

A STUDY OF THE EFFECT OF A SHORT INTENSIVE  
HIGH SCHOOL CAREER EDUCATION PROGRAM ON  
INTERNAL-EXTERNAL LOCUS OF CONTROL  
ORIENTATION, CAREER MATURITY, AND  
CAREER EXPLORATION

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ROBERT BARRY BRADBURY









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HIGH SCHOOL CAREER EDUCATION PROGRAM ON  
INTERNAL-EXTERNAL LOCUS OF CONTROL ORIENTATION,  
CAREER MATURITY, AND CAREER EXPLORATION

by

© Robert Barry Bradbury, B.A.

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in partial fulfillment of the requirements  
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### Abstract

This study examined the relationship between a locus of control change orientation and a career education program, run at the high school level. After a review of the factors effecting career planning behavior, locus of control orientation was identified as being an important mediating variable in the development of career planning skills, and an appropriate one to focus on in the Newfoundland context. With reference to the research on locus of control orientation change, cognitive developmental career counselling, and action-based counselling, a career education program was developed, and run with a group of fifteen high school students. The effects of the program on career planning attitudes and behavior were compared with a controls group, and a group receiving a traditional intervention (The Self-Directed Search). After examining the differences between the three groups with regard to measures of career maturity, career exploration, locus of control orientation, and observational data, it was concluded that internal-external locus of control orientation and career maturity were not affected significantly by the program, although there is evidence of suggested trends. Career exploration beliefs and behaviors are examples of those variables indicating such trends.

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## CHAPTER I

### INTRODUCTION TO THE STUDY

#### Statement of Purpose

The purpose of this study was to examine the relationship between a locus of control orientation change emphasis and a career counselling intervention with senior high school students.

There is concern among educators and people responsible for policy making in Newfoundland education regarding the low education levels of the province and the extremely high levels of unemployment. These factors are linked in the literature to low levels of career planning among students. Students under these conditions can construe their world as externally-controlled and dependent upon economic trends, government grants and decisions of large companies. They tend to have external locus of control orientations.

An internal locus of control has been found to be synonymous with more effective career decision making and, in this study, a career education program with a control orientation change focus was developed and evaluated at the secondary school level.

The following section reviews the Newfoundland scene and the variables effecting career choice.

### Significance

The characteristic of the Newfoundland educational scene which has received focused attention recently has been the level of education of the population. The Royal Commission on Employment and Unemployment (1986) comments:

The most obvious area of concern about education in our Province today is the poor general level of educational attainment of our population. There are a variety of cultural, social, and economic reasons why we should be concerned about this. However, from the commissions viewpoint, its critical importance lies in the fact that poor education levels in the Province are hindering our economic development (p. 44).

A similar commentary was made by Parsons (1982): The educational levels of the labour force in Newfoundland are considerably lower than for Canada as a whole. In this Province thirty-five percent have elementary educational levels, while for Canada, the percentage is eighteen. Whereas in Newfoundland; it is claimed that sixty-five percent of the labour force have education beyond grade nine, the figure for Canada is eighty-two percent (p. 12).

These two commentaries represent a theme which is to be found in recent writings on economic development for Newfoundland. This theme suggests that development must start with a tremendous attempt to revise and revitalize the Newfoundland educational system and to involve more of the population in educational programming. Besides generally low educational levels, as mentioned by Parsons (1982), two of the most serious presenting problems appear to be low secondary and post-secondary involvement.

Crocker and Riggs (1980) in the report "Improving School Retention and Post-Secondary Participation", commented that Newfoundland has the lowest post-secondary participation rate in Canada, by far. At that time, the proportion of Newfoundland youth involved in post-secondary education was barely half the Canadian average and only one third of that of the Provinces of Ontario and Quebec. The Education Report of the Royal Commission on Employment and Unemployment (1986) reflected similar concerns. They noted that by 1985 a large proportion of the population was completing high school (45%) and the proportion of the adult population attending university climbed from 4% to 6%. However, they found that the percent of Newfoundlanders receiving post-secondary training had not changed. This report also highlighted glaring differences in educational attainment between rural and urban areas. They concluded that rural Newfoundlanders

are less educated than their urban counterparts and that the gap is widening.

Secondary school retention presents as the second major concern. As has been reported in the report "Leaving Early - A Study of Student Retention in Newfoundland and Labrador" (1984), large numbers of Newfoundland students drop out of high school. This study followed up on students entering the school system in 1963. After eliminating students who had transferred out, gone to post-secondary early, been placed in special programming, and just failed to pass senior exams, they found that 33% had left early. The actual proportion of students graduating was only an alarming 51 percent.

Currently in this Province the senior high school program and the Vocational School system have been the focus of revision. Besides these programming changes there has been a call for more and more appropriate career counselling. The reports quoted previously have been unanimous in suggesting that more career counsellors be provided, and that programming be established to encourage students to remain in the educational system and to formulate career plans.

A focus of this paper is to review factors impacting upon secondary and post-secondary involvement, with special attention being paid to the variable of locus of control orientation. This variable is concerned with the degree to which students perceive that they have control over events,



and as previously mentioned, it felt to be particularly relevant in the Newfoundland of the 1980's.

In an attempt to understand the phenomenon of career decision making, it would be appropriate to review some possible impacting factors. These are described in the literature and can be grouped under the headings of individual, social and economic. Individual factors would consist of characteristics such as interests, abilities, values, sex, self-concept, decision-making style, cognitive development, and locus of control orientation.

The relative importance of interests to vocational decisions has been studied by Bordin, Nachmann and Segal (1963), among others. Certain occupations have been found to satisfy specific needs and these are related to vocational interests. Herr and Cramar (1984) reported that the merger of the work of Strong and Holland contributed greatly to our understanding of the influence of interests. This influence can be seen most clearly in the format of the Strong Vocational Interest Inventory, which has correlated vocational interests and job choice. Holland (1977) used the terms interest "consistency" and "differentiation" to refer to the characteristics of interest profiles, and these concepts related to vocational maturity, point to the importance of the development and focusing of vocational interests.

A strong relationship is noted between self-concept and educational aspirations (Porter, Porter, & Blishen, 1973).

Low self-concept has been hypothesized as resulting from past patterns of socialization, a lack of appropriate referents, a lack of parental encouragement, and a lack of a feeling of control over events and confidence in the future. Self-concept has been suggested as a mediating variable between occupational choice and post-secondary educational aspirations. In a Newfoundland study Campbell et al. (1975) concluded that those students with a low concept of their ability showed a lower expectancy of obtaining the occupations to which they aspired than did those with a higher concept of ability. Obviously then, self-concept is a factor of some importance.

The style with which students make vocational decisions has been related to vocational maturity or certainty of choice (Rubinton, 1980; Phillips & Stroher, 1982; Hesketh, 1982). Arroba (1977) produced an empirically derived classification of decision styles, and defined decision style as "a way of approaching, responding to, and acting in, a decision making situation." (p. 149) Decision making style has been examined from several perspectives, using many correlates. In the Rubinton study students were found to exhibit rational, intuitive, and dependent decision-making styles. Arroba (1977) described an active-passive dimension in which an active style of decision making involved a logical and thoughtful process, where as the passive style involved a more emotional, intuitive, decisional style. Also different types

of career interventions have been found to have varying rates of success, depending upon the decision style of the participants (Cassidy, 1977). Vocational maturity has also been related to the presence of an independent style and scholastic achievement (Phillips and Strohmer, 1982). Certainly, it seems that the impact of career-oriented events is cognitively-mediated and the need can be seen for cognitively-based career counselling (Keller, 1982). From a similar perspective studies have been concerned with career indecision and have identified some of its correlates as being decision-making style, anxiety, identity problems, and external locus of control orientation (Fagua and Hartman, 1983; Hartman, and Fagua, 1983). Various intervention strategies are discussed in the literature.

