series of steps or stages culminating, in the case of vocational development, in the selection of an occupation or career. When the end product, a career selection, was not attained, it was logical for researchers to examine the vocational developmental theories to ascertain the cause of non attainment. Tyler (1961) in discussing failure to reach a conclusion about an occupational choice, drew a distinction between indecision in a limited area and indecisiveness which was a reflection of severe personality conflicts. Goodstein (1965) expanded on Tyler's idscussion of indecision by proposing that an inability to make a vocational choice might be connected with one of two different antecedent conditions. In one case, that of career indecision, previous limitations of experience of the individual results in vocational immaturity with accompanying anxiety as s/he experiences the results of ineffective or inadequate coping behavior. The anxiety in this case is seen as being a consequence of the failure to have developed suitable skills. Career indecisiveness however is seen as being directly related to antecedent anxiety. Goodstein (1965) states, "Thus the individual who is vocationally uncommitted is undecided not simply because of lack of information either about himself or the world of work but because making a decision or commitment is strongly anxiety arousing" (p.156). Crites (1959) in reviewing Goodstein's approach, suggested a research

design that could be used to define and identify indecision and indecisiveness. However, it appears that writers conducting research in the area of both career development and career decision-making, for the most part have centered their efforts on the origins of vocational indecision by relating vocational decision/indecision to ability level (Ashby, Wall, and Osipow, 1966; Elton and Rose, 1971; Lunneborg, 1975), and to interests or personality constructs, anxiety included (Greenhaus, 1971; Greenhaus and Simon, 1977; Holland and Nichols, 1964; Kimes and Troth, 1974; Lunneborg, 1975; Maier and Herman, 1974; Ziller, 1957) rather than to operationally defining indecision and indecisiveness. The results have been somewhat confusing, at times contradictory, and cover so wide an assortment of variables that it is difficult to know, at this point in time, just where the field is with respect to vocational/career decision-making.

An additional problem is that researchers approach CDM from various points of view and use different terminology, and at times use different instruments to measure similar constructs.

At the same time Goodstein (1965) was elaborating on the notion of indecision and indecisiveness, Marr (1965) reported a study conducted to determine the way that a group of young men had made their vocational choice. The aim of the investigation was "to study the way in which vocational choices had been made". This study, however, did not identify how the choice was made; rather, using a chi square analysis, it determined that in this sample those who had made a career choice by age 25 differed from those who had

not made a choice. Those who had made a choice were more accepting of a father or father substitute. Of those who had made a choice, early deciders (those deciding by 12th grade) were more self-directing and more desirous of continuing in their occupation. Self-directing was a global rating based on 1. the extent to which the subject had shaped his own career and 2. the effort expended to advance in the occupation. Assignment to a group of self-directing, somewhat non-self-directing, and definitely non-self-directing was done by agreement of judges (with an interjudge agreement in 64% of the cases). This study, then, pursued the approach of examining differences between the decided and undecided subpopulations.

Dilley (1965) also discussed decision-making ability and constructed an instrument to measure decision-making ability (the DMI). He found that "high DMI scores were associated with high intelligence, high achievement, high frequency of participation in extra-curricular activities" (p. 423). The importance of this study lies in Dilley's defining decision-making and basing his DMI on a model of decision-making (one which focuses on alternatives, outcomes and probability and desirability of the outcomes).

So, by the end of 1965, there appears to have been three relatively distinct approaches to CDM research that appeared in the literature. Goodstein's (1965) approach suggested a clarification of the constructs on indecision and indecisiveness, and thereby implied an approach that would concentrate on indecision versus indecisiveness rather than on undecided versus decided. Marr's approach suggested that understanding could be attained by identifying

differences between groups of decided versus undecided, with the unexpressed expectations that once differences could be identified differential treatment intervention could be made to assist the undecideds. The third approach, that exemplified by Dilley, was to develop some sort of instrumentation for measuring and quantifying decision-making -- a required step if future researchers were to reach any common understanding of what it is they are trying to measure.

From 1965 to 1970, the majority of research published fell into the second category -- research associated with personality variables.

Kahoe (1966) looked at vocational indecision and college achievement from the perspective of Herzberg and Hamlin's work on motivation-hygiene concept of mental health. The hypothesis examined was that "Vocationally indecisive college students tend to be more hygiene oriented than students who have occupational preferences" (p. 1031).

Kahoe did not distinguish between indecisive and undecided, but rather, under the designation "no preference" placed all those who had indicated on their university admission form that they were undecided as to their vocational preference. The results supported the hypothesis that the no-preference group would be more hygiene oriented; however, a fourth group of students who had been clients at the student counselling center for problems that included "at least a moderate degree of vocational indecision or conflict" (p. 1032) proved to be the most motivation oriented. Kahoe was unable

to offer any theoretical justification for this, but indicated that they were not comparable to the other groups in terms of age, college classification and other variables plus having self-selected themselves for counselling.

Ashby, Wall & Osipow (1966) also compared a group of college freshmen with a view toward determining the relationship between decidedness and some other factors. They found the most undecided group to be more dependent than the other two groups (decided and tentative), but equal in academic achievement. While the authors chose to investigate a "variety of personality, achievement, aptitude, school and family factors" (p. 1037), they were not unmindful of the role of indecisiveness. Because the undecided group showed a significantly higher score on the dependency scale, the authors suggest that the undecided group's uncertainty may have a different antecedent than the uncertainty of the tentative group. It is not clear from this study how the tentative group was distinguished from the undecided group, and thus while the results did show some differences between the undecideds and tentatives, the attribution for the causality of the differences should be interpreted cautiously.

Korman (1966, 1967) looked at self-esteem and its role in occupational choice. Korman does not address himself to the process of decision-making but rather to a testing of a general hypothesis that "individuals of high self-esteem tend to implement self when making an occupational choice whereas individuals of low self-esteem do not" (1966, p.479). The emphasis is on the "personality

as determiner" approach, again characteristic of the second category type of research mentioned above.

Osipow (1969) reported a study entitled "Cognitive Styles and Educational-Vocational Preferences and Selection" and stated that the intent was to "test the general hypothesis that individuals selecting vocationally distinctive educational pathways exhibit different cognitive styles, and that cognitive styles are related to the ease and nature of vocational decision-making" (p. 534). Osipow thus equates selection with decision-making. The hypothesis concerning decision-making, however, "students with different cognitive styles will exhibit differences in the ease with which they have made career-related decisions" (p. 536), while receiving support at a significance level of $p < .001$, was based on responses to three questions that were in themselves so broad that it is difficult to know what exactly was being assessed. The questions were: 1. Have you a great deal of difficulty in making the choice of career? 2. Have you changed your mind frequently? and 3. Have you changed your mind more than five times? (p. 544). These questions distinguished among the four occupational groups studied and the randomly selected groups, but since "ease in career decision-making" was not operationally defined, it is difficult to know the nature of the relationship between cognitive style and ease in career decision-making.

Greenhaus (1971a) looked at "Self-Esteem as an Influence on Occupational Choice and Occupational Satisfaction." Occupational choice in some contexts might be considered as a synonym for

vocational or career decision-making since choice and deciding are commonly used interchangeably (e.g. have you made a choice? . . . Have you decided?), and occupation and career or vocation are often interchanged, especially in common usage. Occupational choice, however, as used by Greenhaus in this study, refers to the outcome of a career decision process, namely the presence in a specific college program. The results of the study did not support the proposed hypothesis as z scores did not reveal any differences between the low and high self esteem groups.

Greenhaus (1971 b) also investigated the role of career salience in vocational behavior. The vocational behavior in this study was occupational choice and occupational satisfaction. Generally when investigators say they are going to look at the role of one concept vis-a-vis another concept or behaviors, what they do is to determine relationships by some method of correlation. Of course, while this method may provide some evidence that the two elements have some relationship, little is known about the nature of the relationship. Thus, in this study, while it was shown that for college males (but not for females) career salience was "positively related to the degree of self-occupational congruences attained in an occupational choice" (p. 209), nothing is known as to whether career salience helps in making an occupational choice, whether it accompanies it, or whether it is merely an artifact of occupational choice.

Elton and Rose (1971) looked at graduating college seniors with the hypothesis that "the senior who was vocationally undecided

as a freshman does not differ in personality or ability measures from the senior who persisted in or immigrated to majors categorized according to the Holland scheme" (p. 86). The hypothesis was supported but because most of the students who were undecided as freshmen dropped out before graduation (only 17% of undecided freshmen survived to graduation) it is difficult to support the contention that there is no difference between the two groups.

The tendency to differentiate between "undecided" and "decided" by means of identifying differences on some psychological construct continued on through the late sixties through the next decade. Maier and Herman (1974) looked at the relationship of vocational decidedness and satisfaction with dogmatism and self-esteem in an attempt to provide a descriptive picture of the undecided. Their approach to identifying "decidedness" was to have the subjects (university freshmen) select a self-descriptive statement about the level of their own decidedness (decided, tentatively decided and undecided), and placed the subject in one of the three levels identifying vocational decidedness in the design. The results did show a difference between the decided and undecided groups on the variables of dogmatism and self esteem in the direction hypothesized, though the latter variable did not produce significant results in a comparison of the decided and tentatively decided groups. Because the data presented did not reflect the break-down by sex and what effect that may have had (and given Greenhaus' research that showed differences between college male and female students) the results would have to

be interpreted somewhat cautiously.

Self-esteem in Maier and Herman's (1974) study was measured using the Total Positive Score of the Tennessee Self Concept Scale, while in Korman's (1966, 1967) studies, self esteem was measured by the self-assurance scale of the Ghiselli Self-Description Inventory. While both Korman's, and Maier and Herman's work supported their hypothesis of the role of self-esteem, it is difficult to know if the same thing was being measured since the two studies employed different measuring instruments.

Leonard, Walsh and Osipow (1973) attempted to extend Korman's previous work by looking at the relationship of self-esteem and self-consistency to second vocational choices. They used Ghiselli's Self-Assurance Inventory Index, a later version (1971) of the earlier Self-Description Inventory. Their results were consistent with the hypothesis presented by Korman. As with Korman, however, their subjects were male while Maier and Herman used both male and female students.

Kimes and Troth (1974) continued in the vein of considering personality variables with their study on the relationship of trait anxiety to career decisiveness. They noted the problem of defining the term undecided but did not themselves attempt to operationalize the term. Their results showed that the students (both male and female, though results were not given separately) "who were completely undecided about a career were significantly more anxiety prone than were students who had chosen careers (p. 277)". They classified

the students on a five-level range of decidedness and of satisfaction, and drew the conclusion that "the more pronounced differences in mean trait anxiety scores among the levels of satisfaction with career decision than among the levels of career decisiveness indicates that trait anxiety may have a more adverse affect on satisfaction with career decision than on career decisiveness" (p. 279).

One of the problems alluded to earlier, namely the use of different terms to describe the same construct, and its obverse, the use of similar terms that are used differentially by different writers, becomes obvious when one looks at the continuing research using college populations. Barak, Carney and Archibald (1975) in a study carried out to determine the relationship between vocational information seeking and educational and vocational decidedness used a career assessment form that asked students to rate themselves on a 5 point continuum with 1 representing "completely undecided about a career (major)". The assumption here is that students equate the two, and distinguish between a career and a job. While it is logical to suppose that the process of deciding upon a college major is the same process used in deciding upon an occupation or a career, there is no evidence to suggest that the various college subjects in the studies reviewed thus far were equating their major with a career. Certainly, in professional schools such as education, engineering or nursing, this is more likely to be the case, but there is nothing to give evidence one way or another that those who were undecided about a major were so because they were undecided about their

occupational goals after graduation. Barak et al.'s study did not give much support to the idea that the more occupational information sought by an undecided individual the more decided he will become. Perhaps this was partly due to the equating of career with major.

A study that fits in the third category of research, that concerned with the development of instrumentation, is that of Holland, Gottfredson, and Nafziger (1975). This study was designed to validate a scheme that was intended to "a. specify the nature of a person's vocational decision-making assets and deficits, and b. to suggest some remedial activities and procedures" (p. 411). The study focused on validating the proposed diagnostic signs. The definition of "good" decision-making arises from Holland's theory of careers, and as such, two criteria that relate to his theory are proposed: "inconsistent and poorly defined interest profiles are related to instability of vocational choices, poor decision-making and lack of interpersonal competency" and "vocational choice depends on self-knowledge, occupational knowledge and the ability to make appropriate decisions based on such knowledge" (p. 412). Thus, the theoretical signs of good decision-making according to Holland's theory are consistency and differentiation of the Self-Directed Rearch (SDS) profile and the results of this study showed that the SDS predicted scores on a decision-making task more effectively than any other proposed predictors: self-knowledge, occupational knowledge, demographic variables, interpersonal competency, preconscious activity or anomy. However, since the validation for making good decisions was based on "satisfaction

with choice, agreement between SDS and current vocational choice and a high translation score on a translation task. (the ability to select occupations appropriate to interests and competencies)" (p. 413), the focus is on outcome rather than process. While it is then possible for a counselor to use an instrument such as the SDS to predict career satisfaction, this study does not indicate how the process of decision-making occurs, or indeed, how a client obtains a consistent and differentiated SDS score, especially since the hypothesized signs of self-knowledge and occupations knowledge "did not usually correlate with the criteria" (p. 417). So, while this study represents an attempt to validate some theoretical signs of vocational decision-making (with an implied goal of producing some instrumentation that will facilitate this kind of assessment,) the focus is on predictions and thus on outcome, rather than process.

Vocational indecision continued to be a topic of research from 1976 through to 1979. Some researchers (Lunneborg, 1976; Gable, Thompson and Glanstein, 1976; Hawkins, Bradley and White, 1977; Barrett and Tinsley, 1977a, 1977b;) continued to focus on personality constructs. Some looked at possible instrumentation (Osipow, Carney and Barak, 1976; Katz, Norris and Pears, 1978) or at the origins of undecidedness (Holland and Holland, 1977). A fourth research trend became evident in reports of programs for dealing with indecision, effecting better decision-making or problem-solving. (Mendonca and Siess, 1976; Dixon, Heppner, Petersen and Ronning, 1979).

Lunneborg, (1976), compared vocationally undecided college graduates with college graduates who had selected an occupation and found that the undecided graduates had "a significantly lower grade point, more often intended non-career activities following graduation, less often were going to graduate school and were far less satisfied with their university experience" (p. 402). Although Elton and Rose (1971) reported no differences between undecided and decided college graduates on ability level, their study cannot be seen as contradictory with this one since they assessed ability level by considering scores on the American College Test while Lunneborg considered grade point averages. Lunneborg's observation that there was a slight tendency for more of the undecided group to have a social sciences or humanities major adds further weight against the assumption of Barak, Carney and Archibald (1975) that career and college major are synonymous.

Gable, Thompson and Glanstein (1976) looked at college women's locus of control and the conformity of their vocational choice and their relationship to vocational development. Their study did not examine the process of vocational choice, but again, like so many other studies, focused on personality constructs that accompany vocational choice. They found that internally controlled women had significantly higher vocational maturity than externally controlled women, but that there was "no difference in vocational maturity between those women making typical versus atypical vocational choices" (p. 263). Since this sample was composed of volunteer college women who had indicated a career choice rather than being undecided, no conclusions can be drawn from this study as to the role of internal

versus external locus of control with respect to the process of decision-making. However, since career choices had been made by both low and high scorers on career maturity, some question as to the ability of the Career Maturity Inventory, Attitude Scale, to reflect decision-making could be raised. This is also reflected in Holland et al.'s (1975) finding that "the CMI does not forecast good vocational translation ability although its rationale clearly indicates that it should do so" (p. 418).

Hawkins, Bradley and White (1979) looked at the role anxiety may play in "avoidance of tasks necessary for vocational development" (p. 398). Specifically they attempted to look at the relationship between general anxiety or anxiety about choice of a college major (major choice anxiety) and a vocation, and educational-vocational decidedness. Their finding that general anxiety contributed less to vocational indecision than did other predictor variables raises some questions when considering the results of Mott (1975) that identified two distinct groups of students: those who scored high on trait anxiety versus those who scored high on state anxiety, using Spielberger, Gorsuch and Lushene's Self-Evaluation Questionnaire. Mott's results indicate that for one group of undecided students, it may indeed be the general or state anxiety that is a major contributing factor in the inability to make a career decision. Comparisons between the two studies are difficult, however, since Mott used a sample of grade eleven and twelve students and employed the Self Evaluation Questionnaire while Hawkins, et al. sampled a cross section of college students and employed the Concept-Specific

Anxiety Scale (CAS) of Cole and Detting to measure and distinguish among general anxiety, major choice anxiety, and vocational choice anxiety. Once again the problem of comparing measurement of a construct using two different instruments presents itself.

Greenhaus and Simon (1977) continued the work begun by Greenhaus (1971a, 1971b) on career salience and vocational indecision. The results, using a correlational approach did not reach the $P < .05$ level of significance, and in cases where significance was achieved, the relationship was of a small magnitude ($r = .26$ the highest reported). Greenhaus draws some conclusions from the results that this author would be hesitant to propose, given the magnitude of the relationship and correlations. However, if his work is considered together with Kahoe's (1966) on motivation and hygiene factors, it can be seen that they may both be attempting to tap some of the same variables, albeit under different construct labels. The variables Greenhaus and Simon label extrinsic "surroundings, supervision, security, associates, prestige and economic" (p. 107) appear to be of the same nature as some of the hygiene factors listed by Kahoe (1966), "salary, company policies, working conditions, security etc." (p. 1030).

Grimm and Nachmias (1977) examined the relationship between divergent thinking (cognitive factor), anxiety (an emotional factor) and current field of interest and future vocational preference. They found that high anxious subjects chose occupations and intellectual interests in the same field (based on Roe's system of classification) as opposed to the low anxious subjects whose occupational

choice and intellectual interests lay in different fields. The major problem when one wishes to compare results of this study with others dealing with anxiety is that again a different instrument to assess anxiety was used. Grimm and Nachmias assessed anxiety by means of a 15 item questionnaire that had been validated by five independent judges. In addition, since the subjects were Israeli high school students, it is difficult to know to what degree their results may be culturally influenced especially with regard to one finding that differed from findings in other studies. They found a strong negative correlation between anxiety and divergent thinking. While the authors suggest that this may be a reflection of age-related change (as previous studies had used adult or older subjects) it is at least as likely that the difference may reflect cultural differences.

Barrett and Tinsley (1976 b) considered self-esteem and its relationship to vocational decision-making in an attempt to empirically validate its role in the decision process and to validate the predictions formulated by two theoretical models (Super, 1953 and Korman, 1966). Barrett and Tinsley used an instrument designed to measure vocational self-concept crystallization (Barrett and Tinsley, 1977 a), the Vocational Rating Scale (VRS) which attempted to "directly assess the individual's awareness of the degree and nature of patterns in his or her specific vocational self-concept". Based on Super's (1963) theory that suggests low self-esteem people have more difficulty in vocational decision-making than do high self-esteem

individuals, because the low self-esteem individuals have a more poorly crystallized view of themselves and of occupations, the VRI was shown to be associated with "the degree of certainty regarding over all self-perception and with the presence of a commitment to a vocational choice independent of age" (Barrett and Tinsley, 1977a).

The study (1977 b), then, used this instrument to test differing implications that the two theoretical models proposed by Super and Korman seem to present with respect to the relationship between self-concept crystallization and self-esteem. Their measurement of self-esteem was derived from administering the Tennessee Self Concept scale to college subjects (unlike Korman and Greenhaus who used Ghiselli's Self-Assurance Scale; Leonard et al. who used a revised version of Ghiselli's scale), as did Maier and Herman, (1974), and Resnick et al. (1970).

Barrett and Tinsley's (1977b) findings indicated that, in support of Super's assumption, that high self-esteem subjects do have a higher level of vocational self-concept crystallization (thereby supporting the notion that high self-esteem individuals are less likely to be vocationally undecided), but also found that in addition, high self-esteem individuals perceive themselves as more competent need satisfying decision-makers than do low self-esteem individuals.

Two studies (Mott, 1975, McGowan, 1977) used Crites' suggested (1969) design approach in examining the differences between career indecision and indecisiveness. Both studies used high school students

as subjects although McGowan used seniors in a large American urban center while Mott used junior and senior Canadian students from an Alberta urban center. Mott's results supported Goodstein's hypothesis regarding anxiety while McGowan's results indicated that there were no significant differences, and he rejected the hypothesis that career indecision and indecisiveness are differentially related to anxiety and vocational maturity. Since the two studies employed the same design, and both used a high school population, what might explain the different findings? Again, the problem of using different instruments to measure the same construct is evident. Mott used Spielberger's et al.'s (1968) Self-Evaluation Questionnaire to identify "trait" and "state" anxiety while McGowan used the Taylor Manifest Anxiety Scale. In addition, another important divergence was McGowan's use of Holland's SDS as the treatment method while Mott used the SDS as well as having subjects view a 25-minute videotape dealing with the process of career planning, attend a group session with a university liaison officer, and have an interview of 25-40 minutes with a counsellor as treatment procedures.

A review of the literature revealed three studies designed to test some instrumentation that would identify antecedents of career indecision: Holland and Holland (1977), Katz, Norris and Pears, (1978) and Osipow, Carney and Barak, (1976). An earlier scale (Holland and Nichols, 1964) was reported but only in a preliminary stage and it was not developed past that stage. Osipow et al. designed

a scale to identify and measure the antecedents of educational-vocational indecision indicating that the indecision construct may be too global a term that is, in fact, composed of various components. Their questionnaire hypothesized sixteen distinct possible antecedents of educational and/or vocational indecision drawn from clinical experience. These sixteen items were later factor analyzed and refined into 4 factors-- need for structure, perceived external barriers, positive choice conflict, and personal conflict -- that accounted for 81.3% of the variance. Their research is still in a preliminary stage and undergoing replication of the factor analysis.

Holland and Holland (1977) followed a somewhat similar approach in creating a scale that would identify students' reasons for indecision. They asked students, both high school and college, who indicated that they were undecided or dissatisfied with their present job or occupational choice to respond true or false to thirteen explanations for being unsure, dissatisfied or undecided about a vocational choice. Holland and Holland (1977) report that the results of students' explanation for indecision form "a single internally consistent scale" (p. 412) while Osipow et al.'s (1976) results implied multiple scales. Until Holland and Holland perform a factor analysis upon their results (as did Osipow et al.) the question of whether there is a single or multiple factor cannot be answered.

Katz, Norris and Pears (1978) report on the Simulated

Occupational Choice (SOC) which is intended to provide a diagnostic measure of career decision-making competencies. The focus of the SOC is on providing a method whereby the process an individual uses in choosing an occupation can be observed through a simulation exercise where the client selects a future, unidentified occupation. The authors define decision-making as "a strategy for acquiring and processing information" (p. 224) and state that in order for a true decision situation to exist (that is, a situation in which the outcome is not a forgone conclusion) "the person confronted with the problem of decision-making either does not know what information he needs, does not have what information he wants, or cannot use what information he has" (p. 224). Central to using a strategy, and in keeping with earlier formulations of Katz, (1963, 1966, 1975) that stress the importance of understanding one's own values, the SOC seeks to have clients identify and rank values as an integral part of the decision-making process.

The results of preliminary work on SOC seem encouraging, though the authors stress that it is as yet only an experimental instrument and not yet a final product. Perhaps the most noteworthy aspect of the SOC is its emphasis on considering the process and how the content elements are used within this process.

Two studies (Mendonca and Seiss, 1976; Dixon et al., 1979) are reported in the literature that deal with programs designed to aid career decision-makers. Mendonca and Seiss evaluated counselling procedures for reducing anxiety which was seen as an inhibiting

factor in vocational decision-making. The counselling methods evaluated were anxiety management, problem solving, and a combination of the two, and for research purposes, a placebo procedure that consisted of a discussion format following presentation of tape recorded material or films on vocational development, and a no-treatment group to control for treatment effects due to time. The results of their study showed that the combination of anxiety management and problem solving resulted in significantly greater gains in vocational exploratory behavior, and in problem solving behavior than did either of the methods alone. Their conclusion was that both defective problem solving skills and anxiety were crucial interacting components of vocational indecision.

Dixon et al. (1979) designed a problem-solving workshop to study the effects of intensive problem-solving training on outcomes related to counselling. As with the Mendonca and Seiss study, the problem-solving training employed the use of role playing vignettes of "typical" undergraduate problem situations. Their results indicated that the training in problem-solving helped to improve the quality of the alternatives generated but did not affect the quantity of generated alternatives.

Both Mendonca and Seiss, and Dixon et al. raise a crucial point with respect to their research: the problem-solving aspect of both groups involved role-playing situations that were seen to be situations familiar to undergraduate students. However, as Dixon et al. comment, "while there is ample evidence in psychology

indicating that decision-making skills can be enhanced on formal laboratory problems . . . there appears to be a lack of evidence (and even negative evidence) for enhancing students' decision-making skills on applied personal problems" (p. 138).

The work of Janis and Mann (1976, 1977) based as it is on having observed clients in various personal conflict situations, provides a new direction for research in the area of career decision-making that may help overcome one of the problems identified -- namely that of teaching decision-making skills in a simulated problem (conflict) situation and then trying to assess results of the amount of transferability that could be expected in real problem (conflict) situations. Rather than trying to assess the role of anxiety in decision-making, they work from the premise that anxiety and stress are present whenever a decision-maker is faced with a decision where the outcome has potentially serious consequences. "The more severe the anticipated loss, the greater the stress" (1976, p. xii). Accepting this premise changes the focus of research on career-decision-making. Instead of trying to examine the role of anxiety, or indeed any other psychological variables, the focus then becomes one of examining coping styles that individuals exhibit under conditions of stress and anxiety, and how the coping styles can be modified so that decision-makers approach a state of "vigilance" rather than one of the deficient coping styles. Initial work with a balance sheet approach (Hoyt and Janis, 1975; Janis and Mann, 1976; Mann, 1976) has proved successful as one

intervention method in improving the quality of decision-making. Use of the theoretical model and intervention techniques which arise from application of the model results in a career decision-making program that differs in focus from those now being used.

CAREER DECISION-MAKING PROGRAMS

Published CDM programs have been, until the late 1970's, written largely for school and college populations, reflecting both the emphasis society places on preparing youth for the world of work, and the fact that school/college populations have been most often the subjects of research in the field of career decision-making.

As with CDM models, programs designed to implement these models (or programs designed to help clients make good decisions without explicit reference to any model), can be viewed on a process-content continuum. On the content end of the continuum are those programs which emphasize the obtaining and organizing of information required to effect an informed decision (Yabroff, 1964; Tuttle, 1970; Cosgrove and Dick, 1970; Canada Manpower and Immigration "Creating a Career", 1974; Scholtz, Prince and Miller, 1975; Loughary and Ripley, 1978), while those closer to the process end place a greater emphasis on how the individual should integrate and use the information gathered (Reilly, 1953; Carkhuff and Friel, 1974; Jackson, 1976; Kirn and Kirn, 1978; Miller, 1978, Bartsch and Sandmeyer, 1979).

There is general agreement among the programs as to the kinds of information a person needs in order to make a career decision. While the specifics of the information may vary according to the age of the target population, from choosing a university program to choosing a job, the information/knowledge that clients are required to obtain can be categorized under the following headings: knowledge of self, knowledge of occupations and knowledge of process.

A major complication in attempting to compare various programs arises in the different use of the term "decision-making" and how the process of decision-making is perceived. For some (Reilly, 1953; Jackson, 1976; Miller 1978) making a career decision is presented as following a series of steps designed to generate and integrate the required information components of self and occupations. Thus, knowledge of process is implicitly taught by having clients move through the steps to arrive at a career decision. Miller (1978) defines the process of deciding as ". . . some way of integrating available information with . . . personal needs and priorities" (p. xiv). Other programs present decision-making as a separate component. (Cosgrove and Dick, 1970; Canada Manpower and Immigration, 1974; Scholtz et al., 1975; Loughan and Ripley, 1978, Kirn and Kirn, 1978; Bartsch and Sandmeyer, 1979).

Cosgrove and Dick (1970) identify three steps in decision-making:

1. establishing the range of options open,
2. listing possible options and

3. reducing options.

Canada Manpower and Immigration (1974) presents five steps for decision-making:

1. clarifying the decision situation,
2. setting criteria,
3. identifying and exploring alternatives,
4. evaluating alternatives and deciding, and
5. planning to implement the decision.

Scholtz et al. (1975) also present a five step process:

1. defining the decision including when it has to be made,
2. identifying existing alternatives the person now knows about,
3. listing the sources of help in discovering new alternatives,
4. adding the new alternatives to the existing list, and
5. predicting possible results for each alternative and selecting an alternative based on risks involved and desirability of outcome.

Loughary and Ripley (1978) identify nine steps in making a decision:

1. state the goal,
2. generate alternatives,
3. evaluate alternatives,
4. estimate needed resources,
5. evaluate needed resources,
6. identify risks,
7. rate the risks on an acceptable to unacceptable scale,
8. decide by results of risk rating and

9. if more than one alternative remains after step 8, select an alternative on the basis of preference.

Kirn and Kirn (1978) narrowly define decision-making as the process to be used when trying to make a choice among alternatives. By completing a chart, a person involved in decision-making will go through eleven steps:

1. state the decision-making situation (by listing the alternatives the person is choosing among)
2. identify the non-negotiable constraints
3. list the criteria used for comparing alternatives
4. weigh (evaluate) the importance of each criteria
5. list the alternatives
6. provide specific evidence for each alternative as to how each meets the criteria listed in 2.
7. eliminate alternatives that fail to meet constraints
8. provide evidence for remaining alternatives to show how each alternative meets criteria listed in 3.
9. estimate how well (the degree of satisfaction) the alternatives meet the criteria identified in 3.
10. compare the alternatives
11. test for risk by listing what can go wrong for each alternative (risk being the combination of seriousness and probability).

Bartsch and Sandmeyer (1979) approach decision-making from a skill-development perspective as do Carkhuff and Friel (1974). Carhuff and Friel identify three broad areas or phases (based on Carkhuff's earlier work The Art of Problem Solving, (1973), the exploratory, understanding and action phases. The steps in problem-solving (used synonymously with decision-making) are given in a four step progression:

1. defining the problem by understanding and exploring
2. breaking the problem down by accurately defining the problem and goal
3. considering courses of action by developing alternatives and ordering values and
4. developing courses of action.

Bartsch and Sandmeyer see decision-making as one of eight skills areas required for life/career planning. The steps they propose in the skill area of decision-making are:

1. understanding how one presently thinks and feels about making decisions.
2. becoming aware of things that influence decision-making
3. considering information on a personal and situational level and
4. concretely stating the decision by formulating the decision in terms of the alternatives.

These four steps are followed to help the client acquire the first skill, that of concretely stating the decision.

The next step (and skill to be acquired) is to construct a time frame in which the decision is to be made, both in terms of latest date and optimal time. The third skill is to learn to state and rank desired outcomes. The final skill is to evaluate alternatives in terms of the best fit between desired outcomes and available alternatives using a simple matrix approach.

It seems that the various programs have different perceptions of what decision-making consists of -- a discreet skill (Carkhuff and Friel, Bartsch and Sandmeyer), a discreet step within a larger process (Kirn and Kirn) or the entire process of career

planning in career decision-making (Reilly, Miller). What is common to all programs is a step-by-step approach indicating the kinds of information required, and the order in which to proceed, though the number of steps, their order, and specificity and kinds of information differ. The underlying assumption of these programs is that an orderly, rational approach that directs clients to obtain, organize, evaluate and implement the required information will result in good career decision-making. Process, in so far as process is discussed or referred to in the programs is seen as the integration of information about self and occupations by means of following a step-by-step procedure in order to arrive at a career choice.

Not only do the various CDM programs vary with respect as to how they perceive the CDM process, but there is little in the way of evaluation on program effectiveness in general, or on the value of any of the programs in terms of stated goals and objectives.

Tichenor (1977) reported on research that was conducted on Kirn and Kirn's Life/Work Planning (third edition, 1975) with a group of adults who had registered for a three day workshop in life/career planning. The program evaluation was conducted to determine the effect of the workshop on levels of self-actualization and values of the participants since the program purports to increase inner-directedness as well as increasing self-knowledge, imparting career planning attitudes and skills. Using Shostrom's Personal Orientation Inventory (POI) to measure self-actualizing

attitudes and values, a significant difference was found between the experimental and control (a wait-list control group) in the hypothesized direction. This study, however, focuses on the increase in self-actualization rather than on program effectiveness in teaching a way of making career decisions. An unsubstantiated assumption is made in relating three sub scales (existentiality, self-regard and self-acceptance) of the POI and career planning. As the research results are not presented in detail, it is difficult to know precisely what changes were effected and to what degree. However, it is encouraging to see some attempts being made in the area of program evaluation in career decision-making.

SUMMARY

This chapter has examined three components of the literature on CDM: the models formulated, the research conducted, and CDM programs in use. An alternate categorization scheme for discussing and comparing models has been proposed: considering models on a process-content continuum in the hope that this schema will result in a sharper definition of how individuals arrive at decisions. The research conducted has been examined with respect to major focus: examining constructs of indecision and indecisiveness; identifying psychological factors affecting CDM; constructing instrumentation to identify and quantify CDM skills and attitudes; and treatment programs designed to help clients make good decisions. Finally, CDM programs were discussed on a process-content continuum to determine the role of decision-making in the program and the proposed steps to be undertaken in effecting a good decision.

CHAPTER THREE

DEVELOPMENT OF A CAREER DECISION-MAKING PROGRAM, "DECIDING TOMORROW TODAY"

The review of the literature regarding the area of career decision-making (CDM) has identified several problem areas:

1. a gap between theories or models of decision-making and their application through programs designed to test the models,
2. scarcity of research dealing with populations other than those enrolled in a high school or post secondary institution,
3. a lack of standard usage for terms such as career and vocational counselling, occupation, job, or career,
4. lack of replication studies,
5. the use of different instruments to measure similar constructs,
6. absence of definition and behavioral statements of process,
7. scarcity of research on programs designed to teach career decision-making skills.

The practitioner or agency that wishes to assist clients in CDM has no way of knowing how effective an existing CDM program may be from looking at the research nor whether an existing program is more or less effective than any of the available alternatives.

Ethics and agency policy often prevent the use of a no-treatment control group to compare treatment versus non-treatment, and simple logistics often prevent the comparison of alternate

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treatment procedures. What is possible in field studies, however, is the performance of a program evaluation that will identify the goals and objectives of the program and determine to what extent these were met.

This study is an evaluation and report of a two phase CDM program. Phase one involves the construction of a CDM program based on the theoretical model proposed by Janis and Mann (1977), and phase two is the evaluation of that program as used by adults who registered for a twenty-hour class in career decision-making at Alberta Career Center, Calgary, in September, 1979. Chapter three covers the program development phase, and chapter four deals with the program evaluation, including research design methodology and instrumentation.

The goal of the program, entitled "Deciding Tomorrow Today" was to teach adults a CDM process which they could apply to their own career/life situation.

I. Definition of Terms

Process: the conceptual activities that are required in order to transform (perceive, select, organize, integrate, etc.) information and act upon it.

Career: the sequence of occupations in which one engages during a lifetime. It is used here in a global sense to include position, job and occupation or any other term which refers to purposeful mental and/or physical activity that results in something of economic value. (adapted from Tolbert, 1974, p. 26).

Career Decision-Making: a systematic process in which data about self and career are utilized and analyzed, both affectively and cognitively according to explicit procedures, and outcomes are evaluated in terms of desirability. The term is used synonymously with career planning. (adapted from Tolbert, 1974, p. 27).

Career Choice: the selection of one career alternative from among a number of alternatives.

The Model: the theoretical model of Janis and Mann, (1977) presented in chapter one (figure 1.).

Framework: the term used to describe the structure of the program with respect to both method and content.

Method: the procedures used in assisting the participants attain their goal.

Antecedent conditions: observable informational and communication variables whose presence or absence affects the mediating processes.

Mediating processes: the cognitive responses that constitute answers to the four basic questions identified by the model.

Criteria for good decision-making: The seven criteria (listed in chapter one) identified as the behaviors indicative of completing a thorough search and evaluation in a decision-making situation.

Content: the exercises/activities which make up the program "Deciding Tomorrow Today."

II. The Career Decision-Making Program.

A. Framework

Framework is the term used to describe the structure of the

program with respect to both method and content. However, it should be noted that the framework is not the process; it is the vehicle by which the process can occur. Neither activities (exercises) that facilitate the method, nor the content is the process; they are part of the framework and were designed to meet one or more of the following objectives:

1. to facilitate the method
2. to facilitate the acquisition of appropriate content
3. to create the appropriate antecedent conditions for moving through the process of CDM.

The content was organized in a five step sequence. Although writers of CDM programs vary as to the number of steps and their sequencing, the content areas in the program "Deciding Tomorrow Today" are included by virtually all vocational theoreticians as being appropriate and necessary to promote CDM. There is at present, no research to indicate whether one method of sequencing is more effective than another. The sequencing and content for this program is as follows:

- STEP 1: Identify goals including identification of needs, values, interests and aptitudes.
- STEP 2: Formulate the decision statement.
- STEP 3: Generate Alternatives.
- STEP 4: Evaluate Alternatives.
- STEP 5: Choose the preferred alternative and develop an action program for implementation.

B. The Method

The method employed to facilitate the process of career decision-making was that of group counselling. Tolbert (1974), using Mahler's 1971 definition of group counselling (as opposed to group guidance) proposed the following rationale for group career counselling:

Three assumptions are made about the essential elements of group counselling. First, career planning and decision-making require input about occupations. Second, accurate data about the self, i.e. about aptitude, preferences, achievements and values are needed. Third, it offers opportunities to explore personal meaning, identify and examine subjective elements of the self, get feedback from others and try on roles. With these basic assumptions as guides, the rationale for group career counselling may be stated as follows:

1. Goal: The goal is an acceptable and realistic occupational self-concept in keeping with the expected level of vocational development.
2. Process: The process involves five types of activities:
 - a. exploration of feelings, attitudes, and values in an accepting climate.
 - b. interaction with others, emphasizing feedback on how others perceive personal occupational plans and goals.
 - c. reviewing personal information and relating it to goals.
 - d. obtaining and reviewing occupational, education and training information.
 - e. practicing decision-making.
3. Confidentiality: Each participant reveals only as much as he chooses to. He may, for example, withhold ability test scores just as he may withhold attitudes toward himself or school. Furthermore, each member treats the group discussions as confidential.
4. Membership: Six to ten participants is the desirable size to promote interaction and feedback, permit some heterogeneity and facilitate maximum participation of each member.
5. The Leader: The leader should be competent in both group counselling and career information. His major functions are to:
 - a. promote a climate for interaction and personal exploration
 - b. insure the input of needed information
 - c. assist participants to learn decision-making strategies.

6. Scheduling: There should not be a set number of meetings. When members decide that group and individual goals have been reached, the sessions are terminated. (p. 179-80).

Point number 6 was not adhered to in this program, as a definite number of sessions were set. However, points 1 to 5 were followed in using this method.

C. Antecedent Conditions

The antecedent conditions (presented in chapter one, figure 1) which this program sought to create are those hypothesized by Janis and Mann (1977). They are:

1. Information about losses from continuing unchanged.
2. Information about losses from changing.
3. Signs of more available information and unused resources.
4. Information about deadline and time pressures.

D. Mediating Processes

The four basic questions hypothesized by Janis and Mann (presented in chapter one, figure 1) constitute the mediating processes. These four questions are:

1. Are the risks serious if I don't change?
2. Are the risks serious if I do change?
3. Is it realistic to hope to find a better solution?
4. Is there sufficient time to search and deliberate?

These questions must be answered "yes" or "maybe". If the questions are answered "no", then Janis and Mann hypothesize that a defective coping style will result.