A variable which has had some attention recently is that of cognitive development. Cognitive level or developmental level has been related to the process of career decision-making (Blocher and Segal, 1981; Kniefelkamp and Slépitza, 1976; Welfel, 1982; Young, 1981). These theorists suggested that rather than treat the undecided student as having personality or ability problems, they should be acknowledged as having different levels of cognitive development. These approaches suggested career maturity to be dependent upon reaching certain levels of cognitive development. How cognitive development impacts upon vocational maturity is addressed in Savickas' (1984) description of vocational

maturity. Vocational maturity can be defined as readiness to cope with vocational developmental tasks. Savickas examines vocational maturity with the perspective of stimulus, intervening, and response variables. Career maturity variables or vocational developmental tasks are categorized as stimulus (S) variables; coping behaviours are considered response (R) variables; and person characteristics that mediate coping responses are considered intervening (O) or organismic variables. From this perspective cognitive development would be an intervening variable, capable of mediating response variables or career coping behaviors. Particularly relevant to cognitive development theories, then, is the fact that an internal locus of control is considered to be an important ingredient to vocational maturity.

There is also considerable evidence regarding the importance of another factor, values. What an individual values in work itself and in the rewards which result from work has been found to be internalized early and to affect vocational decisions (Drummond, McIntire, and Skaggs, 1978; Super, 1962; Thompson, 1966). The literature suggested work values to be fairly stable over time. However, as Herr and Cramor noted, work values are independent of job knowledge and it cannot be assumed that being knowledgeable about values necessarily leads to realistic job choice. Nevertheless, it is apparent that values can be differentiated by many factors, and can be influential to the career choice process.

The variable of gender has been reported to be related to career choice. Relationships were noted between levels of aspiration and gender among rural youth (Slocum, & Bowles, 1968). Campbell et al. (1975) reported that with a Newfoundland sample, a greater number of males who aspired to upper middle class occupations expected working-class jobs, than females who aspired to the upper middle class. Also with a Newfoundland sample Shave (1984) found the greatest number of academically able students not pursuing post-secondary to be male.

The factor of locus of control orientation, the main focus of this paper, is an individual factor correlated in the literature to career maturity and heavily dependent upon socio-economic factors. Because of its susceptibility to influence by economically disadvantaged environments, it is of particular importance to career planning in Newfoundland. Locus of control refers to the degree to which individuals perceive they have control over their environments. Perceptions of internal control over events has been related in the literature to higher and more realistic aspirations (Ducette & Wolk, 1972; Gurin & Gurrin, 1970; Mugsud, 1980). External control orientations have been related to lower aspiration levels (Ducette, 1972); to less realistic career goals (Mugsud, 1980), to lower educational aspirations (Gurin & Gurrin, 1970), and to larger discrepancies between ideal and actualized vocational goals. The process of making

appropriate decisions involves the following tasks: gathering information; attending to it; distinguishing relevant from irrelevant information; extracting information from ambiguous sources; organizing it; and using it. Studies have demonstrated a relationship between these skills and an internal locus of control (Crandel and Lacy, 1972; Ducette and Wolk, 1973; Phares, 1976; Seeman, 1963). In Newfoundland research an external locus of control orientation was related to experience of unemployment, unemployment insurance and welfare receipt among youth (Research Associates, 82). Further, locus of control orientation has been measured to be more internal in students taking a career education course than in a control group, in a Newfoundland sample (McCarthy, 1985).

The second major group of factors affecting the career decision-making process are "social" ones. These would include such variables as socio-economic status, parents occupation, parental education, community size, among others.

Differences in the socio-economic status of students have tremendous impact on aspirations and choice (Coleman, 1963; Frieson, 1967), and specific relationships have been noted with regard to post-secondary participation (Schoenfeldt, 1968; Sewell and Shaw, 1967). Socio-economic status has been related to information known about work, work experience, and occupational stereotypes (Dilliard, 1976); and this influence appears firmly established as early as grade 3 (Mckay and

Miller, 1982). With Newfoundland samples this factor has been related to occupational aspirations (Campbell et al., 1975); youth unemployment (Research Associates, 1982), and probability of academically capable students not attending post-secondary schools (Shave, 1984). Students of lower socio-economic levels have also scored lower on measures of vocational maturity in a local sample (Tompkins, 1981). Low socio-economic status has also been related to external locus of control orientation (Breton, 1972). Breton found that at the father's occupational status lowered, so did high school student's sense of control over events.

Parental education level has been noted to have strong influence on occupational choice and on student expectations (Anderson, 1980; Breton, 1972; Campbell et al., 1975; Shave, 1984; Osborn, 1971).

The size of the community from which an individual comes is related to type of vocational choice made. A conclusion that is often made is that as the population density of an area increases, aspiration levels and occupational attainment also rise (Sewell and Orenstein, 1965). Specific relationships have been found between community size and perceived parental attitude toward post-secondary education (Narine, 1971), student achievement expectations (Peach, 1970), and post-secondary attendance. With Newfoundland samples, traditionalism of career choice was related to place

of residence, as well as aspirations and options perceived open (Wiseman, 1982).

Parental occupation is another influencing factor. Studies supported the conclusion that career choice is influenced by parental models. (Campbell, et al., 1975; Werts, 1968). This influence varies for occupations with larger differences found in specific occupational areas, such as the physical sciences, social sciences and medicine (Werts, 1968). In local research parental occupation has been related to aspirations (Campbell et al., 1975). It was found that in general the higher the occupational level of the father, the higher the occupational aspirations and expectations of the student. It does appear that occupational level of the parent is related to locus of control orientation, again suggesting the mediating role of the locus of control variable.

A third group of factors would be economic ones. These would include such variables as employment rate, parental income, welfare dependence, and post-secondary school entrance opportunities. The rate of employment provincially, or in the community would appear to be a factor of importance. Generally, as mentioned previously, lower socio-economic status would usually correlate with lower aspiration levels. As the rate of employment in Newfoundland appears to be chronically low (Parsons, 1978) and appears to be going to remain low for the immediate future (Cournoyer and Wilson, 1980; Royal Commission on Employment and Unemployment, 1986),



a tremendous impact, should be felt on student career processes.

Parental experience with unemployment, relative to other community members, was important in predicting youth unemployment (Research Associates, 1982).

Parental income, which is a component of socio-economic status, has been related in the literature to type of occupational aspirations (Little, 1967). In a Newfoundland sample parental income was associated with traditional versus non-traditional job aspiration factor (Wiseman, 1982). Also with a Newfoundland sample Shave (1985) observed that students who were academically able but who did not enter post-secondary schools shared with their parent the attitude that to borrow for further education was not a favorable plan, because of the perceived uncertainty of being able to pay back the money borrowed. These families were noted to be characterized by seasonal employment with some dependence on welfare or unemployment insurance benefits.

Another economic factor would be entrance requirements to post-secondary, for if these were overly restrictive, then the market place would not be expected to be attractive to students.