E. The Timetable.

The CDM program "Deciding Tomorrow Today" consisted of a twenty-hour workshop time with the participants, composed of two and one half hour time blocks twice a week for four weeks for a total of eight sessions. Participants were required to complete homework assignments and bring them to the session for discussion. Completion of the homework assignments were estimated to require an additional sixteen to twenty hours of time outside the workshop sessions. The program outline for the eight sessions is as follows:

Session 1:

1. Introduction to workshop
2. Introduction to workshop leaders and participants
3. Resource center orientation
4. Explanation of Life-Line exercise
5. Explanation of Self-Defeating Statements exercise
6. Homework assignment
7. Evaluation of session 1

Session 2:

1. Outline of content for session 2
2. Discussion of exercise on Self-Defeating Statements
3. Discussion of exercise on Life-Line
4. Selection of goals for workshop
5. Explanation of Needs, Interests, Values exercise
6. Homework assignments
7. Evaluation of session 2

Session 3:

1. Outline of content for session 3
2. Explanation of Transferable Skills exercise
3. Explanation of Significant Others exercise
4. Discussion of exercise on Needs, Interests, Values
5. Explanation of Goal Setting exercise
6. Homework assignments
7. Evaluation of session 3

Session 4:

1. Outline of content for session 4
2. Discussion of exercise on Transferable Skills
3. Discussion of exercise on Significant Others
4. Discussion of Goal-Setting exercise
5. Explanation of Decision Statement exercise
6. Explanation of Personal Resources exercise
7. Homework assignments
8. Evaluation of session 4

Session 5:

1. Outline of content of session 5
2. Discussion of exercise on Personal Resources
3. Discussion of exercise on Decision Statement
4. Explanation of Constraints exercise
5. Explanation of Generating Alternatives exercise
6. Homework assignments
7. Evaluation of session 5

Session 6:

1. Outline of content of session 6
2. Discussion of exercise on Constraints
3. Discussion of exercise on Generating Alternatives
4. Explanation of exercise on Evaluating Alternatives
5. Homework assignments
6. Evaluation of session 6

Session 7:

1. Outline of content of session 7
2. Discussion of exercise on Evaluating Alternatives
3. Explanation of exercise on Action Phase
4. Homework assignments
5. Evaluation of session 7

Session 8:

1. Outline of the content of session 8
2. Discussion of exercise on Action Phase
3. Forming Contracts with group members
4. Evaluation of session 8 and of workshop

F. The Exercises/Activities.

The exercises/activities (Appendix A) used in the program were chosen after piloting them with eight groups over a four month period.

The exercises were selected to:

1. facilitate the acquisition of content
2. facilitate the method (group counselling) and thereby meet the seven criteria indicative of high quality decision-making.

3. facilitate the formation of the antecedent conditions required for thorough search and evaluation.

The objectives for each activity are presented in figure 2. The activities are described and explained below.

1. Self-Defeating Statements.

In piloting the program, it was found that one common attribute of many if not most of the participants was the use of self-statements or world statements (that is, beliefs about the way the world is and operates) that keep them from making changes. These statements seemed to center around perception of the self in terms of personal attributes (or lack of them) and no matter what their form, have the effect of adding a silent conclusion: ". . . so therefore, I can't do anything about it." The statements that reflect a world view, that is, beliefs about the world, usually have the same effect -- that is, a silent rider which in effect says ". . . so therefore, that's the way it is and I can't do anything about it."

The theme of eliminating self-defeating statements and actions runs throughout the program. The approach is to build on strengths rather than on correcting weaknesses, on the assumption that if you substitute an adaptive, strong behavior in place of a weak, maladaptive behavior, there will be fewer opportunities for the latter to occur. That is, rather than trying to do less of something negative, work on doing more of the positive action that is counter to the weakness.

Activity	Antecedent Condition to be created	Place in Format	Criteria to be met
1. Self defeating statements	Preliminary to #1	Step 1	Preliminary to #1
2. Life-Line	#1	Step 1	#2
3. Significant Others	#1	Step 1	#4
4. Interests, Needs and Values	#2	transition between Step 1 & 2	#2, 4
5. Transferable Skills	#2	transition between Step 1 & 2	#2, 4
6. Goal Setting	#2	transition between Step 1 & 2	#1, 2, 5
7. Decision Statement	---	Step 2	---
8. Personal Resources, Strengths	#3	preliminary to Step 3	#4, 5
9. Constraints	#3	preliminary to Step 3	#1, 3, 4, 5
10. Generating Alternatives	#3	Step 3	#1, 5
11. Evaluating Alternatives	#3	Step 4	#1, 3, 4, 6
12. Action Plan	#4	Step 5	#6, 7

Figure 2, The objectives to be attained by the activities in terms of antecedent conditions, place in format, and criteria indicative of high quality decision-making.

The counsellor provides the rationale for identifying and correcting self-defeating statements, provides participants with a list of commonly used self-defeating statements, and invites the participants to form dyads or triads to discuss the phrases, and identify any that they may use in their own lives. After sufficient time has elapsed to allow the participants to identify and discuss how they see the phrases as being non-facilitative, the entire group reconvenes, and participants are asked to share their primary self-defeating statements with the entire group.

The purpose in doing this, which is stated by the counsellor at this time, is to alert the group to an area where they may provide help to one another. It is appropriate and facilitative at this point for the counsellor to indicate his/her own self-defeating phrases which either used to be operating or which the counsellor is currently working on. By so doing, the counsellor provides a model for the discussion, invites the participants to check up if they hear the phrase(s) being used, and helps to set a norm in the group which says that interaction among all group members is appropriate. A contract is set up whereby each participant asks to be checked by other group members if s/he uses that phrase during the progress of the workshop, and in return, offers to check others when they use self-defeating statements.

2. The Life-line

The Life-Line presents the first opportunity for the participants to consider goals, and is designed to have them consider

the pros and cons of changing career paths at this time. By having participants project the "ideal" life, the counsellor attempts to bring participants to a state where they say: "Yes, it is important for me to change; it is unacceptable, because of the risk or possible serious loss, for me to continue in the direction I am now headed."

The exercise is presented as a fantasy exercise, not only because it deals with the future, and hence, unknown events, but also because a fantasy approach encourages people to explore a wider range of activities. It was found in piloting this activity that many participants were "unreal" in their projections, not that they had too high a set of expectations for themselves, but rather because the expectations more often tended to be very low and restrictive. They tended to see themselves as unable rather than as able.

This activity is introduced and explained in the first session, and discussed in session 2 with the entire group (the format followed for the whole workshop where an exercise is introduced and explained in one session, done at home, and discussed in the following session). Explanations for doing this exercise include instructions that participants need only reveal to the group those things they feel comfortable talking about. The freedom of the individual, in this and in subsequent exercises, to be selective about those kinds of things s/he wishes to share and discuss, is stressed.

Another reason for presenting this as a "fantasy" exercise is to avoid as much as possible the idea that there is one right or correct answer. By creating a situation where participants are discussing a "dream", it is intended that an atmosphere where people can talk and interact freely, without censure or the feeling that they aren't giving the right answer, will be created.

3. Significant Others

This exercise has two objectives -- one, to have participants consider their interpersonal network and how the choices they make affect and are affected by others, and second, to try and identify some phrases that they may have heard and incorporated sometime in their past, but which no longer fit or are useful. Often the self-defeating statements identified in the first exercise have their origin in what people were told as children by parents or by significant others.

This exercise is explained in session one and participants are asked to complete it at home and consider what effects a career change may have on those listed on the sheet, and how they think those listed might react to a change. In the second session, participants are invited to share with the group any insights or feelings they had while doing the exercise, and what effect the information might have on their career planning.

4. Needs, Interests and Values

This activity (adapted from Student Counselling Services,

University of Calgary, unpublished) is designed to build an information and criteria base for future consideration of alternatives. One way of acquiring information about the self is through standardized interest, aptitude or ability tests. This route was not followed in this program for two reasons: one, the amount of time required to administer, score and interpret results within the four week time frame of the workshop was too much given the other activities to be completed. Second, it was not done in order to avoid a situation where the participant may accept an outside authority's view as being more valid than his/her own perception and experience, and thus short-circuit the search and evaluation process. Since the majority of participants had been in the work force for at least three years, they already had some idea, based on past experiences, of some of the kinds of things they enjoy doing, dislike, do well or do poorly. It is not unusual to encounter participants who view the whole career decision-making process as some sort of mystical intervention or situation where some expert will magically give them the "right" answer and tell them what to do. Janis and Mann write of the handing over of the responsibility for making a decision to someone else as one form of defensive avoidance. In order to prevent the tests from becoming the "outside expert", they were not used, but participants were told of their existence, and that they could take them on an individual basis if desired.

By focusing on past work and work-related experiences, the participants can formulate for themselves a list of their needs, interests and values. It does not appear crucial to distinguish

among these three areas, although some clarification can be done if all the identified things are categorized under one heading. Conceptually, needs, interests and values do differ; however, the purpose of using this system of categorization is primarily to employ labels that will be broad enough to generate and encompass all that was liked or disliked in the work experience rather than trying to teach people to distinguish among the categories.

The counsellor's role is to help participants be as specific as possible as to the identification of what it was they liked or disliked. There is a tendency for participants to use global terms such as "working with people" but discussion of this term reveals that working with people has different meanings for different people. "People" may mean children, adolescents, adults or senior citizens and "working" may mean directing, assisting, teaching, counselling etc. One participant stated: "I want to work with people, but not with people who have problems or with kids". Unpacking the global term "working with people" to consider the kind of work and the kind of people is necessary in order to establish specific criteria for later evaluation of career alternatives. If the counsellor and participants are to understand one another, it is necessary that they have, as far as possible, the same understanding of terms.

5. Transferable Skills

This exercise (adapted from Three Boxes of Life, Boles, 1974) has as its objective to identify skills that the participants

have or which they may wish to acquire, and to point out the concept of transferability of skills. As Boles (1978) points out: "There is a lot of evidence to show that people use and practice (sic) certain skills, often without the slightest awareness that they possess those particular ones. A process of 'skill awareness' or 'skill identification' is usually necessary for most people, before this part of their Total Reality penetrates their consciousness" (p. 139).

Boles defines transferable skills (or functional skills) as ". . . the kind required to deal -- not with intangibles like the Self, Time, Space, Authority, Impulse, Style, Constancy and Change . . . but with the basic tangibles of the everyday world namely Data (or Information) People and Things. Functional skills involve action verbs describing how people act upon Information, People and/or Things". (p. 146).

Boles has two categories to consider: "Want to pick up this skill" and "Want to polish up this skill". For the purpose of this program, two additional categories, "Want to use this skill on the job" and "Do use this skill on the job" were asked in order to help participants examine more closely their present job and possible sources of dissatisfaction. If there is lack of agreement between the skills they do use on the job, and those they want to use, not only may some insight be gained as to possible reasons for current dissatisfaction with their job, but also, some direction for criteria selection for evaluating alternatives can be gained.

The two columns suggested by Boles allow participants to assess their current position and separate skills they may wish to have for avocational pursuits as opposed to those they wish to use on the job.

Sometimes participants will indicate that there are skills they wish to use on the job but are not now using, and it is useful to have participants examine whether non-use of the skills is a function of the job, the place of employment, or of the individual. A receptionist in a large law firm may have different responsibilities (and use different skills) than a receptionist in a small dental office for example.

This exercise, when completed, is linked back to the exercise on Needs, Interests, and Values, and the latter can be expanded to include new pieces of information gained from this activity.

6. Goal Setting

This exercise (adapted from Kirn and Kirn's Life/Work Planning (1978) is designed to build on the fantasy exercise presented by the Life-Line, and move to a practical, reality-based goal setting activity.

In piloting the CDM workshops, it was found that a number of the participants who come to the workshop seeking a career change are also involved in major life changes as well (divorce, separation, widowhood) or in working through a current interpersonal relationship problem. By presenting a format which allows participants to "chunk up their life", it becomes easier to have participants explore areas of concern that may have to be resolved prior to a career

change, or which, in fact, are of higher priority to them.

This approach has the advantage of providing participants with both a structure and a base to work from, without, however, imposing a ceiling. There is a tendency not only for participants to use global terms, as noted earlier, but also to see their life or career as a global concept. This is possibly why it is easy for some to take the first solution or alternative that presents itself to a problem or choice situation. The alternative seems to answer the global problem; however, closer scrutiny (often engaged in after the choice has been made) reveals that the alternative is not a good one because it fails to meet a number of criteria not previously identified. When a problem or choice situation is conceived of in a global fashion, the separate elements that make up the global entity are not identified, and thus often remain unmet and unsatisfied.

Participants are asked to fill in the categories that are relevant for them at this point in their lives; areas in which they wish to make changes. The major work of the counsellor is to help the participants clarify and specify the things that appear under each heading, and to have participants identify in a concrete manner the goal they wish to achieve, and how they will know when they have attained it. Questions about why they have selected that goal (whom might they be trying to please?), what is the expected pay-off, when do they expect to achieve the pay-off, is the anticipated pay-off a likely outcome of the goal and, what might happen if the pay-off fails to materialize, are useful in helping the participants

formulate realistic goals.

By this point the participants have completed step one of the process. The major focus of the counsellor to this point has been to have the participants arrive at a state where they feel it is important that they make a career decision and that they are willing to spend the time and energy to engage in a thorough search and evaluation of alternatives.

7. The Decision Statement.

Forming the Decision Statement, step two, is an important activity in the program. In piloting the program it was not unusual to have someone state that s/he is trying to decide on a career and then indicate that possible alternatives are: going to school, going to work in a bank, or going to Europe for six months. By presenting the highly structured Decision Statement, which takes the form "To choose the best . . .", participants are forced to create a category statement. The alternatives which are considered then must fit in the same category. If they don't, as in the foregoing example, either the Decision Statement is changed so that the alternatives do fit (for example, "To choose the best way to spend the next six months") so that all alternatives fit as being a way of spending the next six months, or else, non-fitting alternatives are discarded. Taking the first approach (changing the Decision Statement) however, is sometimes an indication that the participant is not going to engage in a thorough search and evaluation of alternatives. Rather, what appears to be happening is that the participant is looking

for a justification for a course of action already decided upon.

Using this format also indicates (and is semantically implied by the use of the superlative form of the adjective) that more than two alternatives exist. This helps foster a pattern of vigilance by creating a situation where a number of alternatives can be generated under the decision statement.

From the goal-setting exercise in the previous session, participants select the goal they wish specifically to work on during the remainder of the workshop and state the appropriate decision statement. These are revealed to the group with an opportunity for any group member to seek clarification. Again, there is a tendency for participants to use non-specific terms such as "the best way to become a lawyer" where it is not clear whether the person is looking for an undergraduate program that will maximize acceptance into a law faculty, the best method of acquiring work and study habits to attain an adequate grade point average for admission, the best method of preparing for the preadmissions interview, or the best method of studying so as to pass the courses in law school.

Use of the decision statement also helps participants avoid mixing up apples and oranges by trying to decide among several choice situations at one time. One choice may involve the selection of a career; another may involve the selection of an academic program best designed to gain entry into that career, while a third may involve the geographic location of where to take the program. The answer to one decision, may, of course, affect the available

alternatives of the other Decision Statements. If one is constrained geographically, for example, then the number of available post-secondary institutions will be considerably reduced, as will possibly be the number of available programs.

Identifying the number and kinds of specific decisions that will have to be made in order to attain the goal is necessary in order to provide structure for the future section on Constraints.

8. Personal Resources

The purpose of this activity is to reinforce a central theme in the workshop -- building on strengths. Many of the participants who attended the preliminary workshop session were very hesitant in admitting or recognizing their strengths, and in some cases, tended to discount things that they did do well. There seems to be a feeling of: "Well, if I can do it it can't be anything special. Everybody can do what I can do." Making changes requires courage and a belief in oneself among other things. This exercise is designed to give people the opportunity to assess their strengths and to receive feedback on how others see them.

Participants are asked to read to the group those things they have identified for themselves under the headings "Strengths" and "Aptitudes and Abilities". The other categories are for the participants' private use, both for reasons of not invading personal privacy as might occur under "Material Resources" or because the areas are unknown to the others in the group (Personal Support Systems):

The rest of the group, with appropriate modelling from the counsellor, is invited to add to the items under strengths, abilities/ aptitudes, and where possible, to provide evidence for their observation. This reinforces the notion of being concrete and specific in comments as well as indicating to the recipient of the feedback that the comments have some basis in fact and are not just an attempt to make him/her "feel good". The person who is receiving feedback as to his/her personal strengths, is encouraged to write everything down and accept it -- ask for clarification if need be, but not discount or deny it.

9. Constraints

This activity was designed as an exercise preliminary to the future Evaluation of Alternatives. It was placed prior to the exercise on Generating Alternatives in order to provide a structure that would take into account a person's reality in present situation, and later avoid generating alternatives that were clearly inappropriate given the person's present situation.

Constraints are seen as barriers that stand in the way of people achieving their goals, and the purpose of this exercise is to identify these barriers and to determine to what extent people have control over the constraints. By identifying constraints in the formed of fixed versus chosen, it was hoped to move people from an external locus of control position to a more internal locus of control position.

Participants were asked to identify their constraints,

identify them as fixed or chosen, and discuss them with the group with a view toward seeing what, if anything, could be done to change the chosen constraints. Some constraints (e.g. geographic location) they may not wish to change, but the fact that they are choosing to accept that constraint rather than feeling they are having it forced upon them, is, for some at least, a positive aspect since they have a feeling of being in control.

10. Generating Alternatives

This activity constitutes step three. In this exercise, participants both for themselves and for the other group members, generate alternatives appropriate to the decision statement articulated previously. Prior to having group input, participants are asked to generate their own list of alternatives as well as ask at least one other person outside of the group for input. The purpose for having the group contribute to the list of alternatives is to first, provide as wide an information base as possible by drawing on the experience and knowledge of the others, and second, to encourage people to be receptive toward considering a number of different alternatives. By being able to suggest alternatives for others, it is hoped that the participants would be more inclined to consider alternatives offered to them.

By this point in the workshop participants know one another well enough to suggest alternatives that are useful. Since many of the participants come from a work background dissimilar to that

of the counsellor, they are able to provide rich, additional information, often of the "hands-on" kind that the counsellor may lack.

Using the entire group as a resource as well as material from the resource center (C.C.D.O., career monographs, etc.) also removes the burden of having to "know everything about every career" from the counsellor's shoulders.

Participants read their decision statement and the alternatives listed so far, along with any constraints which will have a bearing on the alternatives suggested. The group is then invited to generate additional alternatives they feel might be suitable for the person, based on the information they have about the person to date (needs, interests, values, skills, constraints, etc). The participants are instructed to write down all alternatives suggested without censoring. They will have the opportunity to prioritize and discard alternatives in the session on Evaluating Alternatives. What is important here is the avoidance of prematurely discarding alternatives without a sufficient information base or knowledge of what the alternatives actually are. Participants often respond, positively or negatively to a job title without knowing what the job entails. If participants are to engage in a thorough search and evaluation, they must have factual data, not images.

The participants are then asked to do a preliminary screening of the alternatives on the basis first of discarding those that clearly violate some of the constraints identified earlier. They are asked to provide evidence that the alternatives they wish to discard do violate a constraint in order to minimize the chance of rejecting

alternatives on the basis of misinformation.

11. Evaluating Alternatives

Evaluating Alternatives is step 4 in the program. The key to this exercise lies in accurately establishing the criteria for acceptance. In CDM, the criteria for acceptance are the goals, values, needs, interests, abilities and skills which the individual wishes to have met in a career. If one is going to measure two or more objects, the same measuring unit must be employed for all objects. In CDM, the measuring units are labelled criteria for acceptance. The question basically is what do you want from a career and how important is it for you to obtain it?

The participants then first determine the criteria for acceptance (and review the past exercises to select those criteria), then prioritize them by assigning weights (numerical values of 1 to 5, 5 being the most important). The alternatives under consideration are then listed, with the present (or most recent) occupation being listed first. Under the column "Identify" people list evidence to indicate how well the criterion is or will be met, and under "Chance", enter an estimate (as a percentage figure) of how likely it is that the criterion will be met. The "Chance" column allows the translation of information in the Identify column to a numerical figure. This figure is then multiplied by the weight (1 to 5) assigned to the criterion, and entered in the Total column. The constraints section is added as an extra check to ensure that the alternatives are acceptable in terms of the reality and choices the person has in his/her life.

Use of the "Identify" column provides the participants with some structure as to the kind of information they require when looking at a specific alternative. If one of the criterion for acceptance was a gross salary of \$15,000.00 per year, then the participant knows specifically what kind of information to acquire when researching the alternative.

The overall totals arising from the multiplication of weights times chance can then be used as a ranking device for the selection of an alternative. If the overall totals of the alternatives do not vary by much, the criteria for acceptance should be re-examined. The participant may have listed too many criteria of the same weight, or else included criteria that don't discriminate among alternatives. If one criterion, for example, was "working with people", then it's obvious that the criterion will not discriminate among teaching, counselling, social work, or working in a bank.

The assigning of numerical values to each alternative can provide a preferential ranking order of the alternatives and leads to a consideration of "go" or "no-go". If desired, especially when more than 5 or 6 alternatives are under consideration, the participants can establish in advance, a cut-off score below which they would not consider any alternative. To establish this cut-off score, the weight of each criterion is multiplied by 100 (the maximum chance of that criterion being present) and the totals are summed. An arbitrary percentage figure is selected (such as 70%) and the total multiplied by the percentage figure with the resulting number being a minimum acceptable figure. The percentage figure is selected by

the participant on the basis of: "I could be satisfied if X% of my criteria were met". This process can serve as a gross screening to eliminate unsuitable alternatives, especially if participants are considering a fairly large number.

12. The Action Plan

The Action Plan is the fifth and final step in the program. This exercise helps the participants make specific plans, look at possible stumbling blocks and how they might be avoided or overcome, and aids in achieving commitment. The Action Plan involves looking at what needs to be done, what steps are to be taken, time frames for completing the steps, and also what kinds of things need to be anticipated.

In piloting the program it was found that the four week program length was not long enough for many of the participants to arrive at the point where they were able to have gathered sufficient information about all their alternatives so as to be able to select and implement their choice. Since the workshop was designed to teach the process rather than have each individual leave with a single career choice, the Action Plan was designed to aid both those who had selected an alternative, and the larger number who were still at the stage of gathering information. The latter were aided in drawing up a timetable, identifying resources and information required, so that a final choice could be made later. The participants shared with the group their specific action proposal, and the counsellor and group members offered suggestions, information, or asked

for clarification that was required. Emphasis was placed on having small, clearly identifiable steps with appropriate time frames for completion. At the end of the activity, the participants were invited to form contracts with one or more of the group members and to report at a specified date their progress. The time frame included not only anticipated completion dates, but also a date for starting. This technique was suggested by a participant in the piloting phase who identified it as an effective means to avoid procrastination.

SUMMARY

This chapter has presented a definition of the terms used and discussed and outlined the program "Deciding Tomorrow Today". The linking of this program with the theoretical model was presented, as well as the framework, timetable and method of presentation of both content and activities. Chapter four deals with the research methodology and design employed in order to evaluate the program.

CHAPTER FOUR

METHOD

"It has often been stated that the laboratory study is the ultimate in scientific method, and that the less precise and less controlled methods of field observation are merely preludes to really scientific study. In fact, one may wonder whether, in counselling and other human behavioral fields, the opposite is the case. The laboratory may permit exploration of variables and may suggest things about people and methods, but only real-life studies can provide the basis for conclusions and generalizations about people and about helping activities." (Goldman, 1978, p. 9)

The decision to conduct a program evaluation of a career decision-making (CDM) program in the field reflects both the concern expressed by Goldman and the necessity of looking at decision-making in vivo. Central to Janis and Mann's (1977) theoretical presentation is the concept of "hot cognitions" and the idea that decision-making about "cold cognitions" may differ sharply, both in terms of process and outcome, from decision-making about "hot cognitions".

This study has three fundamental questions to address:

1. Does the program "Deciding Tomorrow Today" accurately translate the theoretical model proposed by Janis and Mann (1977)?
2. Does the program based on this model teach adults the process of career decision-making in a situation that is real and immediate to them?
3. If it is shown that adults taking this program do learn the process of career decision-making, can the results be attributed to the program (treatment)?

I. The Sample

In August, 1979, two weeks before the start of the workshop, advertisements were placed in the two daily newspapers announcing the workshop, time, place, dates, etc. Individuals wishing to register phoned the Alberta Career Center where their names were recorded, and they were asked to attend a preliminary information session one week before the commencement of the program. A total of 76 people registered for the program over the telephone, and of that number, 52 came to the introductory session.

The purpose of the introductory session was two-fold: first, to outline to the people what the program consisted of, goals and objectives, time commitment required etc; and second, to explain that they would be participating in a research project if they elected to take the workshop during September or October. The purpose and nature of the research was explained in the total group, and those who did not wish to be part of a research project were told that they could register for the November workshop. Of the 52 attending the introductory session, 47 stayed and indicated their willingness to take the course and participate in the research. Of the five who did not wish to take the course, one indicated that she did not want to be involved in the research, three indicated that their expectation was that this course would find them a job, and one indicated that he could not make the time commitment.

The remaining 47 completed a personal information sheet (Appendix B) and wrote Shostrom's Personal Orientation Inventory (POI) and the Decision-Making Scale (DMI, Appendix C) constructed for

TABLE 1
Demographic Information on
Experimental and Control Subjects

	E1	E2	C1	C2
Female	9	9	8	9
Male	4	2	2	4
Age range in years	19-53	18-49	22-53	21-48
Mean age in years	34.5	29.2	31.4	31.8
Number Employed	8	9	8	6
Number Unemployed	5	2	2	7
Range of schooling in years	10-17	10-17	12-17	12-18
Mean years of schooling	13.8	13.4	13.7	13.7
Previous mean number of jobs	3.7	2.0	3.4	3.7

the purposes of this study. They indicated which time slot (5-7:30 p.m. or 8-10:30 p.m.) they preferred, and were randomly assigned into an experimental group (E) or the control Group (C). The E groups were held during the month of September during the two time periods identified above. The C group was slated to be held during the month of October at the same times. On the basis of random selection, the groups were composed of the following:

E1 (5-7:30 p.m.) September	N=13
E2 (8-10:30 p.m.)September	N=11
C1 (5-7:30 p.m.) October	N=10
C2 (8-10:30 p.m.) October	N=13

It was initially intended that the groups (through random selection of 47 people to four groups) be composed of 12 people each (with one group of 11); however, due to the inability to confirm with two participants the group to which they had been assigned in advance of the first workshop session, the final composition of the groups was as noted above.

Information on demographic characteristics is presented in Table 1.

Of the 13 participants in E1, one (male) dropped the course after the second session, one (female) was absent at the last session, and one (female) missed the last three sessions due to a death in the family, but saw one of the group leaders privately to finish off the workshop exercises. This resulted in pre-testing for 13, post testing for 10. The follow-up testing, six weeks after the program, was conducted for nine of those having completed the course.

One participant had moved, leaving no forwarding address, and thus was unable to be contacted.

Of the 11 participants in E2, one (female) did not attend the workshop due to illness, and one dropped out after five sessions due to disinterest. This resulted in pre-testing for 11, and post-testing for 9. One participant did not complete the follow-up data having moved out of the city to a new job.

Of the 10 participants selected to C1, two (one male, one female) did not attend the workshop in October, and thus, did not complete the second testing, leaving a total of eight on which testing at time 1 and time 2 was available. The two people could not be reached by telephone or mail.

Of the 13 participants selected to C2, six did not attend the October workshop (three males, three females), two having found employment and the other four could not be contacted, leaving a total of seven for which test results at time 1 and time 2 were available.

The totals, then, for the experimental groups and control groups for the testing are as follows:

Time 1 (September 6th): E1&2: N=24; C1&2 N=23

Time 2 (October 4 and October 9) E1&2: N=19; C1&2 N=15

Time 3 (Follow-Up, December) E1&2: N=17

At the orientation session, participants were asked to complete a Workshop Orientation Sheet (Appendix B). The first question asked them to identify and prioritize their reasons for attending

the workshop -- the following reasons being listed:

- a. to find a job
- b. to learn how to make decisions
- c. to put some direction in my life
- d. to find out what I'm suited for or what I'm interested in
- e. to find out what my goals are
- f. it was recommended to me
- g. other

Their responses are summarized in Table 2.

All sessions were audio-taped. In addition, this author also attended each session as a process observer, and discussed with the leaders, following each session, the process, problems encountered, and feedback received from the evaluation cards.

II. The Group Leaders

Two graduate students at the University of Calgary, one male and one female: the male an M.A. student in the Department of Philosophy and the female a Ph.D. student in the Department of Educational Psychology conducted the program. Both group leaders had extensive backgrounds in working with groups, one in a clinical setting, the other in personnel development sections of business organizations. In preparation for conducting this program they participated in the piloting of the program initially as participants and later as group leaders.

III. The Design

The design can be presented schematically as follows:

TABLE 2

Summary of Subjects' Reasons for
Attending a Career Decision-Making Workshop

	Total no. of times picked		No. of times picked #1		No. of times picked #2	
	E1&2	C1&2	E1&2	C1&2	E1&2	C1&2
Reason a.	10	13	3	2	1	2
Reason b.	10	16	2	1	2	4
Reason c.	15	18	3	1	8	4
Reason d.	20	20	11	13	2	1
Reason e.	18	19	1	2	7	9
Reason f.	7	7	1	2	0	0
Reason g.	2	0	0	0	0	0

ASSIGNMENT	GROUP	PROCEDURE
R	E1	01 X 02 time 03
R	E2	01 X 02 time 03
R	C1	01 02 X
R	C2	01 02 X

R = random assignment

E = experimental group

C = control group (wait-list)

O = test observations (pre-test = 01; post-tests = 02; follow-up =03)

X = treatment (program, "Deciding Tomorrow Today")

IV. Evaluation of Program Fidelity to Model

Evaluating a program based on a theory not only provides information on the program but also acts as a test of the theory itself. It is necessary then, to provide some evidence that the program accurately reflects the model and that predictions proposed by the model are verified by the program. In this study, the theory of Janis and Mann deals with both effective and ineffective decision-making activities, the antecedent conditions which give rise to various decision-making strategies, and the mediating cognitions which link the antecedent conditions to strategy. A CDM program obviously will attempt to create antecedent conditions to foster the mediating cognitions that result in vigilant information processing, and attempt to change defective decision-making strategies. Thus, this program will reflect only that part of the theory that addresses itself to fostering thorough and vigilant decision-making.

Janis and Mann outlined the criteria for vigilant information processing in decision-making situations as well as indicating

the mediating responses that promote thorough search and evaluation. That is, they have specified observable behaviors (outcomes) and the process by which those outcomes are attained.

To determine whether the program accurately translates the theoretical model in terms of the process, the following evaluation strategy was employed. At the end of each session, participants were asked to fill in anonymously a session evaluation card (a 5 x 8 file card) and answer the following questions:

1. What is one (or more) thing(s) that you learned in this session?
2. What did you like about this session?
3. What did you dislike about the session?
4. Any other comments?

It was hoped that this relatively unstructured approach would identify those things which the participants perceived as being most important, and thus reflect the cognitive mediations which gave rise to the comments. Since each of the exercises was designed both to promote a thorough search and evaluation and to produce the appropriate mediating cognitions, an examination of the comments made by the participants would provide evidence that the process was being followed, and that the outcomes were being met. Chapter Five (Results section) outlines the objectives and mediating cognitions expected for each session and presents exemplary comments from the evaluation cards that indicate whether or not the objectives were met. It is assumed that if participants reflect by their comments the mediating cognitions, and/or objectives, then it can

be stated that the program "Deciding Tomorrow Today" is an accurate reflection of the theory, at least insofar as it pertains to the effective decision-making style.

V. Evaluation of Program Effects on Teaching Career Decision-Making

In order to ascertain whether or not the program teaches adults an effective process of decision-making in a real setting (that is, a setting in which the participants are dealing with a concrete, immediate, and consequential decision), certain behavioral outcomes were postulated. These behavioral outcomes, derived from the seven criteria identified by Janis and Mann as being indicative of high quality decision-making, are as follows: The participants will:

1. identify the goal(s) to be achieved by the making of a career decision.
2. identify the values, needs, and interests they feel are affected by the decision.
3. clearly identify the decision to be made by completing the Decision Statement.
4. consider at least three alternatives before making their decision.
5. actively search for information relevant to the decision and alternatives.
6. consider both positive and negative consequences of possible alternatives.
7. Make a detailed plan for implementing the alternative, or a detailed plan for arriving at the selection of a final alternative.

The evaluation of the extent to which the participants met these behavioral outcomes will be discussed in Chapter Five. The evaluation is based on a synopsis of each session obtained from the audio tapes made of each session and from observations made by the leaders and observer (this author) regarding completion of home assignments and group process.

VI. Measurement of Effects Due to Treatment

1. The Instruments.

Three instruments were used in this study: The Personal Orientation Inventory (Shostrom, 1966), a Decision-Making Scale (DMS) constructed for the purpose of this study, and a Program evaluation Form (PEF) also constructed for this study.

Personal Orientation Inventory

The Personal Orientation Inventory (POI) developed by Shostrom, attempts to assess values, attitudes and personal growth in order to present a profile of a self-actualized person as conceptualized by Maslow and other writers of the humanistic school.

The POI consists of 150 pairs of forced-choice items, which are scored twice: once for the two major scales (Time-competence-incompetence, and Inner-Outer Directedness); and once for the 10 subscales. Damm (1969) concluded:

an overall measure of the POI can probably be best obtained by using the raw score of the I (Inner) scale, or by combining the raw scores of the I and Tc scales. No significant increase in predictability is obtained by converting raw score data to standard scores or combining scales (p.981).

Shostrum (1964) reported a test-retest reliability of .91 and .93 at time periods of 11 to 15 weeks. Tosi and Lindamood (1975) in a critical review of the POI state that "the test-retest reliability of the POI is comparable to the measure of available personality measures, ranging from .55 to .85 for a one week test-retest, and .32 to .71 for 50 weeks test-retest" (p.221). They also comment on the item overlap in the subscales and suggest, as does Damm, that the use of the I scale alone is warranted. The most serious deficiency they noted in the POI was the item overlap and apparent lack of parsimony. They do note that concurrent validation studies support the POI's measurement of psychological health as opposed to psychopathology, and as coincidence with measures of self-actualizing characteristics as determined by other personality measures. Evidence for the POI's predictive validity on criteria related to self-actualization also supports its construct validity." (p.222).

Foulds and Warehime (1971) in a study on faking with the POI found that deliberate attempts by naive students to "fake good" resulted in lower scores on from four to ten POI scales, while psychologically sophisticated subjects can often be detected by unusually high profiles.

The rationale for choosing the POI was two-fold: one arising from previous research and the other on a logical connection between decision-making and inner directedness.

Tichenor (1977) in reporting on an evaluation of Life/Work

Planning used the POI, without, however, reporting data except to note that the treatment group differed significantly at the $p < .05$ level on Inner Directedness and Self-Regard. The Life/Work Planning program has as an objective "to increase one's inner directedness, to increase the capacity to cope with present realities, to increase self-knowledge and to impart career planning attitudes and skills that can be applied to both immediate and future situations" (Tichenor, 1977, p. 54). The objectives identified as goals of Life/Work Planning are identified by other career theoreticians (Dilley, 1967, Peavy, 1979, Snodgrass and Healy, 1979) as legitimate outcomes of any CDM program.

Foulds (1971) in conducting a growth group with special emphasis being placed on "the decision-making process, on the importance of choosing in awareness, and on accepting personal responsibility for one's choices and behaviors" (p.339), used the POI as an instrument that would reflect change in this area.

The inner-directed person (as measured by the I scale) on the POI is described as "guided by internal motivations rather than external influences: (Shostrom, 1966, p.17) as opposed to the outer-directed person (O scale) where "the primary control feeling tends to be fear or anxiety of the fluctuating voices of school authorities, or the peer group. There is a danger that the other directed person may become over-sensitive to 'others' opinions in matters of external conformity. Approval by others becomes for him the highest goal" (p. 17).

Two of the defective coping patterns identified by Janis and Mann (1977) defensive avoidance and hypervigilance, could be seen as being a pattern more likely assumed by persons with a high O score since in attending more to cues outside themselves they would be more likely to respond to early external cues that suggest that "little or no further information is available and that members of his most relevant reference group agree that one of the alternatives is preferable to all others" (p. 50) than those with high I scores. The other two defective coping patterns, unconflicted inertia and unconflicted change would not, for people who self-select into a group on CDM appear to be of concern, since if these patterns were in operation, it is unlikely that people would even seek out help in making a career decision. Working on an assumption then, that the two defective patterns of coping, defensive avoidance and hypervigilance may be more likely engaged in by those exhibiting high O scores, and that the CDM program would contribute toward a higher I score, the POI was used to measure changes in the I score.

The Decision-Making Scale

What is the process involved in making decisions and how can that process be identified? Current instruments in the area of vocational development deal with such things as vocational interests (Minnesota Vocational Interest Inventory, Ohio Vocational Interest Survey, Strong-Campbell Interest Inventory, etc.), values

(Allport-Vernon-Lindzey Study of Values, Prince Differential Values Inventory, Rokeach Value Survey), aptitudes (Scholastic Aptitude Test, Differential Aptitude Test, General Aptitude Test Battery) or career maturity (Career Maturity Inventory, Career Development Inventory). None of the available instruments reflects the process of decision-making as hypothesized by the Janis and Mann model. These instruments that do claim to assess decision-making skills (Ferguson, 1976; Jones, 1976) are designed for use with school age populations rather than for adults.

In an attempt to assess the decision-making process as hypothesized by the model, an instrument, the Decision-Making Scale (DMS) was constructed for this study.

The mediating process outlined by Janis and Mann suggests that there are four basic questions that must be answered "yes" or "maybe" in order for a person to undertake a thorough search and evaluation of alternatives. These questions are:

1. Are the risks serious if I don't change?
2. Are the risks serious if I do change?
3. Is it realistic to hope to find a better solution?
4. Is there sufficient time to search and deliberate?

The DMS poses statements that seek to elicit answers to these questions within a career decision-making framework. In addition, one more area reflecting the awareness of career information was included. Thirty statements were selected from a pool of statements constructed to reflect one of the five scales or categories. These scales are as follows:

Scale 1 deals with the question "Are the risks serious if I don't change?" Statements in this category reflect the individual's belief that it is important and/or possible to make a career decision rather than avoid making a decision.

Scale 2 deals with the question "Are the risks serious if I do change?" Statements here reflect the individual's wish/belief that it is important to consider a number of alternatives, that the first alternative that comes to mind may not be beneficial, and the willingness to search out suitable alternatives.

Scale 3 deals with the question "Is it realistic to hope to find a better solution?" Statements here reflect the individual's willingness to evaluate the alternatives so as to find one that meets essential criteria for acceptance rather than go back and take the first alternative.

Scale 4 deals with the question "Is there sufficient time to search and deliberate". Statements here reflect the individual's willingness to plan and carry out an alternative rather than select an alternative on the basis of the pressure of time.

Scale 5 deals with the question "Do I have enough information on which to make a career decision?" Statements here reflect the individual's knowledge and perception of the information components (either information about self or about occupations) to consider in career decision-making.

Each of the scales was represented by six statements, arranged

in random order and phrased either in a positive or negative form to avoid a response set in answering the items. The responses were arranged on a Likert type scale from (1) strongly agree (2) agree (3) undecided (4) disagree and (5) strongly disagree.

Validity results were obtained by submitting the DMS to four raters (graduate students in Educational Psychology Department, University of Calgary) for their assignment of statements to the scales they were designed to identify. The percentage agreement of the raters with a priori categories is as follows:

Category 1 = 95.8%

Category 2 = 66.7%

Category 3 = 54.0%

Category 4 = 62.5%

Category 5 = 75.0%

Average = 70.8%

The independent raters agreed that 70.8% of the items fit into the a priori category, providing a measure of content validity.

Reliability data were obtained by having a group (N =41) of second year undergraduate students in the Faculty of Education take the DMS twice, one week apart for a test-retest measure.

The reliability of the DMS, on a test-retest design was assessed using Pearson's Product-Moment Correlations. The results are as follows:

Category 1 = .58

Category 2 = .72

Category 3 = .66

Category 4 = .77

Category 5 = .33

Total . = .75

The Program Evaluation Form.