These factors and others all impact upon students aspiration, expectation, choice, and the remaining components of the career development sequence. These factors have been tied together in the theories of career development and

choice, and these theories provide overviews of the interplay of these various factors. The literature on career choice and career development has many theoretical approaches from "trait and factor" approaches to "cognitive development" approaches, all of which embody many or all of these variables. Particularly relevant are the writings of Krumboltz, Mitchell and Gelatt (1975) and Krumboltz (1979). They commented that although real life is always more complicated than our theories, it is possible to call attention to the events most influential in determining career selections. Although this approach is outlined in more detail later, key components are sketched here.

The four categories of influencers in the Social Learning theory of career selection are as follows:

(i) Genetic endowments and special abilities, including such factors as race, gender, appearance, intelligence, and abilities.

(ii) Environmental conditions and events, including such factors as job and training opportunities, entrance requirements, rate of return for various occupations, technological change, family training experiences, and resources, and neighbour and community influences.

(iii) Learning experiences, such as instrumental learning and associative learning experiences. Skills necessary for career planning and other occupational and

educational planning activities, are learned through successive learning experiences.

(iv) Primary task approach skills, such as, problem solving, work habits, mental set, emotional response and cognitive responses.

These four types of influencers and their interactions can lead to several types of outcomes:

(i) Self observation generalizations which are overt, or covert self statements.

(ii) Task approach skills which are cognitive and performance abilities and emotional predispositions for coping with the environment, interpreting it in relation to self observation generalizations, and making covert and overt predictions about future events.

(iii) Actions which are entry behaviours, that indicate overt steps in career progression.

As can be seen from this outline this Social Learning Theory is inclusive of all the factors which are the focus of this study, and includes a framework for considering the interaction effects. The proceeding section will present a discussion of the identified factors in light of the Social Learning model.

The genetic and special ability factors are discussed in studies involving gender, mental ability, and physical ability differences. These factors tend to explain differences within a population, but would not appear to explain differences due

to regional disparity and high levels of unemployment, such as this study is concerned with. Environmental conditions and events have been found to have major impact upon career choice and also are appropriate to explain intra and inter population differences. The number and nature of job opportunities appears to be an influencing variable as this Province has had, and continues to have, a high unemployment rate (Parsons, 1978; Cournoyer and Wilson, 1980).

Changes in social organizations would refer, in the local scene, to the tremendous thrust, in this Province, both by the Provincial and Federal governments, to provide job creation and to use unemployment insurance benefits as a sort of guaranteed annual income. This has possibly contributed to a feeling of dependence, lower aspiration levels (Campbell et al., 1975), and increased chance of unemployment (Research Associates, 1982).

Family training experiences and resources would produce conditions for the individual, that make a difference in the individual educational and occupational preferences, skills, and selections. As previously outlined this would include such relevant factors as socio-economic status, parental education levels, parental occupation, parental income. In the Newfoundland and Labrador context depressed income levels, parental education levels, lower socio-economic status, all contribute to low aspirations and lower post-secondary attendance (Research Associates, 1982; Shave, 1985).

Neighbourhood and community influences also contribute, with one tremendous impact here being the rural nature of many Newfoundland communities, and the resulting lowering of aspiration levels (Shave, 1985).

The learning experience component of the Social Learning Theory provides the link between genetic and environmental influences, and task approach skills. The genetic and environmental factors influence the types of learning experiences an individual has, and also the predispositions taken into these experiences. The nature and variety of these learning experiences subsequently influence the various task approach skills that are developed or acquired. These task approach skills consist of problem solving skills, work habits, mental sets, emotional responses, and perceptual and cognitive processes. The Social Learning Theory affords a framework for an applied understanding of these experiences and is outlined in the proceeding paragraphs.

These various types of influences and their interactions lead to several types of outcomes discussed in the model. Self observation generalizations result from the various types of learning experiences which the individual is involved with, and would include interests, values, self concepts, aspirations, expectations. These various factors are all influenced by the genetic, environmental factors and learning experiences discussed above. High unemployment could impact

significantly upon the self-observation generalizations in many ways.

A second outcome, task approach skills, would include in relation to career planning: skills in value clarifying, goal setting, predicting future events, generating alternatives, information seeking, estimating, reinterpreting past events, demanding and selecting alternatives, and planning and generalizing. Many of these components would be part of career maturity, and reference to the literature would relate these to family, community, environmental factors, plus internal factors such as cognitive style, locus of control and values.

The final outcome variable is actions, and these would consist of entry behaviours, such as job application or entry to post-secondary school.

In Newfoundland, as in other areas, deficits in the skills required for career choice have been addressed with interventions and programs based upon various theoretical approaches or models. Specifically, in Newfoundland some of the contributing factors to low aspirations and low educational involvement have been hypothesized to include the rural nature of most communities, low socio-economic status, low parental education, low vocational maturity and high unemployment rates. Recommendations have resulted for increased career guidance programming to counteract these influences. The result has been more programming of various

kinds, including the introduction of Career Education 3101, a senior high school credit course.

One of the objectives of these efforts, in the perspective of Social Learning models, has been to provide learning experiences to develop skills necessary for career planning. However, it is important to note that one of the major influencers in the Social Learning theory perspective, besides genetic, environmental, and learning experience factors, are the primary task approach skills which result from an interaction of these three, and impact on further interactions and outcomes. These are described as being skills, performance standards, values, work habits, mental sets, emotional responses, and perceptual and cognitive processes (Krumboltz, 1979). These primary influencers can have tremendous affects upon guidance programming and can serve as mediating variables. The effectiveness of guidance interventions may depend upon the appropriateness of those primary influencers.

It is the contention of this writer that in a serious attempt to significantly change or affect the career behaviour of Newfoundland students, these primary influencers must be taken into account. The specific primary task approach skill of interest in this study is locus of control orientation. This particular variable has been identified as related to career interventions (McCarthy, 1985), and post-secondary attendance (Research Associates, 1982).

Further, it is a variable which, as has been shown, is influenced by social factors such as high levels of unemployment; and which influences many career related outcomes. In summary, the general assumption is that in areas of high unemployment and low socio-economic status students feel less able to achieve their true aspirations. Studies confirm that locus of control varies in relation to the social class of the group involved (Battle and Rotter, 1963; Gruen & Ottinger, 1969). Phares (1976) commented "in general the evidence is consistent with the view that those groups which cannot compete effectively for social status or power, and which have little mobility or access to material wealth, will be more likely to adopt an external belief system" (p. 154).

Locus of control orientation has been shown to clearly influence career planning behaviour. Several investigators have found a relationship between this orientation and career maturity (Gable & Thompson, 1976; Khan & Alvi, 1983; Thomas & Carpenter, 1976). Locus of control orientation has been related to information seeking behaviour (Minnich & Gastright, 1974), and to type of occupational choice, and level of decidedness (Burlin, 1976; Denga, 1984; Kisher, 1981).

Farmer (1977) commented: Externally-oriented individuals with low self esteem construe their world as chance determined, and outside their personal control, or otherwise unpredictable. This perspective makes them less interested in



information seeking behaviour, and in trying out new behaviours with regard to career goals (p. 469).

Farmer is commenting on the fact that externally oriented individuals do not respond to career choice in the desired manner. They tend to construe their world as chance determined and outside their personal control. They are less interested in information seeking and in trying out new behaviours. Their external disposition tends to cause them to respond poorly to traditional methods of career education. Externals are less affected by a values confrontation approach (Young, 1979), and seem to find less benefit from various counselling styles (Fry, 1975). Similar results suggesting that locus of control orientation can influence the outcome of various types of change techniques have been reported by Alegre and Murray (1974); Biondo & Macdonald (1971), Sherman (1973); and Davis and Phares (1967).

Some researchers imply (Denga, 1984; Thornton, 1978) that the style of control orientation will affect the type of intervention utilized and suggest intervention strategies to meet the needs of these different groups. Denga (1984) suggested that secondary school students should be screened with locus of control orientation instruments prior to career counselling. Students with an internal bias would receive guidance focusing on developing awareness of external factors which cannot be ignored, such as the job market. Externals would receive specialized guidance designed to increase

recognition of intrinsic factors which are correlated with career or job satisfaction.

Different locus of control orientations have been found to respond to different types of influence attempts. Externals have been found to respond to subtle and overt attempts while internals react negatively to overt attempts (Biondo et al., 1971).

Others have felt that it is vitally important to change the control orientation as much as possible to the internal focus. In these procedures, interventions are proposed specifically to increase internality.

These programs would either identify groups with external orientation and provide intervention to them, or include control orientation change strategies for all participants. Examples are found in the goal setting and resumé writing groups of Beatty and Gardiner (1980), problem solving groups of Duckworth (1974), the low achiever groups of Felton and Riggs (1972), and the self-paced student development course at Mesa Community College (Mitchel & Young, 1979).

In this section the Newfoundland scene with regard to patterns planning was reviewed. The Province's low secondary and post secondary involvement rates present as major problems and appear to be related to impacting factors from individual, social, and economic factor groups. It is the position of this paper that in an attempt to change the career behaviour of Newfoundland youth, it is vitally important not to overlook

important variables. From the perspective of Social Learning Theory primary influencers have an important role to play in subsequent career development, and in determining how a student will respond to further interventions. One such primary task approach skill is felt to be locus of control orientation, a variable which has implications for career counselling, and one which responds to direct intervention, or change attempts. Also, locus of control orientation is a variable which is suggested to be influenced by the social and economic climate of Newfoundland at present (Research Associates, 1982).

In the remaining chapters this study reviews the literature of Internal-External Locus of Control Orientation and identifies methods recommended for increasing student levels of internal locus of control. The main thrust of the investigation was to examine ways of increasing student career maturity and career exploration through the mediating variable of control orientation. The study examined the benefit of this approach, compared with a traditional short career intervention, and with no treatment.

In the study 45 students were randomly selected from a rural grade X class and administered a locus of control orientation measure. Three groups were designated with representative samplings in the areas of control orientation, gender, and academic stream. The treatment group was provided with a program which incorporated techniques suggested by the

literatures of Internal-External Control Orientation, Cognitive-Developmental Career Counselling, and Action-Based Counselling. The program had a discussion and action base, and a focus upon confronting and changing external control viewpoints. Of the two other groups, one received a traditional, short, career intervention, and one was a no-treatment control group. Besides the measure of control orientation, all groups were pre and post tested with measures of career maturity, and career exploration. Informal data, in the form of response sheets and comment forms were also used.

#### Definition of Terms

Career - The course of events which constitute a life; the sequence of occupations and other life roles which combine to express one's commitment to work in his or her total pattern of self-development (Super, 1976).

Career Education - The totality of experiences by which persons acquire knowledge and attitudes about self and work and the skills by which to identify, choose, and plan, and prepare for work and other life options potentially comprising career; an effort aimed at refocusing education and the actions of the broader community in ways that will help individuals acquire and

utilize the knowledge, skills and attitudes necessary for each to make work a meaningful, productive, and satisfying part of his or her way of life (Hoyt, 1978).

Career Maturity - Attitudinal and cognitive readiness to cope with the development tasks of finding, preparing for, getting established in, pursuing, and retiring from an occupation (Super, 1974).

Locus of Control Orientation - Refers to the attribution a person places on the control over various reinforcements, he or she receives (Rotter, 1966).

Internal Locus of Control Orientation - Refers to the disposition to attribute to oneself some control over the various life reinforcements received (Rotter, 1966).

External Locus of Control Orientation - Refers to the disposition to attribute to fate, chance, or powerful others, the control over various reinforcements he or she receives (Rotter, 1966).

### Limitations of the Study

This study was conducted in a rural Newfoundland setting and any attempt to generalize the findings must take the setting into consideration.

This study attempted to evaluate the effect a short career intervention, focusing upon locus of control orientation change, had upon career maturity, career exploration, and locus of control orientation. There was no attempt to provide comprehensive career education programming, and the program designed in the study had as its goal the stimulation of interest in career planning.

Another limitation of the study was the fact that the action component of homework assignments was underused. This was due to the noncredit nature of the program. Further research could investigate the benefits of a higher level of action-based activities.

A further limitation existed in the grouping aspects of the study. The treatment group met as a group and functioned with a discussion group format, while the self-directed search group met in a class setting. It was therefore difficult to specify how much of the effect was due to group process and how much due to program. Further research could follow up on this point.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### Introduction

The review of the literature is organized around three sections. Section one, which is the most extensive, deals with locus of control orientation. This section of the review is further divided into seven subsections. The initial subsection introduces the concept and provides some background information. The next four subsections review the literature concerning the relationships between control orientation and the following variables: achievement, aspiration, vocational maturity, and cognitive factors. The last two subsections deal with what the literature has to say about the role of control orientation change in career counselling, and the methods which have been found effective in changing control orientation.

Section two reviews the area of Cognitive Developmental Career Counselling. This is a relevant area as the locus of control variable is given a prominent place in Cognitive Developmental Career Counselling theory.

Finally, the third section describes a counselling approach called Action-Based Decision Counselling. As the locus of control literature strongly suggests that control change programs be action-based, this writer designed the

career intervention, described in this paper, with an action-based approach.

### Locus of Control

#### Introduction to Locus of Control

Locus of control, as postulated by Rotter (1966), refers to the degree to which individuals perceive that they have control over their environments. At one end of the spectrum, individuals tend to perceive outcomes of their behaviour to be the result of their own actions, while at the other end they feel it is due to fate, luck, or powerful others. Rotter (1966) commented:

When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his actions, then in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When an event is interpreted in this way, we have labelled this a belief in external control. If the person perceives that the event is contingent upon his own behaviour, or his own relatively permanent characteristics, we have termed this a belief in internal control (p. 1).



Phares (1976) described the concept of internal-external control of reinforcement as evolving from social learning theory. Rotter (1975) discussed Social Learning Theory as a theory of personality which attempts to integrate two different but equally important, trends in western psychology, the stimulus-response or reinforcement theories, and the cognitive or field theories. Four classes of variables are used in the theory: behaviours, expectancies, reinforcements, and psychological situations. The general statement is that behaviour is a function of the expectancy that the behaviour will lead to a particular reinforcement in that situation, and the value of that reinforcement. A hypothesis of Social Learning Theory is that when an organism perceives two situations as similar, then his expectancies for a particular kind of reinforcement will generalize from one situation to another (Rotter, 1975).

Rotter (1975) commented:

Expectancies in each situation are determined not only by specific experiences in that situation, but also to some varying extent by experiences that the individual perceives as similar (p. 57).