The Program Evaluation Form (Appendix C) is a 25-item course evaluation instrument. The statements were designed to assess the participants' feelings about the program and about the help provided by the leaders and other group members. The responses were set up on a Likert scale of (1) strongly agree (2) agree (3) disagree (4) strongly disagree and (5) not applicable. The purpose of this instrument was to elicit information directly specific to the program and to determine whether the opinions at the conclusion of the course were maintained over a six-week period.

VII The Follow-Up

In order to determine whether gains were sustained over time, a six week follow-up was conducted. The six week follow-up included retesting on the POI, the DMS, and the 25-item program evaluation form that was given only to the experimental group, once at the end of the workshop and again at the follow-up.

Participants were told at the conclusion of the workshop that they would be contacted individually in six weeks time and be asked to complete a questionnaire as well as return for a personal interview. During the beginning of the second week in December, participants

were contacted by mail and asked to complete the POI, the DMS and the PEF as well as an 8-item open-ended questionnaire (appendix D) assessing activities conducted since the workshop's conclusion. Appointments were made by phone and the participants returned the materials at the personal interview session at which time they were asked to comment on how successfully they had completed their action plan (session 8 of the workshop), and general feelings about the worth of the course.

VIII The Hypotheses

The following null hypotheses were formulated to test the effects of the program:

Hypothesis one. There will be no difference after treatment between the experimental and wait-list control group on the "I" scale of the P.O.I.

Hypothesis two. There will be no difference after treatment between the experimental and wait-list control group on scale 1 of the DMS.

Hypothesis three. There will be no difference after treatment between the experimental and wait-list control group on scale 2 of the DMS.

Hypothesis four. There will be no difference after treatment between the experimental and wait-list control group on scale 3 of the DMS

Hypothesis five. There will be no difference after treatment between the experimental and wait-list control group on scale 4 of the DMS.

Hypothesis six. There will be no difference after treatment between the experimental and wait-list control group on scale 5 of the DMS.

Hypothesis seven. There will be no difference on the "I" scale of the P.O.I. for the experimental group between scores obtained at a six week follow-up and at the post-test.

Hypothesis eight. There will be no difference on scale 1 of the DMS for the experimental group between scores obtained at a six week follow-up and at the post-test.

Hypothesis nine. There will be no difference on scale 2 of the DMS for the experimental group between scores obtained at a six-week follow-up and at the post-test.

Hypothesis ten. There will be no difference on scale 3 of the DMS for the experimental group between scores obtained at a six-week follow-up and at the post-test.

Hypothesis eleven. There will be no difference on scale 4 of the DMS for the experimental group between scores obtained at a six-week follow-up and at the post-test.

Hypothesis twelve. There will be no difference on scale 5 of the DMS for the experimental group between scores obtained at a six-week follow-up and at the post-test.

IX Statistics.

The statistics used to test the hypotheses are t-tests. There are certain assumptions that are made when employing a t-test or

any parametric test (Kerlinger, 1974). These assumptions are normality, homogeneity of variance, and continuity and equal intervals of measure.

Assumption of Normality

One of the basic assumptions used with parametric statistics is that of normality of the random variable used. Although the sample used in this study was composed of people who self-selected into the workshop, the program was open to any adult Albertan in the vicinity of Calgary, and thus there is no reason to expect that this assumption is violated.

Assumption of Homogeneity of Variance

The assumption of homogeneity of variance states that "variances are assumed to be homogeneous from group to group, within the bounds of random variation" (Kerlinger, 1964). Kerlinger goes on to state:

The evidence to date is that the importance of normality and homogeneity is overrated, a view that is shared by the author. Unless there is good evidence to believe that the populations are rather seriously non-normal and that variances are heterogeneous, it is usually unwise to use a non parametric statistical test in place of a parametric one (p. 287).

Assumption of Continuity and Equal Intervals of Measures

The third assumption, that of continuity and equal intervals of measures states that measures to be analyzed are continuous measures with equal intervals. Although intelligence, aptitude and personality test scores are, strictly speaking ordinal, Kerlinger states:

Yet, though most psychological scales are basically ordinal, we can with considerable assurance often assume equality of interval. The argument is evidential. If we have, say, two or three measures of the same variables, and these measures are all substantially and linearly related, then equal intervals can be assumed. This assumption is valid because the more nearly a relation approaching linearity, the more nearly equal are the intervals of the scales. This also applies to some extent to certain psychological measures like intelligence, achievement and attitude tests and scales, (p.440).

Summary

This chapter has identified the method used in answering the three basic questions posed in this study:

1. Does the program "Deciding Tomorrow Today" accurately translate the theoretical model proposed by Janis and Mann?
2. Does the program based on this model teach adults the process of career decision-making in a situation that is real and immediate to them?
3. If it is shown that adults taking this program do learn the process of career decision-making, can this result be attributed to the program (treatment)?

The chapter identified the sample population, the design, instrumentation employed, and the hypotheses formulated. Finally, the rationale for using the statistics selected was presented.

CHAPTER FIVE

RESULTS

The purpose of this study was to conduct an evaluation of the career decision-making (CDM) program "Deciding Tomorrow Today." Three fundamental questions were posed:

1. Does the program "Deciding Tomorrow Today" accurately translate the theoretical model proposed by Janis and Mann (1977)?
2. Does the program based on this model teach adults the process of career decision-making in a situation that is real and immediate to them?
3. If it is shown that adults taking this program do learn the process of career decision-making, can the results be attributed to the program?

I. Evaluation of Program Fidelity to the Model

Janis and Mann present a model that seeks to describe how people involved in a consequential, stressful decision-making situation make decisions. They hypothesize the conditions and cognitive mediations that differentiate high quality decision-making from four other defective decision-making strategies. The CDM program constructed for this study seeks to create the appropriate antecedent conditions and mediating cognitions that elicit high quality decision-making.

The activities comprising the program (Figures 2, Chapter three) were selected in order to create the antecedent conditions suggested. In order to assess whether these conditions were in fact created, and whether the mediating cognitions were effects, participants' evaluation of each session were analyzed.

Following are examples of relevant comments submitted by the participants at the end of each session. The antecedent conditions and mediating cognitions which each session was designed to elicit are identified, and participants' comments, reflecting the awareness of these, are listed below by session.

Session 1

At the conclusion of session 1, it would be expected that (a) comments regarding universality, (b) the need to make a decision, (c) the possible losses that might occur if a decision were not reached, and (d) information about identification of goals or self-knowledge would be present.

a. Universality

- . I've learned I'm not the only one feeling confused about my career.
- . I discovered that I was not the only person that had trouble deciding what to do.
- . I learned that there are other people who are unsure of the direction that their life should take or what their goals are.

b. Need to Make A Decision

- . It is very helpful to me to find a workshop set up to deal with the help that I particularly need at this time...
- . I learned that I really did want to change my direction of my life as far as career goes, and that this really is the place for me to start.

- . I do need to improve decision-making.
- c. Is There Risk of Serious Loss if I Don't Change?
- . no relevant comments
- d. Identification of Goals - Self-Knowledge
- . The main aspect that I have learned in this session is that it is important for me to change my habit of thinking about myself and about my goals.
 - . To project my goals to include things that can be accomplished immediately and in the future.
 - . I saw a little more clearly, just by saying it in the introduction, how I happen to be where I am today -- lack of planning.

Session 2

The expectations for session 2, with respect to antecedent conditions and mediating cognitions are much the same as those for session one. The comments made at the end of this session should reflect (a) possible losses about remaining unchanged (that is, possible losses occurring if a decision is not made), (b) continued identification of goals, values, knowledge etc., and (c) comments reflecting the belief that a change must be made.

a. Risk of Possible Loss

- . I learned that I have goals to set. I must get out of my "rut" and decide what my next move will be.
- . Clarified to an extent for myself where I was going and more specifically what I want and need. I've always chose (sic) something, then rejected, first one thing then another and became very frustrated.
- . I learned that, rather than feeling threatened, I am feeling excited about looking at the alternatives for another career. The womb is so safe and secure and the outside world is so frightening. This session helped me to look at the basic question -- what am I afraid of? Giving up my well-paying job may even lead to happiness (which my well-paying job does not now provide anyway.)

b. Identification of Goals, Values, Self-Knowledge, etc.

- . I learned a little more specifically what my goals are.
- . How to formulate a specific goal so you know when you get there.
- . The main thing I learned from today's session was what my goal is. It helps to put things into perspective
- . Learned to define my goals to myself and narrow down to most important goals.

c. The Need to Make a Change

- . One of the things I learned in this session is that I am going to have to make the decision myself instead of relying on someone else to do so -- but that is the main reason why I am here.

Session 3

The comments made at the end of session 3 should continue to reflect (a) information about possible losses from changing, (b) an indication that there is an intensive search for new information relevant to further evaluation of alternatives, and (c) the goals and objectives to be fulfilled and the values implicated by the choice.

a. Possible Losses from Changing

- . I learned about many of the negative thoughts I have or that influence my life right now go back many years and that in fact I have many support systems right now among my friends and associates. I also learned that my present job is actually meeting many of my needs, interests, and values, and that I am not as unsuited as I thought to it re skills. I learned that the major item that may be missing in my job is the emotional side and that it is worth trying to get that part.

b. Intensive Search for New Information

- . I'm doing what I'm not interested in and not doing what I'm interested in. I've learned from other participants a few more needs, interests and values I didn't identify and that are important.

c. Identification of Goals and Objectives to be Fulfilled

- . I learned I have to define my skills and interests more specifically.
- . After thinking about the needs, values, interest charts, I was able to clarify exactly what I need in a job.
- . I learned, through discussion, how to weigh my priorities with regard to needs, interests, values. I stated them on the graph, but I now have a better sense of priority.
- . I learned to distinguish between my needs and other people's needs.

Session 4.

By the end of session 4, participants should (a) continue to identify their goals and objectives, (b) take into account new information, and (c) formulate a decision statement that reflects their goals and objectives.

a. Identification of Goals and Objectives

- . I have learned to state clearly what the goal is that I want help with from this class.
- . I have learned to be more specific in my goals and to define them.
- . I feel that I'm getting some benefit out of this class because I'm starting to be more aware of my emotions and reactions. For awhile I felt as though I was just confusing myself more but it seems to be falling into place.

b. Take Into Account New Information

- . I learned a few good tools that I can use to achieve my goals.
- . I learned that I haven't previously been aware of my needs, nor of my interests. The workshop is opening my awareness to areas where I am confused. I've sure been groping.

c. Formulate A decision Statement that Reflects Goals and Objectives

- . Learned re-wording to help clarify my statement.
- . It's starting to make sense. It ain't (sic) that hard when it's broken down into manageable units. Clarify the decision statement was valuable. It removed the vagueness of some of my goals and things I can/want to do about them.

Session 5.

Session 5's comments should continue to reflect (a) the search for new information relevant to further evaluation of alternatives, (b) the assimilation of new information relevant to the decision, and (c) some indication that they perceive there is more information available.

a. Search for New Information Relevant to Alternatives

- . I learned a lot more about myself in terms of positive attitudes and how I am coming across.
- . A valuable exercise to help me put "how I see myself" and "how others see me" into better perspective. False humility can be damaging. With respect to strengths and abilities, I have a lot to work with. Any chosen constraint in this area can now be seriously looked at with a view to realistically looking at some alternatives I may not have considered.

b. Assimilation of New Information

- . It makes me realize that I wanted to jump right into goals, but the thought process of making decisions is starting to come through and it is entirely new to me. On the other hand, I realize that an organized brain is the first step to making good decisions.
- . I learned a little more about myself tonite. It's really nice to get feedback from the other people in the workshop. It was nice to have some positive things about myself rather than negative things for once.

c. Is There More Information Available?

- . no comments

Session 6

The comments made at the end of Session 6 should reflect (a) the realization that there is more information available and that there are other alternatives, and (b) that there will be sufficient time in which to make a decision.

a. Available Information Producing Other Alternatives

- . I learned some areas to explore I never thought of.
- . I learned I had more alternatives than I thought I did.
- . That there are a broad range of alternatives available to me, areas I had not considered.
- . I learned how supportive people are and that I do have alternatives that are realistic.
- . Breaking decision-making into such manageable units seems to make the whole process much less foreboding.

b. Is There Sufficient Time Available to Make a Decision?

- . I was glad that we were told that we don't have to make the FINAL decision by Thursday because I was getting quite uptight about that.

Session 7

Session 7's comments should reflect that (a) there is sufficient time in which to make the decision, (b) that the costs and risks, the positive and negative consequences of the alternatives are being considered, as well as (c) a continued search for new, relevant information and (d) an evaluation of the alternatives under consideration.

a. Sufficient Time to Make the Decision.

- . I didn't like my lack of time for preparing.
- . I find myself getting more and more tense as I get closer to making a decision and expecting an action.

b. Weighing Costs and Risks, Positive and Negative Consequences.

- . I like the discussions of the problems of making choices and weighing alternatives; the feedback stimulates my thoughts.
- . I learned the "what is the worst possible things that could happen to me if I did this?"
- . The identifying, weighing and assessing of end results of homework exercise on alternatives.

c. Continuing Search for New Information

- . I have a lot more work to do -- specifically research and thinking. These sessions are making me more aware of what I'm really after.
- . I need more information about my alternatives before I can make a decision about the best career path for me. I need to do much more research on the alternatives I have arrived at.
- . I learned that I skip searching for information because of a pre-conceived opinion that is not based on fact. Learned that researching and gathering facts is vital.

d. Evaluating Alternatives

- . Re-evaluate constraints -- do some research on alternatives.
- . I like the thought of knowing why an alternative is discarded.
- . I was able to determine more accurately what the criteria for my career would be.
- . I guess I've come to the realization that the model is a clarifying, a specifying instrument and that to be of benefit to me means more research re alternatives. Must go farther into evaluating alternatives.

Session 8

Session 8, the concluding session in the workshop, should reflect the participant's willingness to make an action plan with detailed provisions for its achievements.

- . I learned that I'm not finished. I'm just beginning on a plan of action.
- . I learned that one of my basic problems is organizing time and that I can accomplish more/given units of time if I break tasks down to smaller, achievable units, i.e. timetable.
- . That I must not just write down action statements, but get down to doing them.
- . My action step is positively fascinating and challenging to me and leads to many other ideas. There is a peacefulness to going in a direction that comes from taking all the decision-making steps. A finalness -- like I don't have to worry whether or not this is the right step -- it is.

II. Evaluation of Program Effects on Teaching Career Decision-Making

The second question posed is "Does the program based on this

model teach adults the process of career decision-making in a situation that is real and immediate to them?" Seven behavioral objectives (based on the criteria identified by Janis and Mann as being evidence of a thorough search and evaluation) were formulated for the purpose of evaluating the workshop. These behavioral objectives (outcomes) are as follows:

The participants will:

1. identify the goal(s) to be achieved by the making of a career decision.
2. identify the values, needs and interests they feel are affected by the decision.
3. Clearly identify the decision to be made by completing the Decision Statement.
4. consider at least three alternatives before making the decision.
5. actively search for information relevant to the decision and the alternatives.
6. consider both positive and negative consequences of possible alternatives.
7. make a detailed plan for implementing the alternative, or a detailed plan for arriving at the selection of a final alternative.

Items 1, 2, 3, 6, and 7 were carried out by having the participants complete exercises that were designed to produce those behaviors. Goal Setting (objective 1) was approached through two exercises: the Life Line in which participants projected their life up to age 80 and imagined goals they would like to have achieved

by that time; and the Goal Setting Exercise, in which participants set specific, concrete goals for themselves. All of the participants completed these two exercises and were able to specify at least one relevant goal for themselves.

The identification of needs, values and interests (objective 2) was made by completing the Needs, Interests and Values Chart. The needs, interests and values were derived from a consideration of previous employment the participants had experienced. The participants completed the chart as a home assignment and modified (added, clarified, etc.) items during the group discussion of the exercise.

Clearly identifying the decision (objective 3) was accomplished by having the participants construct a decision statement in the form of "To choose the best.... ". This exercise followed the previous exercises on Goals, Needs, Interests, Values, and Transferable Skills. The decision statement for the majority of the participants was "To choose the best job". However, there were some exceptions to that. Three participants who initially indicated that they wished to make a career change chose a decision statement that reflected for them a more immediate and important goal (as a result of having done the goal setting exercise), in the area of making friends and expanding their social network. These people were new arrivals in the city (having moved in within the last year) and felt that a more immediate concern was to establish a social network of friends. One participant was a homemaker who was not looking for a job, but who had come to the workshop because she felt she needed help in

learning how to make decisions in her life. Her decision statement reflected an interest and hobby of writing children's stories, and the decision statement was "to choose the best marketing strategy for selling stories."

Considering both positive and negative consequences of possible alternatives (objective 6) was carried out in the session on evaluating alternatives. The exercise required that they identify criteria for acceptance (that is, the positive things they wished to obtain from the alternatives) and estimate the likelihood of that criteria being met, as well as identify the things that might go wrong (negative consequences) and how they might be avoided or ameliorated.

Objective 7, making a detailed plan for implementing the alternative, or a detailed plan for arriving at the selection of a final alternative, was accomplished in the last session of the workshop where participants wrote out their plans together with a time line, and made a contract with another group member to carry out the plan and contact the other person to report progress. All the participants drew up an action plan, with time lines, and left a copy with this author. This plan was then used in the follow-up six weeks later in assessing whether or not the plan(s) had been implemented.

Objective 4- consider at least three alternatives -- was attained by all members. The mean number of alternatives considered (that is, evaluated in terms of applying criteria for acceptance and searching for relevant information) was five.

Objective 5 -- actively search for information relevant to the decision and alternatives, was determined by counting the number of times participants used the resource center outside of class time, and noting the number of times they indicated they had sought out other kinds of relevant information. Each of the participants used the resource center at least twice out of class time, and the average number of times it was used was 2.76. In addition, the follow self-reported information seeking activities were noted:

- a. phone calls requesting academic information - 5.
- b. talks with present employers regarding career promotion in present job - 3.
- c. interviews arranged with potential employers in other areas - 4.
- d. trips made to other agencies for additional information (e.g. public library, Canada Manpower etc.) - 7.

This is in contrast to the wait-list control group, who, during the September waiting period did not report any information-seeking activities.

Investigation of program effects continued by conducting a six week follow-up. In addition to completing a short questionnaire (Appendix D), the participants were interviewed. Exemplary comments from the questionnaire and interview are presented below.

The first question, "Have you made a job/occupational change since taking this course?" was answered affirmatively by three. Of the remaining 14, four had formulated decision statements that were not related to choosing a job or career. Those who answered

"no" to the question were asked to comment if they thought the workshop had a role to play in their deciding not to change jobs.

Exemplary comments reflecting their view of the role of the workshop are as follows:

- . Yes. It helped me to identify that what was bothering me about my present occupation was not really the characteristics of the occupation.
- . Yes. I have analyzed where I am now and what I must change in my personal life before I am in a position to make a change.
- . Yes. I have checked out other alternatives to changing a job and I have decided to return to school in September '80.
- . Yes. Through having analyzed other people's problems, I learned that in this stage of my development that stability in a job was of the essence.

Those that were unemployed, but looking for employment, commented:

- . Partly. Made me realize I was "hyper-vigilant". Decided to take a closer look at options over a longer term. Helped me balance personal/career decisions.
- . No, because I had made the decision to complete my degree before I took the workshop.

One question asked if they had used the process presented in the workshop for making any other decisions since they completed the workshop.

Six responded "no", eleven answered "yes." Some exemplary comments are:

- . Generally I have used the model to analyse career choices and job situations but I have also used it to evaluate personal situations.
- . To an extent. Example: when deciding something, what effect would the end result have.
- . Have used system in developing personal answers to previously dubious situations.
- . Yes, to buy a car.
- . Yes. Since the workshop I seem to make everyday decisions much quicker than I used to. I employ this decision-making model in my decisions where applicable.

Question 7 asked: Do you feel at this time that the workshop has made any difference in your METHOD of making decisions? That is,

do you do anything differently now, and if so, what?

Three responded "no", and fourteen answered "yes". Exemplary comments of those responding yes are:

- . Definitely yes. I look at decisions in terms of immediate as well as long term effects of that decision.
- . Yes. I look at the alternatives available to me first before jumping into or out of something.
- . I am making decisions faster and more intelligently and generally more organized. Try to find alternative ways to accomplish goal.
- . Yes. I assess things more. When I make up my mind I stop to think about it and to weigh it against alternatives. Before I would do it impulsively.
- . Yes. I'm sure it has. I used to just let things happen. Now I plan and decide. I'm confident I can obtain the information I need to make the decision and then make it.
- . Yes. I identify the goal, then analyze all the means of achieving that goal, then make the decision as a result. I try not to make assumptions but obtain facts.