Locus of control as a construct has generated a large amount of research. Most locus of control investigations have been conducted with college student samples, while some studies have used samples of children, the elderly, and clinical groups (Lefcourt, 1982). McNulty (1983) reported

only nine studies being present in the literature using adolescents as subjects. The research in the area, as a whole, has focused on the relationship between locus of control and various attitudes, behaviours, and/or personality characteristics. Examples of these areas of research would include resistance to influence, coping behaviour, achievement behaviour, various psychotherapies, change of internal-external orientation, and measurement of internal-external orientation.

Summarizing an array of studies on the difference between individuals classified as internal and external in terms of locus of control, Phares (1976) wrote:

The most basic characteristic of internal individuals appears to be their greater efforts at coping with or attaining mastery over their environments. They seem to acquire more information, make more attempts at acquiring it, are better at retaining it, are less satisfied with the amount of information they possess, are better at utilizing information and devising rules to possess it, and generally pay more attention to relevant cues in the situation (p. 78).

He further commented:

In general, internals appear more reliant upon their own judgement. They seem to be less susceptible to control and influence from others as shown in

attitude change studies. They particularly resist subtle forms of attempted influence. Internals are more accepting of information when it has merit than when it does not. Internals are not as likely to respond on the basis of prestige or expertise of the message's source, as are externals (p. 104).

Phares also described how generalized and specific expectancies co-exist within an individual, and stated that belief in personal control is both a general disposition that influences individuals across a wide range of situations and a rather specific belief that may apply to a limited number of situations. How these general and specific expectancies co-exist is not completely understood and has apparently led to measurement problems (Phares, 1976; Rotter, 1975). Connolly (1980) presented an illustration of how expectancies may develop in different areas of life functioning and how specific life expectancies may lead to the development of these general expectancies (Figure 1).

Connolly commented "the transfer of beliefs from one life area to another, and the experiences in each, are key variables in formulating internal vs. external expectancies of control" (Connolly, 1980, p. 178).

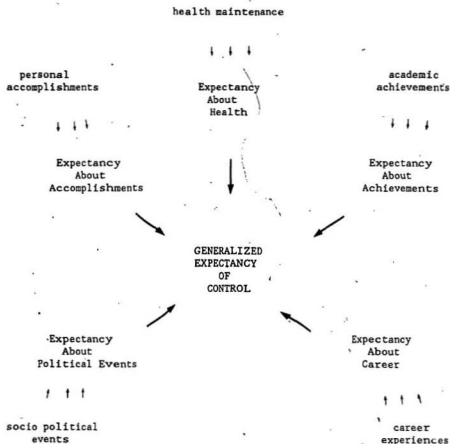


Figure 1. The Formulation of Specific and Generalized Expectancies.

NOTE: From "Changing Expectancies: A Counselling Model Based Upon Locus of Control" by S.G. Connolly, 1980, Personnel and Guidance Journal, 59, 178.

Prior to examining the studies in the literature concerning the relationship of control orientation to career decision-making, there are cautions that will be considered. Rotter (1975), reflecting upon the surprisingly large number of studies using the locus of control concept, speculated that the interest in the concept must be related to some persistent social problems, which in turn are related to increasing growth, complexity of current society, and resultant feelings of powerlessness generated. Although contributing significant findings, he commented that some of the studies appear to reflect a basic misunderstanding of the nature of the variables and measurement devices used to assess individual differences. Rotter described the following problems with conceptualization and measurement:

(i) The need to treat reinforcement as a separate variable -- a problem, which has arisen particularly in studies of social action, independence and conformity -- is the failure to treat reinforcement value as a separate variable. Rotter suggested that to make a locus of control prediction, it is essential to either control reinforcement value, or measure it and systematically take it into account.

(ii) The problem of specific vs. generalized control orientation -- a problem which appears mainly in studies of achievement behaviour, or behaviour in achievement situations. Some research attempts have tried to obtain highly accurate predictions of achievement behaviour from generalized measures

of locus of control. While this is somewhat valid in achievement situations which are less ambiguous and more familiar, the more structured the situation, the less reasonable this is.

(iii) The "good guy - bad guy" problems - some psychologists have argued that it is "good" to be internal and "bad" to be external. Rotter (1975) suggested that it does seem clear that self report scales of anxiety, adjustment, or other symptoms, correlate with self report locus of control scales. However, he reported other studies suggested that it is typical for internals to repress failures and unpleasant situations. Rotter concluded that there are many interesting problems yet to be investigated, and commented "it would be helpful, in such situations, if the researcher had not already predetermined that internals are always 'good guys' and externals always 'bad guys'" (p. 61).

There are also problems associated with measurements:

(i) Social desirability - Rotter (1975), in commenting on measurement problems, described this problem as one which was somewhat controlled. He suggested that the I-E scale is subject, as are all personality measures, to the conditions of testing, and the known or suspected purposes of the examiner.

(ii) Unidimensionality versus multidimensionality - many studies of locus of control have dealt with whether or not there are important subscales within the original I-E

scale, or whether or not the concept itself should be broken down into more specific categories (Joe and Jahn, 1973; Kleiber, Veldman, and Manaker, 1974; Mirels, 1970; Reid and Ware, 1973). Rotter (1975) commented:

A broad concept of internal versus external control is viable if, in most samples of subjects, a better than chance relationship can be seen between attitudes of subjects toward fate, luck, and control of powerful others, or the belief that one controls political events as well as personal ones. In each case the subclasses may show interrelationships among referents that are significantly higher than those between referents for one subclass and those of another subclass. Where such functional relationships exist, it is perfectly reasonable, if one has some purpose for doing so, to develop subscales or to use clusters of items within the present scale (p. 63).

Rotter stated that he does not want to discourage factor analysis and the use of subscales, but does want to discourage the idea that these will lead to the "true structure of the concept". The analyses are not felt to be important in themselves, but can be of use in building new instruments.

(iii) Confusion over the meaning of externality - Rotter described, as surprising, results that some externals showed in early studies patterns of behaviour resembling the

behaviour of ambitious, competitive subjects. In competitive, achievement situations, Rotter had found a number of externals who behaved in a manner expected of internals. Studies suggested that validity was not the problem but that two groups of externals were showing up. These two groups of externals were given the names defensive and passive externals. Rotter reported methods of differentiating between the groups, have sometimes been fruitful, either by using other variables or data (Davis, 1970; Hamsher, Geller, and Rotter, 1968), or by endorsement of failure vs. success items in children (Crandall, Katkowsky & Crandall, 1965). Rotter (1975) commented further on this problem:

The importance of this distinction between two bases for endorsing external items, lies in the prediction of specific criteria. It seems from our present data that there is a group of defensive externals who are competitive, striving, and ambitious, when placed in competitive, achievement situations, although the same individuals may avoid competition when it is possible to do so without loss of status.

In order to understand or make predictions regarding the relationship of internal-external test behaviour and some other criteria, it is important to make a theoretical analysis of the criterion behaviour and the possible relationship to defensive versus congruent externality. It may be important



to use one of the methods already developed, or a new method to differentiate between these two groups (p. 65).

As a concept or construct then locus of control has some characteristics which are important to note:

(i) When observing career-related behaviours, the value of specific reinforcements should also be noted. For example, post-secondary application must be considered in terms of the acceptance rates and the employment opportunities the courses provide.

(ii) The nature of the concept general and specific must be addressed whether a general measure or a specific subscale is used has some importance in this study.

(iii) The assumption that all students would be better off in terms of career planning if they were more internally-orientated, cannot be accepted at face validity. There appears to be complex relationships, and any research should be somewhat open to unexpected results.

(iv) The possibility of encountering the behaviour pattern that Rotter termed "defensive" should be included in the plan for our study.

Following this introduction, the literature of research on locus of control and career choice variables is reviewed in the following sections.

### Locus of Control and Achievement

Several measures of locus of control orientation have been found to relate to achievement and deferred gratification. Lefcourt (1982) commented that the link between locus of control and achievement appeals to common sense. He noted that after the middle sixties personality characteristics, such as locus of control, began to receive extensive attention.

The Coleman report (Coleman, Holsen, McPortland, Mood, Weinfield, & York, 1966) directed much attention to factors affecting the performance of certain groups. Coleman found that among groups, such as non-white children, achievement was predicted by a measure of the child's belief that academic outcomes were caused by the child's own efforts.

Coleman (1971) concluded about the findings regarding sense of control and achievement "the importance of attitudes, such as this, is the effect such an orientation toward the environment, can have on other resources by creating an active, driving stance toward the environment rather than a passive one" (p. 83).

Bar-Tal, Kfir, Bar-Ahar, and Chen (1980) observed that, in general, internals tend to obtain greater academic achievement, to express less anxiety, and to have a higher level of aspiration, in a study of 2438 ninth grade boys. Nowicki and Roundtree (1971), in a survey of 87 twelfth grade students from a suburban high school, on measures of locus of

control, social preference, and the Otis intelligence scale, found locus of control to be related to achievement for boys and involvement for girls. Siegelman (1973) in a survey of 394 ninth grade New York blacks, of low socio-economic status, found correlations between pupils' attitudes, control of environment, and grades, when they controlled for intelligence.

Wolk and Ducette (1973), in two separate studies, used locus of control as a mediator variable in investigating the relationship between achievement motivation and several other variables, including preference for immediate risk, estimation of future success, and classroom test performance. They found only students identified as internal, produced data consistent with predictions from achievement motivation theory. They concluded:

Theoretically, this implies that an internal expectation for control over one's reinforcements, as well as situationally specific cues for such control, is necessary for the direct and efficient satisfaction of certain needs. Only when the situation is one which allows control, and only for subjects with an internal orientation, will achievement motivation theory hold (p. 62).

Bar-Tal and Bar-Zohar (1977) reviewed 36 studies which were concerned with the relationship between locus of control and achievement. Thirty-one of these investigations reported

finding positive relationships between locus of control and achievement.

Other studies have investigated the relationship between locus of control and deferred gratification. With regard to these Lefcourt (1982) commented:

Overall, the studies support the hypothesized relationship between locus of control and ability to defer gratification in the pursuit of long range goals. As with achievement, the findings are often variable, and at times inconsistent. Various measures, such as time judgments and time perspective, are linked with locus of control, and it is evident that perception of time is of some importance in man's perception of himself as an active determiner of life's directions. Individuals, who develop with little notion that life's satisfactions and misfortunes can be determined by personal efforts, have been less apt to extend themselves or to persist overtime in the pursuit of distant goals (pp. 97-98).

The link between control orientation and achievement, and deferral of gratification, has been established clearly in the literature. The ramifications of this for career planning are obvious. Locus of control orientation appears to play a mediating role with regard to achievement and deferral of gratification. A student's motivation to achieve

goals and his ability to work towards long term goals is directly related to internal-external control orientation. An internal orientation appears to facilitate a student to work towards career goals, and also postpone immediate satisfaction, focusing instead upon more preferred, longer term objectives. A student whose control orientation is external would tend to focus upon immediate gratification of needs and see no benefit in working towards long term goals, over which he has no real control. This mediating effort of this factor underscores its function as a primary task approach skill in Social Learning Theory perspective.

#### Locus of Control and Aspiration

The connection between perceived control and vocational aspiration is also one which has face validity. This relationship was noted in the study by Bar-Tal et al. (1980) reported in the previous section. Mugsud (1980) surveyed male high school students with the Nowicki-Strickland locus of control scale and level of aspiration scale. Results provided evidence that internal children tend to have more realistic levels of aspiration. Doucette and Wolk (1973) found that internal white females had higher levels of aspirations, than did external white females. Gurin, Gurrin, Lao and Beattie (1969), and Lao (1970) observed that students whose orientations were internal, were characterized by higher

educational expectancies and aspirations, than were students whose orientations were external.

Burlin (1976) investigated the relationship between locus of control and ideal and real aspirations of adolescent females. An association was found between locus of control and ideal aspiration, and locus of control and the presence or absence of a discrepancy between real and the ideal. About locus of control and career counselling for women, they note, "it is not enough to present young women with a wide range of occupational alternatives. Counsellors must assist young women, through individual and group counselling, to act more freely on these alternatives" (p. 128).

#### Vocational Maturity and Locus of Control

The concept of vocational maturity or readiness for vocational decision-making has been correlated with control scores. Khan & Alvi (1983), in a study of 272 Ontario high school students, found maturity, as measured by the Career Maturity Inventory, related to various factors including perceived control. Thomas (1974), investigating the relationship between career development responsibility (a measure of control) and career maturity, found results indicating that the main effects of occupational choice and locus of control, were significant. They suggested:

Mature career attitudes are either mediated by, or develop concurrently with 'career development responsibility'. Considering what we know about the relationship of the acquisition and use of information in problem solving, to internality, it is highly possible that locus of control does mediate acquisition of mature career attitudes (p. 6).

Lokan and Boss (1982), in a survey of male and female students from three classes of 9's and 11's in five Ottawa suburban schools, concluded that internals do tend to exhibit more mature vocational behaviour than do externals. Hughson and Foster (1975) studied locus of control as measured by Rotter's (1966) scale, and the concept of consistency from Holland's theory. He found that individuals with consistent patterns were significantly more internally-controlled than those with inconsistent patterns. Thomas (1976), surveying three secondary schools in Florida with the Career Development Responsibility scale, and the Career Maturity Inventory attitude scale, found significant differences for race, and locus of control when SES was controlled.

Breton (1972), in his large scale survey of social and academic factors in the career decisions of Canadian Youth, tabulated percentages which suggested a relationship between aspects of vocational maturity, such as involvement in career decision making, and sense of control over events. Gable and

Thompson (1976), using the CMI and MacDonald and Tseng's locus of control scale with 179 freshmen, found internally controlled women had significantly higher maturity. They noted that the importance of considering locus of control in vocational development is considerable.

It appears clear from the literature that a relationship exists between control orientation and vocational maturity. It is suggested that control orientation mediates various behaviours which make up vocational maturity.

#### Locus of Control and Cognitive Factors

The research concerning cognitive factors has important implications for career education. Internals will actively seek ways to control the environment when control is seen as instrumental to the desired goal. In order to manipulate the environment effectively, relevant information must be collected and used. In career selecting the ability to collect and use information requires attending to it, distinguishing relevant from irrelevant information, extracting information efficiently from ambiguous situations, and organizing and using the collected information (McNulty, 1983). Assuming that internals possess the above mentioned abilities to a greater extent than do externals, they would be expected to more actively see and use relevant information. Externals, on the other hand, would be expected not to see



any benefit in information, as they feel little control over the situation.