Question 8 asked "In looking back at the workshop, what do you now feel was of most benefit to you?" Exemplary comments follow:

- . The workshop made me take a close look at myself and my life. I had never done it before. I feel I know myself better and that I am participating actively in my life and the direction I will take.
- . The fact that there were people ready to help me by pointing things out to me, by showing me alternatives, by being there when I needed them.
- . The decision making model is what the workshop was all about, but this could not have been brought about as effectively if it weren't for the interplay between not only the group leaders, but the participants as well. The extent to which everyone was committed to the program drove home the value of the decision-making model.
- . Sorting out my feelings about my past job and being able to both effectively and objectively look at a new job (i.e.) if a job does not meet certain criteria I will not look at it. On the other hand, if it meets all my criteria, I cannot necessarily jump into that profession at will; thus I am looking at changing some of the barriers to my job alternatives (i.e.) going back to university.
- . Learning to apply the model to decisions.
- . It helped me to feel better about myself.

The Action Plan

The 17 participants, at the end of session 8, drew up action plans for themselves. The average number of steps per plan was 3.4 and the completion rate of attaining these steps was 74.5%. Sixty percent of the participants had fully completed their action plan by the time of the follow-up. In the personal interview, the main reasons given by those who had not completed their action plan was illness (three) and lack of time (five).

At the conclusion of the program, and again at the follow-up, the experimental participants completed a 25-item Program Evaluation Form. (Appendix C). A t-test was conducted on the items. Items that changes from program end to follow-up (at p .05) are reported in Table 3.

III. Measurement of Effects Due to Treatment

A number of hypotheses were generated to test the effects due to treatment. Only those experimental subjects who completed testing at all three times (pre-test, post-test, and follow-up) were included in the analysis, resulting in an N of 17 for the experimental group. The control group was a wait-list control group who were registered for the program 4 weeks after the experimental group. Only those subjects who completed testing at the first two times (pre-test and post-test) were included in the analysis, resulting in an N of 15 for the control group. A t-test was used to test the following hypotheses, with a p .05 used to reject the null hypotheses.

TABLE 3

Analysis of Experimental Group's Responses on the PEF
 For Items that Differed Between Program Conclusion and Follow-Up

Item #	Time ⁽¹⁾	Mean	S. D.	t-value	Level of Probability. ⁽²⁾
2	2	1.23	.43	-2.07	.05
	3	1.58	.50		
5	2	1.35	.49	-2.22	.04
	3	1.58	.50		
10	2	1.17	.39	-2.38	.03
	3	1.58	.79		
12	2	1.23	.43	-2.07	.05
	3	1.58	.50		
23	2	1.47	.62	-2.42	.02
	3	2.05	1.02		
24	2	1.23	.43	-2.58	.02
	3	1.52	.51		

(1) Time: 2 = program conclusion 3 = follow-up

(2) $P < .05$

Hypothesis one. (H_0): There will be no difference after treatment between the experimental and wait-list control group on the "I" scale of the P.O.I.

The results are presented in Table 4.

TABLE 4
Analysis of Scores after Treatment for Experimental and
Wait-List Control Group on "I" scale of the P.O.I.

Group	N	Mean	S.D.	<u>t</u> value	Level of Probability
Experimental	17	87.00	8.78	3.68	.001
Control	15	76.33	7.45		

Since $p < .001$, the null hypothesis is rejected, indicating that after treatment the experimental group did increase in inner directness as measured by the "I" scale of the P.O.I.

The data collected from the Decision-Making Scale are presented in Table 5. Hypotheses two, three, four, five and six refer to the data presented here.

Hypothesis two (H_0): There will be no difference after treatment between the experimental and wait-list control groups on scale 1 of the DMS.

For scale 1, $p < .35$ and thus the null hypothesis is accepted indicating that there is no difference after treatment on scale 1 of the DMS. The program did not significantly change the experimental

TABLE 5

Analysis of Scores Obtained on the Five scales of the D. M. S.
for the Experimental and Wait-List Control Groups after Treatment

Group ⁽¹⁾	N	Scale	Mean	S. D.	<u>t</u> -value	Level of Probability
E	17	1	10.11	2.66	.94	.35
C	15	1	9.26	2.40		
E	17	2	10.29	1.96	.04	.97
C	15	2	10.26	2.43		
E	17	3	12.58	3.04	-3.00	.005*
C	15	3	15.73	2.86		
E	17	4	14.29	2.99	-1.81	.08
C	15	4	16.06	2.43		
E	17	5	10.52	1.80	-3.48	.002*
C	15	5	13.00	2.20		

(1) Group. E = experimental C = wait-list control group.

* $p < .05$

group's belief that it was necessary and/or possible to make a career decision.

Hypothesis three (Ho): There will be no difference after treatment between the experimental and wait-list control groups on scale 2 of the DMS.

For scale 2, $p < .97$, and thus the null hypothesis is accepted indicating that there is no difference after treatment between the two groups on scale 2. The program did not significantly change the experimental group's belief that it is important to consider a number of alternatives.

Hypothesis four (Ho); There will be no difference after treatment between the experimental and wait-list control groups on scale 3 of the DMS.

For scale 3, $p < .005$, thus the null hypothesis is rejected indicating that there is a difference after treatment on scale 3 of the DMS. The experimental group differed significantly after treatment from the control group on the belief that it is realistic to hope to find a better solution.

Hypothesis five (Ho): There will be no difference after treatment between the experimental and wait-list control groups on scale 4 of the DMS.

For scale 4, $p < .08$, thus the null hypothesis is accepted indicating that there is no difference after treatment on scale 4 of the DMS. The program did not significantly change the experimental

group's belief that there was sufficient time to search and deliberate.

Hypothesis six (H₀): There will be no difference after treatment between the experimental and wait-list control groups on scale 5 of the DMS.

For scale 5, $p < .002$, thus the null hypothesis is rejected indicating that there is a difference after treatment on scale 5 of the DMS. The experimental group differed significantly after treatment from the control group on the belief that they had enough information on which to make a career decision.

The analysis, by means of a t-test, of the comparison of data collected for the experimental group at post-test and follow-up, on the POI and DMS is presented in Table 6. The remaining hypotheses refer to the data presented there.

Hypothesis seven (H₀): There will be no difference on the "I" scale of the POI for the experimental group between scores obtained at a 6 week follow-up and at post-test.

Since $p < .007$, the null hypothesis is rejected, indicating that after six weeks the scores on the "I" scale did change from those obtained at the conclusion of the program. The direction of change is toward a higher degree of Inner directedness as measured by the I scale of the POI.

Hypothesis eight (H₀): There will be no difference on scale 1 of the DMS for the experimental group between scores obtained at a

TABLE 6

Analysis of Scores Obtained by the Experimental Group on the
 POI and DMS at Follow-Up Compared with Post-Test.

Time (1)	Scale	Mean	S. D.	t-value	Level of Probability
1	"I"-POI	87.00	8.78	-3.10	.007*
2	"I"-POI	91.47	9.81		
1	1-DMS	10.11	2.66	.09	.93
2	1-DMS	10.05	2.53		
1	2-DMS	10.29	1.96	-1.05	.30
2	2-DMS	10.70	1.64		
1	3-DMS	12.58	3.04	.64	.53
2	3-DMS	12.23	2.58		
1	4-DMS	14.29	2.99	2.97	.009*
2	4-DMS	12.64	2.31		
1	5-DMS	10.52	1.80	-1.13	.27
2	5-DMS	11.17	1.87		

(1) Time 1 = post-test 2 = follow-up

*
 $p < .05$

6-week follow-up and at post-test.

Since $p < .93$, the null hypothesis is accepted indicating that after six weeks the scores on scale 1 of the DMS did not differ significantly from those obtained at the post-test.

Hypothesis nine. (Ho): There will be no difference on scale 2 of the DMS for the experimental group between scores obtained at a 6-week follow-up and at post-test.

Since $p < .31$, the null hypothesis is accepted indicating that after six weeks the scores on scale 2 of the DMS did not differ significantly from those obtained at the post-test.

Hypothesis ten (Ho): There will be no difference on scale 3 of the DMS for the experimental group between scores obtained at a 6-week follow-up and at post-test.

Since $p < .53$, the null hypothesis is accepted indicating that after six weeks the scores on scale 3 of the DMS did not differ significantly from those obtained at the post-test.

Hypothesis eleven (Ho): There will be no difference on scale 4 of the DMS for the experimental group between scores obtained at a 6-week follow-up and at post-test.

Since $p < .009$ the null hypothesis is rejected indicating that the scores on scale 4 of the DMS did change from those obtained at the conclusion of the program. The direction of change is toward a stronger belief that they had sufficient time to search and deliberate.

Hypothesis twelve (H_0): There will be no difference on scale 5 of the DMS for the experimental group between scores obtained at a 6-week follow-up and at post-test.

Since $p < .27$, the null hypothesis is accepted indicating that after six weeks the scores on scale 5 of the DMS did not differ significantly from those obtained at post-test.

Summary

This chapter has presented the results of the evaluation of the program "Deciding Tomorrow Today". Comments illustrating the cognitive mediations were presented in linking the program to the model. The behavioral objectives indicative of high quality decision-making were outlined, and evidence supplied that these objectives were achieved. Finally, hypotheses generated to test the effect that the program (treatment) had, were specified, and the results reported. Hypotheses one, four, six, seven, and eleven were rejected, the rest accepted.

CHAPTER SIX

DISCUSSION

The focus of this study has basically been two-fold: one, the creation of a career decision-making (CDM) program based on a theoretical model (proposed by Janis and Mann, 1977) and secondly, the evaluation of that program as presented to a group of adults who registered for the program.

A review of the literature in the area of career decision-making initiated the writing of a program for adults on CDM. It became obvious that most of the programs and much of the research involved school age populations rather than adults, but of greater concern was the diffuse nature of the research and the gap between theory and practice. As indicated in Chapter 2, research on career decision-making and career indecision reported in journals seemed to fall into one of four categories: a clarification of the constructs of indecision and indecisiveness (Goodstein, 1965); identification of differences between those who were undecided versus decided (Marr, 1965); development of instrumentation designed to identify and describe decideds versus undecideds (Holland and Nichols, 1964); and treatment programs for career decision-making (Mendonca and Seiss, 1976). The CDM programs (largely produced as texts or workbooks by publishing companies) while presenting materials that

have common agreement as to content, do so without any explicit reference to any theory that would justify their inclusion. The assumption appears to be that presentation of pertinent information in an orderly, systematic manner results in good decision-making. If this indeed were the case, then career decision-making would be a non-issue, and one would expect that individuals would be able to simply access the required information and act upon it.

The application of theory to practice seems to be largely in the area of content. The various theoretical models that suggest the process of CDM have found their translation in programs primarily in the inclusion of the kinds of information required rather than the process required to integrate the information. Thus, we have a situation where the bulk of the research on CDM aims at investigating differences between decided and undecided populations, while the programs designed to teach CDM are largely focused on content to be acquired.

This study is a preliminary attempt to bridge the gap between the two by creating a program based on a theoretical model of decision-making and evaluating that program. The program was designed with the following assumption in operation: that people who are making a career choice do not necessarily know how to make good career decisions in situations that admit to more than a simple yes-no choice.

The implication of accepting this assumption is that any CDM program requires an explicit teaching of a rational, sequential

method of arriving at a decision, and this is achieved by teaching the process.

In piloting the program it was found that the participants were, for the most part, unsure and unpractised in any formal decision-making method. There were some kinds of errors and problems that appeared fairly often: the tendency to see decision-making as a choice between only two alternatives, an either-or approach; category mistakes that encompass trying to make choices among different options that are not comparable; lack of specificity and the tendency to deal with global terms; and finally, the tendency to make decisions based not on hard data, but rather on impressions, rumors, or misinformation from uninformed sources. Generally participants who attended the workshops did not know how to assess career information, nor know appropriate questions to ask or information to extract when information was available.

The program, as run for this study, can be conceived of as a skill building program in which participants were taught the skills they needed to have in order to make a good decision and taught these skills in a meaningful situation that had immediate application. The emphasis was on the skills and the process required to use those skills.

There is no doubt, from looking at the literature, that there are differences between decided and undecided career decision-makers. The problem lies in that such a number of variables have been identified (anxiety, self-esteem, locus of control, dogmatism, career salience, dependency) that seems to differentiate the two groups, that creating a program that seeks to address specifically

one of these variables is likely to be ineffective with at least some participants who do not fit into the category. Even if a community agency were large and diverse enough to offer separate programs for distinct homogeneous groups of individuals, there still remains the problem of adequately identifying the proper placement for each person.

A more practical approach would seem to be to have participants move through a program that identifies and focuses on the process and which allows the participants the time to identify for themselves what kinds of things may keep them from using that process.

In order to follow this approach, it is necessary to identify the process involved in CDM. The model of Janis and Mann (1977) provides one description and was the basis for the program "Deciding Tomorrow Today".

Process has been defined for this study as the conceptual activities that are required in order to transform (perceive, select, organize, integrate, etc.) information and act upon it. The content and structure of the program is used as a vehicle to promote process rather than the process being used to promote content. The difference is more than semantic. The former requires a structure that will create the appropriate antecedent conditions to occur with the emphasis placed on having participants talk about how they perceive the content, how it fits with their own self-concept, their goals, their ideals. Anxiety, level of self-esteem, locus of control and the other variables identified as distinguishing

the decided and the undecided are then considered as part of the process and dealt with as appropriate within the group setting.

The program was designed and conducted in such a way that the major emphasis was on the process. The workshop, which included homework assignments, was designed to provide maximum class time for participants to talk about the exercises, what information they gained from completing the activities, and how they saw that information being used in their own lives. On the evaluation cards completed at the end of each session, under the heading "What did you dislike about tonight's session?", two kinds of items emerged. One, a housekeeping type of comment that covered things like the temperature of the room, or the timing of the coffee break; the other comments reflected a concern with a lack of time, such as the following:

- . not enough evenings in workshop. Cramming but maybe that's wise since it gets you cracking.
- . lack of time. It was such an interesting session, I wish it could have been longer.
- . how time went so quickly.
- . there always seems to be not enough time.
- . the time limit although I realize it is essential.

These comments seem to reflect a feeling that the time spent during the sessions on talking about how the exercises were done and their meaning to each was considered to be an important element of the program. No comments that would suggest dissatisfaction with having to do assignments out of class time were made, nor were any suggestions made that we might better have spent the time in class actually doing the assignments.

The group leaders concentrated their efforts on helping participants specify and clarify their statements and process the information they had gathered. Questions and statements by the group leaders not only centered on the four basic questions hypothesized by Janis and Mann (1977) to be instrumental in moving people toward a state of vigilance, but also on areas that would help the participants integrate the content in a way that was meaningful to them. Some examples of the type of process questions or statements used by the group leaders were:

- . How would you feel about not having that criteria met?
- . What kinds of things do you see happening if you achieve that goal?
- . What does being challenged in your work mean to you? What kinds of things have to happen in order for you to feel challenged?
- . What is it that keeps you from doing.....?

Evaluation of Program Fidelity to the Model

Janis and Mann (1977) offered a descriptive model of how individuals make decisions in a situation where the consequences are of such importance that anxiety and stress are generated to a degree that vigilant information processing may not occur. Recognizing that choosing a career is, for many people, a conflict situation, and that anxiety and stress associated with this type of decision may result in defective decision-making activities, the task was to translate the descriptive model concerning vigilant information processing into a prescriptive model. Janis and Mann in effect are saying that when individuals are in state of vigilance, they pose certain questions to themselves, and an affirmative response to these questions fosters a thorough search and evaluation. The

program, then, in turning the descriptive into a prescriptive mode, poses those questions to the participants and presents activities which will foster the affirmative answers required.

Since Janis and Mann are presenting a process, and since the CDM program purports to teach a career decision-making process, evidence that this process has indeed occurred can be obtained from an examination of the kinds of comments made by the participants as they worked through the program.

Exemplary comments from the evaluation cards were presented in Chapter 5.

Question 1: Do I need to make a career decision because there is risk of serious loss if I don't?

Statements garnered from sessions 1 and 2 did reflect comments that suggest that for some of the participants this first question was answered positively. This was probably not the case for the two participants who dropped out by session four. One, a young woman who had a work history of short employment since leaving high school (jobs of one to six months in duration), came to the workshop with her sister. While the sister attended the sessions and successfully completed an action plan by the six-week follow-up, the drop-out did not appear to be dissatisfied with her work pattern. Her plans initially were to continue in this pattern of short term employment and this orientation did not change. This may have been reason for her discontinuing the workshop.

The other early drop-out could not be contacted as to his reasons for leaving. Initially he appeared to be committed to

taking the workshop, and said that it was important for him to leave the kind of work in which he was presently employed. However, from his low level of group interaction with other members, and his reluctance to participate during the class sessions, the conclusion was drawn by the group leaders that he left because of the framework of the program which promoted active inter-member sharing and interaction.

The decision to use a group counselling format for this program was taken not only in recognition of the more efficient use of counsellor time, but primarily because it was perceived to be the best method to conduct a process oriented program. The group counselling format promotes discussion among the group members, and the opportunity to receive input from a wide variety of sources. In addition, the concerns, issues, and possible solutions that are articulated by one member serve as a model and a catalyst for others in the group. Many of the evaluation comments received after the first session centered around universality, the feeling that they were not alone in being confused about their career paths. The recognition that others share a similar problem and have similar feelings of confusion, anxiety, etc., helps not only to reduce anxiety but also creates group cohesiveness which contributes to the members' sense of commitment to the group and to the process.

Janis and Mann hypothesize that the second question, "Are the risks serious if I do change?" must be answered "yes" or "maybe" in order for a decision-maker to conduct a thorough search and

evaluation of existing alternatives. Failure to answer this question affirmatively would leave the individual accepting the first alternative that appeared to solve the dilemma.

Most of the participants in the workshop were not at a stage when they began where they had identified one alternative or course of action they wished to take and were only trying to decide whether to accept that choice. The two main reasons given by the participants for taking the course were "to find out what I'm suited for or what I'm interested in" and "to find out what my goals are." Thus, the possible short circuiting of the entire process of decision-making (which would occur if the participants did not consider a number of alternatives) was not as much of a factor initially as it might be in other decision situations where one alternative is clearly available. The comments in the first few sessions do not provide strong evidence that the participants were holding back from accepting an obvious alternative in favor of finding more information. This does not necessarily indicate that this question or issue does not arise, but that in this case the participants were initially desirous of considering a number of options. The willingness to consider more than one alternative was more clearly shown by the participants' behavior in researching information on various alternatives than by any comments that would reflect the idea that acceptance of the most salient alternative may also lead to loss or high risk. Thus, evidence that this question does arise and is affirmatively answered is not clear; however, the actions of the participants in searching out and evaluating alternatives would suggest that, for this group at least, there was an implicit

desire to consider a number of alternatives, and the program did provide the motivation and information necessary for them to pursue additional information.

The third question "Is it realistic to hope to find a better solution?" was evidenced by participants expressing hope and confidence that they were finding appropriate information and alternatives. Using Yalom's (1975) terminology when he discusses curative factors in group counselling, this question seems to reflect instillation of hope. The comments reported after sessions 2, 3, 4, 5, and 6 reflect generally a feeling that they are on the right track and that they will be able to achieve their goal. Yalom says that "the instillation and maintenance of hope is crucial in all of the psychotherapies; not only is hope required to keep the patient in therapy so that other curative factors may take effect, but faith in a treatment mode can in itself be therapeutically effective." (p.6). It would appear that the comments do reflect a feeling that it is realistic to hope to find a solution, and that this feeling is a very important element in having participants reach and maintain a state of vigilance. There does appear, then, to be evidence that participants experienced the feeling of its being realistic to hope to find a better solution, and thus, answered the third question "yes".