Seeman (1963) concluded that internals are superior in recall of information which was important to the attainment of personal goals. Davis and Phares (1967) noted that internals not only retain more information than externals, but also engage in more information seeking behaviour. Crandell and Lacy (1972) concluded that internals score higher on a perceptual task, such as the Embedded Figures Test, which requires close attention to stimulus cues, sorting of relevant information and analytic use of the information. Ducette and Wolk (1973) found that their data also supported the contention that internal subjects are more sensitive to task oriented stimuli. They observed that internals are superior to externals; in the utilization of previous experience in order to improve current performance; the recall of success following the presentation of feedback; and the forming of a successful problem solving strategy.

McNulty (1983) commented about the research in cognitive factors: "in summary, internals extracted, recalled, and utilized, task linked information, more effectively than externals within a task oriented situation" (p. 29).

Barron and Ganz (1972) found that "self discovered feedback" during a task performance, led to improved performance by internals, and decreased performance by externals. However, the offering of verbal feedback improved

the situation for externals only. A factor of socially mediated feedback appeared to help externals. Gregory and Nelson (1978), using extrinsic reinforcement to facilitate performance on an angle matching test, found that an explicit reinforcement increased the time spent in deliberation by externals, but not for internals. Lefcourt (1982) commented on these cognitive studies:

These studies serve to reinforce conclusions that externals seem to require that a structure be offered before they are likely to perform. Internals, by contrast, seem to be searching for the meaning of the various situations and tasks in which they are engaged, without being told to do so (p. 78).

Internal orientation tends to predispose individuals to react in specific ways with regard to information gathering and processing.

Specifically, in the research quoted, an internal orientation was associated with recall of information previously learned, detection of relevant information from the information encountered, and application of this information to specific tasks effectively. These skills are quite important in career planning. In order to develop appropriate plans, students must be able to recall information from varied learning experiences. They require information regarding many specifics about self and occupations, and alternatives open

to them. As this information is not always clearly related to career decision making, skills in detecting relevant information, and applying it, are essential.

The studies by Barron and Ganz (1972) and Gregory and Nelson (1978) provide insight into the importance of socially mediated reinforcement or feedback for those with external orientations. Any attempt to assist individuals who are externally-oriented to develop improved information gathering skills would appear to be facilitated by high levels of support and social reinforcement. Career decision making, if it is to be realistic, requires effective processing of information, and the mediating impact of control orientation is, hence, an important one.

#### Locus of Control and Career Counselling

The relationship between locus of control orientation, level of aspiration, and level of vocational maturity, suggests the importance of the concept in career counselling. If the relationship exists, would increasing internality lead to an increase in aspiration levels and vocational maturity? Several studies have called for use of the concept in career counselling.

Minnick et al. (1974) suggested that career-related activities, which strengthen the relationship between a student's behaviour and the reinforcement that follows, can increase vocational maturity. Denga (1984), in a survey of

200 rural secondary school students, found that internals were more intrinsically influenced in occupational choice. He concluded that high school students should in the future be screened with a locus of control instrument before occupational counselling. He suggested that students with an internal bias require a special kind of guidance to develop the awareness of external factors which cannot be controlled, such as the marketplace. Externals, on the other hand, require specialized assistance designed to increase internality. For example, these students must come to see the intrinsic factors which have been more significantly correlated with career or job satisfaction.

Kishar (1981) investigated the effect of self-esteem and locus of control orientation in career decision making in 224 adolescents in Fiji. Results indicated that both self-esteem and locus of control had significant effect on career decisional status of both sexes. However, one interesting point from this study was that locus of control orientation accounted for more of the variance in decision status than did self-esteem. Kishar contrasted the effects of self-esteem and locus of control. In making a vocational choice, an individual assesses an option in terms of whether or not it will permit the individual to function in a role consistent with his self-esteem. Self-esteem, in that sense, acts as a mediating variable. Locus of control orientation can also mediate outcomes through effecting information-gathering,

information-processing, and even decisional status (Kishar, 1981).

Thornton (1978) investigated the relationship between locus of control orientation and self reporting activity after a one-day career workshop, and found internals more able to explore careers and the means to attain them. He concluded that the workshop had a greater impact on the internals, implying that career planning programs should take steps to booster beliefs in an internal locus of control. Thornton commented "the introduction to career planning programs should emphasize that personal control is possible; persons with external views should be identified and counselled; and initial career enhancing actions should be reinforced" (p. 475).

The relationship between internality and superior career maturity, information gathering, and decisional status have been supported in the literature. These studies by Thornton (1978), Kishar (1981), Mennick (1974) and Denga (1984), carried the discussion one step further and called for strategies to increase internality prior to career intervention. Whether or not this is a feasible endeavour, depends upon the stability of this trait and its response to change attempts.

In summary, the concept of locus of control orientation has been found to correlate with most of the traditional variables studied in career planning research reviewed. The

following relationships have been supported by the reviewed research:

(i) Control orientation is related to achievement and deferral of gratification. Studies controlling for other factors, such as intelligence, suggested the function of control orientation as being a mediating variable (Seigalman, 1973; Wolk & Ducette, 1973).

(ii) Control orientation is related to higher and more realistic levels of aspiration. The research also suggests that knowledge of alternatives appears insufficient to increase aspirations levels. An internal control orientation appears to mediate the effective use of relevant knowledge in the process of developing aspirations (Gurin et al., 1970; Gurin et al., 1969).

(iii) Control orientation is related to measures of career maturity. Many of the traits associated with career maturity, such as acceptance of responsibility for choice, and effective processing of information, appear to be mediated by control orientation. (Hughson et al., 1975; Khan et al., 1983; Lokan et al., 1982; Thomas, 1976).

(iv) Control orientation correlates with various cognitive behaviours, usually associated with effective planning. These include information recall, information retention, information seeking and sorting (McNulty, 1983). This conclusion is extremely important due to role played by these behaviors in effective decision making.

Control orientation has correlated with the effectiveness of career counselling programs. Internally oriented individuals usually benefit more from traditional career education programs than externally oriented individuals. The research reviewed suggested either differential counselling approaches for varying control orientations or the modification of control orientation prior to career counselling.

The preceding studies established the relationship between internal locus of control and more realistic career aspirations (Burlin, 1976; Doucette & Wolk, 1972; Gurin et al., 1969), improved information processing (McNulty, 1983), and higher levels of career maturity (Breton, 1972; Khan et al., 1983; Lokan, 1982; Thomas, 1974). A question posed by these studies is whether increasing internal locus of control orientation in individuals leads to more realistic career aspirations, improved information processing, and higher levels of career maturity.

In addition to this question is the question of whether locus of control orientation can be modified through career interventions, which are often short in duration. The following section further explored the literature of studies concerning locus of control orientation change.

### Change in Locus of Control Orientation

Much research has focused on the conditions which facilitate change in locus of control orientation. Lefcourt (1982) organized these studies under the following headings:

- (i) natural and accidentally occurring changes;
- (ii) deliberately contrived and behaviourally assessed changes;
- (iii) scale assessed changes;

These headings will serve as groupings with which to review the relevant literature.

- (i) Natural and accidentally occurring change.

Locus of control orientation appears to change with age and with life situations. However, Weisz and Stipek (1982) surveyed studies considering effects of aging on control orientation but concluded that no clear answer was available.

Traumatic life events have been found to impact upon control orientation. Persons going through a major life crisis were found to become more internal as the crisis moved to resolution (Smith, 1970). It seems clear that environmental factors occurring around an individual can cause shifts in control orientation toward the internal or external direction, depending upon the nature of the event.