If some support is found for the existence that instillation of hope has indeed occurred, and that participants are saying, at least implicitly, that it is realistic to hope to find a solution,

then the question arises as to what conditions were in effect to create that atmosphere. Research on anxiety and career decision-making has identified anxiety as being characteristic of those who are undecided, and one program (Mendonca and Seiss, 1976) was designed to teach clients anxiety management and problem-solving skills in order to be able to make career decisions. They hypothesized that "vocational indecision may result from cognitive problem-solving operations that are lacking or inhibited by anxiety" (p. 339), and their approach was to present clients with a method of coping with anxiety in order to facilitate vocational decision-making activities. Janis and Mann are also cognizant that stressful and anxiety producing situations reduce cognitive functioning and result in defective decision-making patterns. Yalom comments however, that "information decreases anxiety by reducing ambiguity" (p. 94), and goes on to say that "unless an individual is able to order his world cognitively, he may experience anxiety, which, if severe, interferes with the perceptual apparatus. Thus, anxiety begets anxiety; the ensuing perplexity and overt or subliminal awareness of perceptual distortion becomes itself a potent secondary source of anxiety" (p. 95). He also comments earlier, in connection with a study of effective change agents in group therapy, that, "no matter how the data was approached, cognition was clearly seen to be an essential cog in the gears of change." (p. 76).

Rather than following the approach of Mendonca and Seiss and attempting to reduce anxiety by teaching anxiety reducing techniques

this program, following Yalom's approach, attempted to remove debilitating anxiety by removing the ambiguity in the task. The task of decision-making is broken down into small, easily managed units, and information is given or identified as required.

It is logical to assume that a high degree of anxiety would not co-exist with a feeling that a better solution could be found. The comments that support the contention that participants did feel that they would be able to effect a good solution then, by analogy, also reflect that the anxiety present was not of such a degree as to be maladaptive and move people into a defective decision-making pattern.

Anxiety did become more pronounced, as evidenced by some comments in sessions 6 and 7 as the time for the conclusion of the workshop drew near, and the fourth question "Is there sufficient time to search and evaluate a better alternative?" became an issue. Although participants were told at the beginning that the purpose of the workshop was to teach them the process of career decision-making which they could apply to their own career situation, some comments made in sessions 6 and 7 indicated a concern over there not being enough time in which to select a suitable alternative.

For one participant who dropped out in session 5 because she obtained employment (during evening hours that conflicted with the workshop time), this last question was possibly answered "no". Although she indicated that she would have wished to continue the course, her economic situation was such that immediate employment was of greater concern and necessity than finding the most

appropriate career. The comments, plus the drop-out due to employment, would indicate that people do pose the question of "Have I sufficient time to make a decision?" however, the relatively small number of comments could indicate that they did not see this as a major concern.

The focus of the program was to teach a process; nevertheless, the final evaluation of process lies in evaluating outcome. It is extremely difficult to select outcome measures that adequately reflect whether or not a "good" decision has been made. Looking at outcome only, especially if the successful outcome is framed in terms of obtaining employment in the field of one's choice, leads to situations where an individual is unsuccessful not due to a poor decision but due to factors outside of his/her control. At the other extreme, looking only at outcome could also result in a situation where an individual obtains employment after having used a defective decision-making pattern, but the employment is satisfactory and it appears that a "good" decision has been made. The problem with this latter case is that the individual may be no better equipped to make a good decision the next time it is necessary to make one, and the defective decision-making pattern used may result in a far less fortuitous outcome.

The emphasis on teaching process is one that stresses skill acquisition. By presenting participants with a clearly defined model of the steps involved in good decision-making, and by providing them with an opportunity to experience this process -- that

is, learn the questions to ask and how to integrate the information acquired, they should be better able to translate that skill into any situation that has consequential results.

Evaluation of Program Effects on Teaching Career Decision-Making.

In order to assess the extent to which this program had proved effective in teaching the process, behavioral outcome activities were formulated. Janis and Mann (1977) had identified the characteristics of good decision-making and these criteria were adopted as being capable of providing evidence that the process was generating a thorough search and evaluation.

The program was designed so that the majority of criteria would be met if the participants completed the exercises. Most of the exercises were given as homework, that is, to be completed outside of class time. Time in class was spent in providing a rationale for each activity, explaining how it was to be done, and answering any questions. The bulk of class time, however, was spent in having the participants talk about the completed exercises. The task of the two group leaders was to help the participants clarify and specify their responses. All the participants came to the session having at least attempted to complete the exercise. Through their interaction with the group leaders and with one another, they added to or modified their responses until they were completed to their satisfaction.

It became obvious, however, that with some of the participants in this group, as well as participants in the piloting groups,

that a career choice was not the most important decision that they faced at this time. This became obvious when they wrote out the decision statement "To choose the best" after having done the exercise on goal setting. The three individuals who chose a decision statement other than one directly career related were people who were experiencing some sort of personal conflict in their lives, and were looking for solutions to that kind of problem. It appeared, from their progress through the group, that they initially attributed some of their dissatisfaction to their jobs; however, in working through the activities, they began to see that the major source of dissatisfaction was not the employment but their feelings about themselves, their social network and the quality of their present relationships. The method employed with these individuals was to have them work at two decision statements, one of them being the career statement, in order to learn the process so that they could apply the same process to their second, personal decision statement in another domain. Individuals taking the workshop formed an implicit contract with the group leaders that the content and purpose of the workshop was to teach and facilitate career decision-making. The group leaders and this author were disinclined to change the nature of the contract by changing the group into a personal growth group or a personal problem-solving group, although it became obvious that for at least two of the participants personal counselling would be beneficial. In cases where it appeared that personal counselling would be beneficial, participants were given the names of agencies where they could apply for professional counselling.

The interrelationship between one's life on the job and outside the job is a close one, and often it is difficult to distinguish whether dissatisfaction with a job creates dissatisfaction with an individual's feelings about the self outside of the job, or vice versa. Both possibilities presented themselves with the participants enrolled in the program. Those who went on to formulate action plans that were directed toward a career change seemed to be those who attributed their dissatisfaction to their present employment. While this may seem to be an obvious conclusion, the implications underlying this are worthwhile noting. The assumption underlying agency programs offering career counselling would appear to be that individuals seeking this kind of assistance are, in fact, trying to make a career decision. Judging from the types of individuals who seek career counselling services at Alberta Career Center, however, it appears that a number of them have problems of a different nature that they seek to alleviate by making a career change. Adequate career counselling then, at least for those making use of ACC services, would imply a program that helps people separate sources of dissatisfaction and avoid the trap of trying to solve one problem by applying a solution which is appropriate for a different problem. By concentrating on teaching individuals the skills involved in working through the process of CDM two things are accomplished. First, individuals acquire skills that may be used for any major decision-making activity, and second, working through the CDM process requires the setting of goals and careful examination of one's entire life situation, thus permitting .

an analysis of what problem areas need to be addressed first.

There is some evidence, then, in terms of the participants having met the behavioral criteria that were formulated as providing evidence that a pattern of vigilance was being employed, that the program "Deciding Tomorrow Today" does teach adults a process of decision-making.

Measurement of Effects due to Treatment.

The program was attended by adults who self-selected into an advertised course on career decision-making. While random selection of participants was not possible, random assignment of subjects into experimental and wait-list control groups was carried out. In order to supplement the assumption underlying the use of parametric statistics, a pre-test on the POI and DMS was carried out on all subjects prior to the first session with the experimental group. This information is presented in Table 7.

Random assignment of subjects into the two groups resulted in two equivalent groups except on the dimension measured by scale 1 of the DMS. Both groups, however, scored on the "agree" end of the scale, with the control group scoring closer to the "strongly agree" position. The assumption is then, that with the exception of scale 1 of the DMS that any differences found after treatment between the groups on the instruments can be attributed to program effects.

Hypothesis 1 (in the null form) stated that there will be no differences after treatment between the experimental and wait-list control group on the "I" scale of the POI. This hypothesis was rejected $p < .001$). The experimental group increased their

TABLE 7

Analysis of Scores Obtained by Experimental
and Control Groups on the POI and DMS at Pre-Test.

Group (1)	Scale	Mean	S.D.	t-value	Level of Probability
E	"I"-POI	78.05	10.88	.98	.33
C	"I"-POI	74.80	7.42		
E	1-DMS	10.76	2.81	2.34	.02*
C	1-DMS	8.66	2.16		
E	2-DMS	10.17	2.09	- .15	.88
C	2-DMS	10.33	3.67		
E	3-DMS	14.58	3.24	- .54	.59
C	3-DMS	15.20	3.16		
E	4-DMS	15.05	3.38	1.13	.26
C	4-DMS	13.80	2.83		
E	5-DMS	12.82	2.21	- .53	.60
C	5-DMS	13.20	1.74		

(1) Group E = experimental C = wait-list control

*
p < .05

I (inner directedness) score more than the wait-list control group.

It might reasonably be hypothesized that, following Yalom's assertion that "information decreases anxiety by reducing ambiguity" (1975, p. 94), that with the reduction in ambiguity comes an increase in a sense of personal control. The program, by presenting a highly structured format in terms of procedures, along with considerable time to process the information arising from the activities, allowed the participants to reduce the ambiguity for themselves, gain a sense of direction, and hence, personal control. This is reflected by the post-treatment scores on the POI.

The exact nature of the relationship between anxiety and inner-directedness is not known, but again, it seems logical to deduce that at least one cause of anxiety may be the feeling that one has no control over one's life, that primary reactions are in response to the wishes, desires and opinions of others. The characteristic of other directed (as opposed to inner directed) persons, according to Shostrom is fear or anxiety (1968). Whether there was a reduction in anxiety accompanied by an increased measure of inner directedness or whether an increased measure of inner directedness resulted in decreased anxiety cannot be answered with any certainty.

Hypothesis 2 (in the null form) stated that there will be no difference after treatment between the experimental and wait-list control groups on scale 1 of the DMS.

Scale 1 was constructed to try and tap attitudes revolving around the questions that Janis and Mann hypothesize that people pose when faced with a consequential decision. Scale 1 assesses the degree to which participants believe that it is important and/or

possible to make a career decision.

The structure of the DMS required the participants to respond strongly agree (1), agree (2), undecided (3), disagree (4), or strongly disagree (5). Strongly agree or agree (or in cases where the items were reversed to avoid a response set, strongly disagree or disagree), responses were considered to reflect the participants' belief that these items were important, and thus, the lower the means, the greater the degree to which the participants would indicate that the categories were important to them.

The groups did not differ significantly on this variable at the pre-test, and (Table 7) at the post-test. Because of the pre-test difference, no conclusion about the effects of the treatment can be made. It should be noted, however, that it is likely that this variable reflects a pre-treatment attitude. It would be logically expected that people who self-select into a CDM program do think it is important for them to make a career decision. Scale 1 of the DMS might be useful in cases where a "captive audience" (such as might exist in a high school group guidance class) is exposed to career decision-making by identifying those who do not feel that the information will be of use to them.

Hypothesis 3 (in the null form) stated that there will be no difference after treatment between the experimental and wait-list control groups on scale 2 of the DMS. The null hypothesis was accepted.

Scale 2 assesses whether individuals believe it is important to consider a number of alternatives and their willingness to

search out suitable alternatives. There was no significant difference after treatment on this scale between the experimental and control groups, both groups indicating that they agreed it was important to search out a number of alternatives. Since both means were on the agree and strongly-agree side, reflecting a positive approach and willingness to consider a variety of options, a significant difference between the two groups would be less likely to occur. What this may reflect, is that individuals who self-select into a CDM program are the kinds of people who, in fact, are willing to consider a number of alternatives. As with scale 1, if this were not the case, it is unlikely that they would expose themselves to a program that would have them search out various alternatives. It does not appear, however, that the program had any effect on increasing their willingness to search out alternatives.

Hypothesis 4 (in the null form) stated that there will be no difference after treatment between the experimental and wait-list control groups on scale 3 of the DMS. The null hypothesis was rejected $p < .005$).

Scale 3 attempts to determine whether or not it is realistic to hope to find a better solution. It appears that after the program the treatment group felt to a greater degree than did the control group that it was realistic to hope to find a better solution. This attitude possibly reflects in part the "instillation of hope" created by experiencing the support of a group environment, and the feeling of personal control engendered by creating attainable action plans for themselves.

Hypothesis 5 (in the null form) stated that there will be no difference after treatment between the experimental and wait-list control groups on scale 4 of the DMS. The null hypothesis was accepted.

Scale 4 deals with the question, is there sufficient time in which to search and deliberate? The results of this scale approached significance ($p < .08$) but did not reach the .05 level of significance. This scale had the highest mean of all the DMS scales for the experimental, and for the control group. (Table 5) The results indicated that neither group appears to be in extreme state of "hypervigilance" where they would select any alternative so as to solve the problem. Results here again, however, reflect the control group's ability to wait the four weeks until the program was available to them. It is possible (and maybe probable) that the participants who did not come to the October workshop did not feel that they had that length of time to search and deliberate on suitable alternatives. Had it been possible to administer the DMS to the total group of people who were initially in the wait-list control group, there may have been a significant difference.

The larger mean score for this scale as compared to the other scales for the control group may reflect a feeling of "wanting to get on with it", of having felt that they had taken sufficient time already and were now in a position to act, or perhaps a feeling of anxiety that time was drawing short and a decision had to be made in terms of their own financial or economic situation. The cause

for this score being slightly higher cannot be answered by the data at this time.

Hypothesis 6 (in the null form) stated that there will be no difference after treatment between the experimental and wait-list control group on scale 5 of the DMS. The null hypothesis was rejected.

Scale 5 deals with the question "Do I have enough information on which to make a career decision?" The two groups differed at a level of $p < .002$ on this category, with the experimental group perceiving that they had sufficient information and were aware of the kinds of information required in order to make a career decision. It appears that the program had an effect, then, on increasing people's perception of the kinds and amount of information needed for career decision-making.

One of the problems not anticipated when the DMS was drawn up was that not all the participants in the CDM workshop would be primarily concerned with making a career decision. Although the instructions indicated that the statements on the DMS referred to attitudes about career decision-making, not all statements specifically referred to career. It is difficult to know whether those who were not primarily interested in a career decision answered the questions as they would apply to a career decision or whether they separated general decision-making attitudes from specifically mentioned career decision-making attitudes.

Although the instrument does distinguish the groups on two

dimensions where it would be expected that treatment would have some effect, it does not distinguish treatment effects on three scales. This may be due to the nature of the groups in that the participants self-select into the program, and the first scale at least attempts to tap pre-treatment attitudes, or because treatment did not significantly affect attitudes toward searching out alternatives and having sufficient time in which to make a decision.

Hypothesis 7 (in the null form) stated that there will be no difference on the I scale of the POI for the experimental group between scores obtained at a 6-week follow-up and at post-test. The null hypothesis was rejected. ($p < .007$, Table 6).

The means indicate that after 6 weeks, the experimental group continued to increase their scores on inner-directedness. The follow-up measures were used to see if gains that were made were maintained over time as well as to try and detect whether the post-test measures were merely reflecting what has been referred to as "the rosy glow of termination". The increase of the I score on the POI toward greater inner-directedness after 6 weeks might be attributed to the formation of action plans by the participants. It is likely that an adaptive spiral was created. Participants formulated concrete, achievable steps, considered possible problems that might arise in seeing these steps through to completion with accompanying alternative actions to meet the problems, set time lines for themselves, and established a reporting procedure with at least one other group member. At the follow-up, 60% of the participants had completed all the action steps they had set for

themselves, and in terms of the total number of steps that had been set, 74.5% of them had been achieved. Here again, the question of whether accomplishing the action plan increased the level of inner directedness or whether the level of inner directedness evident at the post-test period enabled the action plans to be completed cannot be answered with any assurance. However, the fact that the I scores increased over the six week period would point toward accepting the view that accomplishing the action steps contributed to a greater sense of inner directedness.

Hypothesis 8 (in the null form) stated that there will be no difference on scale 1 of the DMS for the experimental group between the scores obtained at a 6-week follow-up and at post-test. The null hypothesis was accepted.

The experimental group entered the program with basically an "agree" position on scale 1, held that position throughout the program and maintained it over the 6-week follow-up period. There is no reason to expect that people entering the program with an "agree" position and having maintained that position through the course of the program would change in the direction of "undecided" or "disagree" after six weeks.

Hypothesis 9 (in the null form) stated that there will be no difference on scale 2 of the DMS for the experimental group between the scores obtained at a 6-week follow-up and at post-test. The null hypothesis was accepted.

As with scale 1, the experimental group entered the program with basically an "agree" position on scale 2, and maintained that

position up to the 6-week follow-up. The possibilities for change were either toward the "strongly agree" position or in the other direction toward "undecided" or "disagree" end of the scale. In any program attempting to foster attitudes, the hope is two-fold: one, that the attitudes identified will in fact manifest themselves either as being currently there or acquired as a result of the treatment; and second, that at the least, participants will continue to manifest those attitudes. One of the purposes of the follow-up testing was to provide some indication that after time, negative results would not appear (in terms of the variables tested).

Hypothesis 10 (in the null form) stated that there will be no difference on scale 3 of the DMS for the experimental group between the scores obtained at a 6-week follow-up and at post-test. The null hypothesis was accepted. At the end of the program, there was a significant difference between the experimental and control groups (Table 5), with the experimental group having the lower mean. This change in thinking that there was reason to believe that a satisfactory solution could be found maintained itself over the six weeks following the program.

Hypothesis 11 (in the null form) stated that there will be no difference on scale 4 of the DMS for the experimental group between the scores obtained at a 6-week follow-up and at post-test.

Scale 4, dealing with the belief that there is sufficient time to search and deliberate, did differ significantly ($p < .009$) with the follow-up means lower than the post-test mean, indicating

that after six weeks, the experimental group increased significantly in their belief that they had sufficient time to search and deliberate. Since 60% of the participants had completed their action steps and had arrived at a decision they were satisfied with, this change may, in fact, reflect a lack of time pressure due to having arrived at a decision.

Hypothesis 12 (in the null form) stated that there will be no difference on scale 5 of the DMS for the experimental group between the scores obtained at a 6-week follow-up and at post-test. The null hypothesis was accepted. As with the results arising from hypotheses eight, nine and ten, the scores did not differ significantly over the six weeks following the program.

The results from this instrument, however, should be treated cautiously as this instrument is previously untried, having been constructed for the purpose of this study. The means on the various scales for both the experimental and wait-list control groups tend to lie on the "agree and strongly-agree" end, reflecting that at least for the adults who came into this program, the attitudes they hold are those that would predispose them toward a thorough search and evaluation. It may be that this instrument could discriminate between those that have attitudes that facilitate a thorough career decision-making process from those who do not, if it were given to other than a group of people who self-select into a career decision-making workshop. If this did indeed prove to be the case, then this instrument could be used as an initial screening device to aid the counsellor in determining the types of activities that needs to be carried out in order to bring about the attitudes that would

foster a pattern of vigilance.

The Program Evaluation Form (PEF, Appendix C) was administered to the experimental group at post-test and again at follow-up. A t-test was conducted on the items, and those items which reflected a change at $p < .05$ level were reported (Table 3). Items 8, 11, 13, 14, 15, 16, 17, 18, 19, 20, and 23 were constructed to assess the participants' feelings about the benefit of the course in terms of their goals. The remaining items were designed to assess the participants' feelings about the leaders and the group environment.

All the means, both at post-test and follow-up were below 2.1, indicating a very positive evaluation of the program. The majority of items did not reflect a significant difference at the six-week follow-up. Those that did are as follows:

2. The leaders regarded my concerns as being of real importance to me
5. The explanations given by the leaders were clear and direct
10. The leaders were very accepting of me
12. The group members were very accepting of me
23. The course was really thorough in helping me explore my own alternatives.
24. The leaders seemed knowledgeable about career decision-making.

As noted earlier, however, the means on all items were below 2.1, and while a difference over time was observed on the above items, their means still reflected an "agree" disposition. In addition, the items, with the exception of 23, reflected the participants' feelings about the work of the leaders. The items that reflected

feelings about the course and its objectives did not differ, again with the exception of 23.

It is difficult to know why 23 would have differed from post-test to follow-up. One explanation may be that by the end of six weeks, the number of alternatives generated during the course had been evaluated and reduced and one finally selected so that the participants no longer had the same number to explore. That is, if the exploratory phase had ended for a number of them, the change in opinion may reflect a lessening in importance for this element of the process.

The change in attitudes about the leaders' performance probably reflects a lowering of the emotionality common to group termination, although here again it is difficult to assess why only some of the items reflecting leader behavior differed significantly. The overall trend was for the means for nearly all items to rise slightly; however, the follow-up means still reflected a positive view toward the leaders and the program.

IMPLICATION FOR FURTHER RESEARCH

The purpose of this study was threefold: to design a career decision-making program based on a theoretical model and to ascertain whether the program accurately translated that model; to determine whether the program is effective in teaching the process of career decision-making; and finally to determine, by comparing a treatment group with a wait-list control group if it was indeed the program which played the major role in having people learn the process.

By focusing on defining and identifying the process involved

in decision-making rather than on the outcome, a necessary first step in vocational counselling can be achieved. It seems somewhat anticipatory to operate on the assumption that if people are unable to make career decisions after exposure to a program that the reason may lie in the psychological realm -- anxiety, poor self-concept, etc. These factors may indeed be operational; however, the assumption that they may cause career indecision is better made after the counsellor has some evidence that the individual knows the process and that it is not lack of knowledge that prevents a career decision from being made.

The evidence in terms of the participants' comments suggests that individuals who successfully complete a thorough search and evaluation of alternatives, and thus go through the decision-making process in a state of vigilance do pose the kinds of questions that Janis and Mann (1977) hypothesize as the mediating cognitions that effect good decision-making. Further, in terms of behavioral objectives formulated as providing evidence that the process has been reliably followed, the behaviors of the participants supports the idea that the program "Deciding Tomorrow Today" does promote the process of good decision-making.

This study has been but an initial attempt to develop a program based on a theoretical model. The program was designed for adults who seek out the services of Alberta Career Center. Further research is needed to indicate whether the program would be effective for other types of populations (for example, students in career

guidance classes). Further use of the DMS used in conjunction with this program with different populations may also provide some information as to the ability of the instrument to discriminate between the motivated versus non-motivated (scale 1); between those who may prematurely close off alternatives versus those who are open to considering a number of alternatives (scale 2); between those who believe it is possible to find an acceptable career choice versus those who do not think so (scale 3); between those who feel they have sufficient time to search and deliberate versus those who may be in a state of hypervigilance (scale 4); and finally between those who are willing to look for appropriate information versus those who do not know what information they may need.

The nature of the model is such that investigation of its usefulness for decision-making is confined to real situations where the decision has important consequences to the decision-maker. This is not to say, however, that it may not provide a useful teaching tool for people who wish to learn the process for later use. While a field study may be somewhat looser than a controlled laboratory experiment, the potential gains from examining how people actually made decisions of importance to them are high.

While the material presented to date does not suggest that this is the most efficient or effective way to teach a decision-making process to adults, there is enough evidence to suggest that further investigation into the model is warranted, perhaps with more emphasis on looking at defective decision-making patterns,

their antecedent conditions and accompanying cognitions. This may result in an increased understanding of why people do not make good decisions when the outcomes are so clearly of importance to them. Further research comparing this program with other approaches to teaching career decision-making may reveal the extent to which this program is effective in terms of the generally recognized goals of CDM programs.

Finally, it is unclear at this point to what extent the program was effective as opposed to the effectiveness of the group leaders, and whether the group approach involving intragroup interaction between both members and leaders is more effective than having an individual work through the program with a counsellor in a one-on-one situation.

It is this author's contention, however, that if gains are to be made, both in terms of understanding how people make career decisions and how good decision-making can be taught, then the approach must start by examining the theory underlying the program, seeing that the theory is accurately translated by the program, and then by examining the program effects themselves in terms of the process which the program claims to teach.

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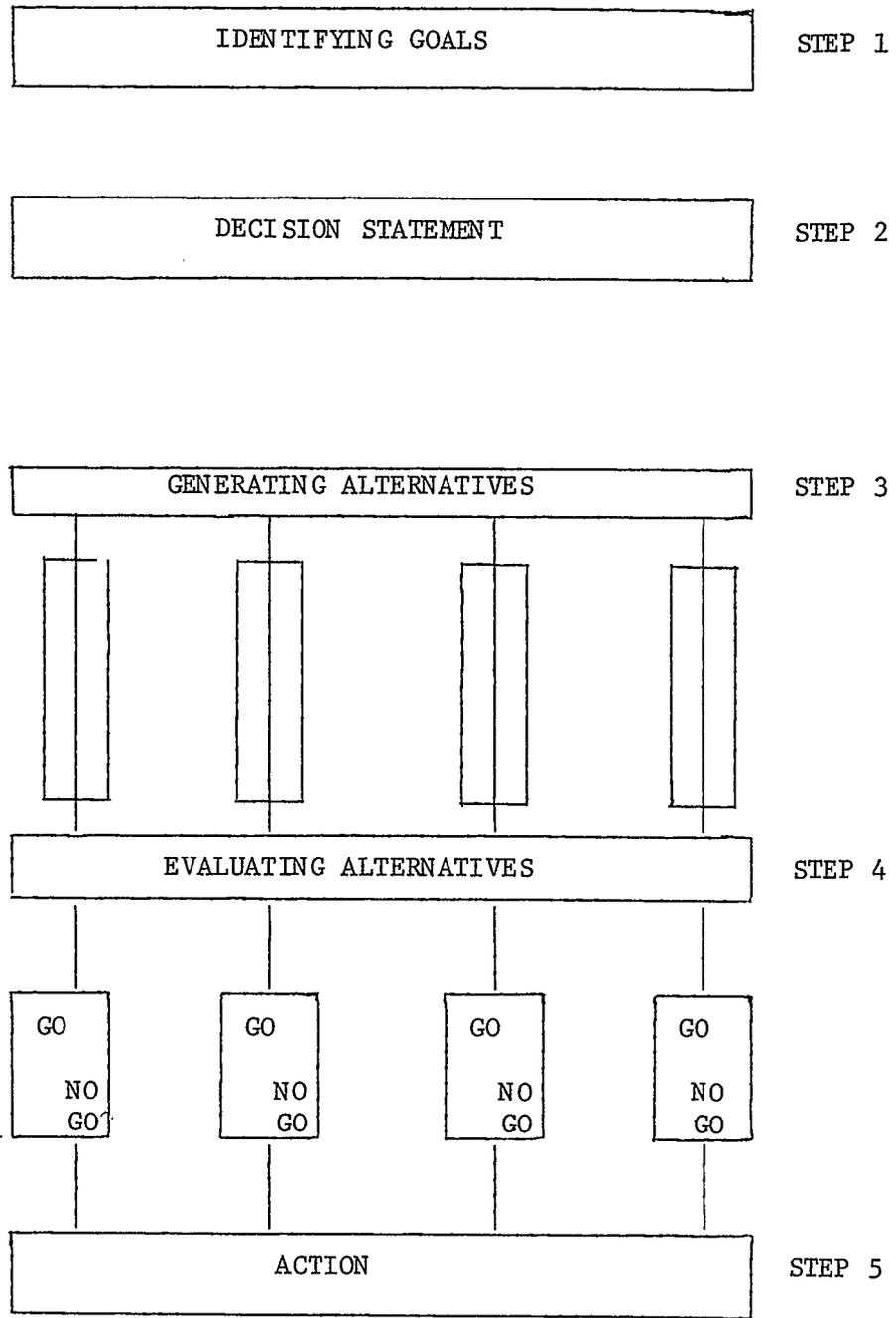
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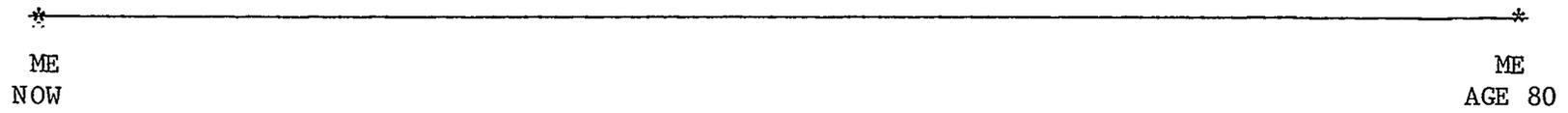
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APPENDIX A
EXAMPLES OF PROGRAM ACTIVITIES

MODEL FOR CAREER DECISION-MAKING



LIFE LINE



SIGNIFICANT OTHERS

INSTRUCTIONS

1. Put your name in the center of page 8. You may wish to identify yourself by a square, triangle, circle, or any other shape, or perhaps by using different colors. (See page 9 for an example.)
2. Place the names of those people, past or present, that are important to you. You may see them as either a positive or negative influence in your life.
3. You may wish to indicate their closeness to you by the distance you place them from your own name.
4. After you have put down the names (or initials), think of a phrase, (a saying, a proverb) that you associate with that person or that you can remember hearing them say, and place that saying next to the name.
5. There is no one best way to do this - the example on page 9 is one way that it can be done. Design the sheet so that it is meaningful to you.

"Transferable Skills"

This column if you want to use this skill on/in a job	This column if you want to pick up this skill from scratch	This column if you want to polish up this skill some more	This column if you are now using this skill in your job
---	---	---	--

LIST A

_____	_____	_____	1. assembling	as with kits.	_____
_____	_____	_____	2. constructing	as with car- pentry, etc.	_____
_____	_____	_____	3. or building		_____
_____	_____	_____	4. operating tools	as with drills, mixers, etc.	_____
_____	_____	_____	5. or machinery	as with sewing machines, etc.	_____
_____	_____	_____	6. or equipment	as with trucks, stationwagons etc.	_____
_____	_____	_____	7. showing manual or finger dex- terity.	as with throwing, sewing, etc.	_____
_____	_____	_____	8. handling with precision and/or speed.	as with an as- sembly line, etc.	_____
_____	_____	_____	9. fixing or re- pairing.	as with autos or mending etc.	_____
_____	_____	_____	10. other		_____

LIST B

_____	_____	_____	11. muscular coor- dination	as in skiing, gymnastics, etc.	_____
_____	_____	_____	12. being physically active	as in exercising hiking, etc.	_____
_____	_____	_____	13. doing outdoor activities	as in camping, etc.	_____
_____	_____	_____	14. other:		_____

GOAL	WHAT I HAVE BEEN	WHAT I AM NOW	WHAT I AM ABLE TO DO	WHAT I WANT TO DO	WHAT I NEED TO DO	WHAT I AM GOING TO DO	WHAT STANDS IN MY WAY
1. PHYSICAL							
2. EMOTIONAL							
3. MATERIAL							
4. OCCUPATIONAL							

STRENGTHS

- 1. PERSONAL STRENGTHS

- 2. APTITUDES/ABILITIES

- 3. MATERIAL RESOURCES

- 4. PERSONAL SUPPORT SYSTEM

- 5. PROFESSIONAL SUPPORT SYSTEM

- 6. Education/CERTIFICATION/
PREVIOUS EXPERIENCE

CONSTRAINTS

constraints

actions to remove, modify or
cope with constraint

1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

EVALUATING ALTERNATIVES

DECISION MAKING STATEMENT: TO CHOOSE THE BEST _____

WHAT I WANT
TO OBTAIN

ALTERNATIVE A

ALTERNATIVE B

IDENTIFY CHANCE TOTAL IDENTIFY CHANCE TOTAL

WHAT I WANT TO OBTAIN	WEIGHT:	ALTERNATIVE A			ALTERNATIVE B		
		IDENTIFY	CHANCE	TOTAL	IDENTIFY	CHANCE	TOTAL
GOALS:							
VALUES:							
INTERESTS:							
SKILLS/ABILITIES:							
OTHER:							
NON-NEGOTIABLE CONSTRAINTS:							

GO/NO GO _____ GO/NO GO _____

ACTION PLAN

WHAT I AM GOING TO DO WHEN I LEAVE HERE

STEPS	DATE	WHO ELSE?
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

WHAT MIGHT GO WRONG?

WHAT CAN I DO ABOUT IT?

APPENDIX B
PARTICIPANT INFORMATION FORMS

PARTICIPANT INFORMATION SHEET FOR CAREER WORKSHOP

NAME: _____

SEX: _____ AGE: _____ MARITAL STATUS _____

ADDRESS: _____

PHONE: _____ WORK _____

PRESENT OCCUPATION: _____

HIGHEST EDUCATION LEVEL ACHIEVED: _____

PREVIOUS EMPLOYMENT HISTORY (list all employment of 6 months duration
or more.)

PART-TIME/VOLUNTEER WORK (list any part-time or volunteer work that
you have done in the past 5 years).

WORKSHOP ORIENTATION SHEET

NAME: _____

1. Why did you come to this workshop? (select the ones that apply, and number in order of importance, with one being most important).

_____ to find a job

_____ to learn how to make decisions

_____ to put some direction into my life

_____ to find out what I'm suited for or what I'm interested in

_____ to find out what my goals are

_____ it was recommended to me

_____ other (please state) _____

2. What is your present job? _____

3. Do you want to leave the job you are now in? _____

4. What do you dislike about this job? _____

5. What do you like about this job? _____

6. What made you take this job in the first place? _____

7. What alternatives are there to staying in your present job? _____

8. Does this present job meet any of your long or short term goals?
How?

9. What do you think will happen to you if you don't change your present job? (How will you feel, how will it affect your lifestyle?):

10. What do you hope will happen if you do change your present job?

11. How important is it for you to change your present job? _____

12. What have you done to date about changing your present job? If nothing, what has stopped you?

APPENDIX C
DMS AND PEF

NAME:

(Please Print)

DECISION-MAKING SCALE

On the following pages is a list of 30 statements that refer to career decision-making. Please read each statement carefully and decide whether you strongly agree with the statement, agree, are undecided, disagree or strongly disagree.

Please circle the number which you believe best fits the statement.

1 - strongly agree, 2 - agree, 3 - undecided, 4 - disagree, 5 - strongly disagree.

Statements	Strongly Agree (1)	Agree (2)	Undecided (3)	Disagree (4)	Strongly Disagree (5)
1. I seldom think about the career I want to enter.	1	2	3	4	5
2. It is important to consider a wide variety of alternatives when making a career decision.	1	2	3	4	5
3. I weigh the outcome of various alternatives before I make a decision.	1	2	3	4	5
4. When I've chosen an alternative I have a hard time carrying it through.	1	2	3	4	5
5. I know how to find information which will help me make a decision.	1	2	3	4	5
6. As far as I'm concerned luck is the most important thing in deciding what career I will choose.	1	2	3	4	5
7. There are so many alternatives to choose from that it is better just to ignore them and take the first one that comes along.	1	2	3	4	5
8. I know about and consider the possible results, good and bad, of each possible alternative to my decision.	1	2	3	4	5
9. There is no use in making plans to carry out a decision because there are too many things that can happen to change the situation.	1	2	3	4	5
10. What you want out of life is the most important thing to consider in making a career decision.	1	2	3	4	5

Statements	Strongly Agree (1)	Agree (2)	Undecided (3)	Disagree (4)	Strongly Disagree (5)
11.. I'm not going to worry about choosing a career since you don't have anything to say about it anyway.	1	2	3	4	5
12. When making a decision I look at many different possible alternatives.	1	2	3	4	5
13. There are so many alternatives to choose from in considering a career that I wish somebody would just tell me what is best for me.	1	2	3	4	5
14. You should always have a back-up alternative in case things don't work out.	1	2	3	4	5
15. There is only one "right" job for a person.	1	2	3	4	5
16. You get into an occupation mostly by chance.	1	2	3	4	5
17. I look at a number of alternatives when important decisions come up in my life.	1	2	3	4	5
18. When you consider alternatives you should know ahead of time which alternatives you want to choose.	1	2	3	4	5
19. The hardest part of decision-making is carrying out the decision.	1	2	3	4	5
20. Knowing what your values are is important in making a good career choice.	1	2	3	4	5
21. There is no point spending time trying to decide on a career since something will come along sooner or later.	1	2	3	4	5

Statements	Strongly Agree (1)	Agree (2)	Undecided (3)	Disagree (4)	Strongly Disagree (5)
22. It is important to have a good method to use to look for possible alternatives when important decisions come up in life.	1	2	3	4	5
23. It is impossible to know how each alternative will turn out so it's pointless to spend time deciding which is best.	1	2	3	4	5
24. I pick out a second alternative to use in case something goes wrong with the first alternative.	1	2	3	4	5
25. I can identify my career goals.	1	2	3	4	5
26. There is no point in deciding on a career when the future is so uncertain.	1	2	3	4	5
27. Good career planning involves looking into several different occupations.	1	2	3	4	5
28. When I have several alternatives I know how to tell which alternative is best for me.	1	2	3	4	5
29. When I have chosen an alternative, I know the steps to take to put it into action.	1	2	3	4	5
30. Knowing what your abilities are is important in making a good career choice.	1	2	3	4	5

COURSE EVALUATION

Directions: Please circle the number which you believe best fits the statement. 1 - strongly agree, 2 - agree, 3 - disagree, 4 - strongly disagree, 5 - not applicable.

- | | | | | | |
|--|---|---|---|---|---|
| 1. I could talk about my real feelings in this course | 1 | 2 | 3 | 4 | 5 |
| 2. The leaders regarded my concerns as being of real importance to me. | 1 | 2 | 3 | 4 | 5 |
| 3. The leaders were direct and honest. | 1 | 2 | 3 | 4 | 5 |
| 4. The course has made me more confident. | 1 | 2 | 3 | 4 | 5 |
| 5. The explanations given by the leaders were clear and direct. | 1 | 2 | 3 | 4 | 5 |
| 6. The leaders understood how I felt during the course. | 1 | 2 | 3 | 4 | 5 |
| 7. The leaders were interested in my concerns. | 1 | 2 | 3 | 4 | 5 |
| 8. The course has actively helped me to make better decisions. | 1 | 2 | 3 | 4 | 5 |
| 9. The leaders were actively involved in helping me. | 1 | 2 | 3 | 4 | 5 |
| 10. The leaders were very accepting of me. | 1 | 2 | 3 | 4 | 5 |
| 11. I was able to explore information that was personally relevant to me. | 1 | 2 | 3 | 4 | 5 |
| 12. The group members were supportive and encouraging. | 1 | 2 | 3 | 4 | 5 |
| 13. The course has helped me to see things more clearly. | 1 | 2 | 3 | 4 | 5 |
| 14. This course has helped me to develop or use my own strengths. | 1 | 2 | 3 | 4 | 5 |
| 15. This course helped me to find additional sources of help or information. | 1 | 2 | 3 | 4 | 5 |
| 16. I am able to devise plans to resolve some of my own problems as a result of this course. | 1 | 2 | 3 | 4 | 5 |
| 17. The course assisted me in identifying a variety of options in solving my concern(s). | 1 | 2 | 3 | 4 | 5 |
| 18. I thought the course focused on concerns that were most important to me. | 1 | 2 | 3 | 4 | 5 |

19. The course provided me with the information for which I was looking. 1 2 3 4 5
20. The course directed me to other appropriate sources of information which I required. 1 2 3 4 5
21. The leaders seem to know what they were talking about. 1 2 3 4 5
22. The course was very thorough in helping me explore my own feelings. 1 2 3 4 5
23. The course was really thorough in helping me explore my own alternatives. 1 2 3 4 5
24. The leaders seemed knowledgeable about career decision-making. 1 2 3 4 5
25. The leaders seemed knowledgeable about emotional/social concerns. 1 2 3 4 5

Any other comments?

APPENDIX D
COURSE FOLLOW-UP QUESTIONNAIRE

Course Follow-Up

1. Have you made a job/occupational change since taking this course?

2. If yes, was this change due to having taken the workshop? Please explain. _____
3. If you did not make a job/occupational change since the workshop, do you think the workshop had a role to play in that decision? If so, how _____

4. Have you enrolled or have you taken steps to enrol in any formal education program, full or part-time? (a formal education program being one that leads to a certificate, diploma, or degree) _____

5. If yes, what role did the workshop play in helping you make that decision? _____

6. Have you used the kind of decision making model presented in the workshop to help make any other kinds of decisions?

7. Do you feel at this time that the workshop has made any difference in your method of making decisions? That is, do you do anything differently now, and if so, what?

8. In looking back at the workshop, what do you now feel was of most benefit to you?