- (ii) Deliberately contrived and behaviourally assessed change.

Several researchers have made significant progress in investigating change of control orientation in school



children. Reimanis (1971) studied teachers, trained in modifying classroom procedures, to encourage children to develop feelings of internality. Experimental children were given more individual attention to assist their learning about behaviour consequences and consistency in the environment, around them. In a second study, with college students, Reimanis was successful with a group counselling approach emphasizing confrontation of external statements and replacement with internal ones. Students were observed to experience scale changes in internality as well as behavioral changes, such as taking new housing, changing study programs, seeking new instructors, etc.

DeCharms (1972) investigated a concept which was called "personal causation", and which is quite similar to the concept of locus of control. DeCharms described the concept of personal causation as:

The initiation by an individual of behaviour intended to produce a change in the environment. When a person initiates intentional behaviour, he experiences himself as having originated the intention, and the behaviour. He is the locus of causality of the behaviour, and he is said to be intrinsically motivated. Since he sees himself as the originator, we refer to him as the origin. When something external to the person impels him to behave, he experiences himself as the

instrument of the outside force, and the outside force 'is the locus of causality. He is said to be extrinsically motivated, and since the person is impelled from without, we refer to him as the pawn. We sometimes talk of people as primarily pawns, implying that they characteristically see themselves as not originating their own behaviour (pp. 96-97).

In his study, black elementary school teachers who received personal causation training designed and implemented exercises for 6th and 7th graders. The study was a longitudinal one and measures of motivation and academic achievement were obtained for 3 years from 5th to 7th grades. The experimental manipulation was accomplished through a two-step process. First, the teachers attended a motivational training session and second, exercises were developed by teachers and research staff designed to focus upon program objectives. The thrust of the study was that, to assist students to behave in an "origin manner", they would have to be assisted: (1) to determine realistic goals for themselves; (2) to know their strengths and weaknesses; (3) to determine concrete action that they can take now to help them reach their goals; and (4) to consider how they can tell whether or not they are approaching their goals. The exercises for the students stressed internal realistic goal setting, personal responsibility, adopting feelings of personal causation and confidence.

The results of the study suggested that personal causation training had positive effects on the motivated behaviour of both teachers and students. Students were observed to increase in scores of origin behaviour, academic achievement, and even attendance.

Dweck and Reppucci (1973) was also successful with school children, specifically those described by schools as "helpless" from the perspective of Seligman's concept of learned helplessness. In a 1975 study she experimented with a procedure of causal retribution with the purpose of producing a "tendency to persist", which she had previously (1973) associated with the attribution of outcome to effect. Her study contrasted the effectiveness of two types of training programs. The first provided the subjects with continuous success experiences. The second type focused on teaching the children to assume responsibility for their own failure. This was accomplished by encouraging attribution of failure to effort rather than to ability. When both groups were exposed to intermittent failure experiences, the first group's behaviour quickly deteriorated, while the second maintained performance levels. Their perceptions of control orientation effected their continued performance more than the patterns of reinforcement which they received.

Other studies using behaviourally-assessed change involved other age groups and various methods. Felton (1973) observed trainees involved in a process oriented training

program for middle level mental health workers. The program consisted of 90 minute intensive group counselling sessions, emphasizing internalization and actuation of responsible behaviour. The orientation of the program was the Gestalt focus on present time and behaviour, with emphasis on the use of language of responsibility and on responsible behaviour. Results showed a significant shift in locus of control scores as well as daily behaviour. Masters (1970) altered control orientation through influencing retribution of causality. A case study was presented in which an adolescent was encouraged to construe his "obedient behaviour" as an active and successful attempt on his part, to control parental behaviour, rather than just submission. Duckworth (1974) used a program designed to train individuals to apply generic problem-solving skills to their personal problems. The training sessions were 75 minutes long, and lasted for 5 weeks. Results indicated that the training group achieved a higher standard in subsequent study, became more emotionally stable, and developed an increased belief in internal control. An implication from this study is that the control orientation change, brought on by the problem solving training, had spin-off effects on emotionality and achievement.

(iii) Scale assessed changes.

Many studies have involved changes in locus of control orientation which have been measured only in terms of scale change. These types have been the most common and have

involved observing the effects of such variables as group growth experiences, crisis interventions, summer camp experiences, and life planning groups, etc.

Change of I-E orientation has been observed in situations of "psychological growth". Foulds (1971) found that college students became more internal on the Rotter scale after eight weeks of group growth experience. Gillis and Jessor (1970) found a similar increase in internality with psychiatric patients undergoing therapy. However, as would be expected, only the patients who were noted as improving, showed the change to a more internal position. Norwicki and Barnes (1973) found that inner city teens, experiencing a structured camp, also experienced an internal shift in control orientations.

Another group of studies focused in, to a greater extent, on direct change of I-E orientation and provided more information as to techniques found successful. Pierce and Schauble (1970), working with university students seeking counselling, found that locus of control scores could be changed with brief, straightforward intervention. This intervention took the form of discussion of the concept of locus of control, training in the discrimination of internal and external statements, and subsequent modification of external statements. Dua (1970) contrasted a behaviourally oriented action program with a re-education psychotherapy program, working with female university students who were

requesting help with relationship problems. The action program emphasized defining the problem in behavioral terms and establishing a sequence of specific actions which might be appropriate. The action method produced more orientation change than the re-education program, consisting of discussion of attitudes and emotions involved, and possible attitude change needed. Felton and Biggs (1972) found that collegiate low achievers going to a 10-week course, designed to prepare them for entry or re-entry into higher education, increased in internality. The program included reading, writing motivation, problem solving, psychology, various study skills labs, as well as group psychotherapy. The psychotherapy techniques included orientation to present time, confrontation, and the use of language emphasizing responsibility.

Several studies have focused on locus of control orientation as it applies to the general area of career planning. Individual goal-setting conferences were found to be effective on classroom achievement and on measured control orientation (Goa, 1979). Beatty and Gardiner (1980) studied the effects of resume writing and resume writing plus goal-setting, on control orientation of business college women. Both the resume writing group and the group with a goal-setting component, scored higher on internality than a control group. The resume writing placed emphasis in the following areas:

- (i) consideration of interests.
- (ii) discussion of total assets and barriers.
- (iii) clarification of students' perceptions about factors to consider in making vocational choices, and an attempt to bring the student to an awareness of the factors involved in success and failure.
- (iv) completion of an occupational worksheet on a specific occupation.

The component of goal-setting contained emphasis on the advantages of making short- or long-term plans. Students were also asked to do classroom and homework exercises within the context of immediate-, one-, and five-year goals. A study by Johnson and Bukacek (1979), with college students attending a life planning workshop, found little effect on locus of control scores. The workshop consisted of a five-hour session, concentrating on self-exploration and group interaction. It is possible that the short term nature of the workshop and/or the lack of specific focus on control orientation, resulted in no significant orientation change.

A self-paced student development course at Mesa Community College was found to result in improved college retention rates, enhanced intrinsic motivation and increased internality of perceived control (Mitchel and Young, 1979). Units of the course focused on the following areas:

- (i) familiarization with student services.
- (ii) assessing skills and weaknesses.
- (iii) learning to allocate time.
- (iv) articulating expectations of college and other plans.
- (v) delineation of educational goals.
- (vi) selecting relevant courses.

Several articles in the literature have attempted to review the methods used to achieve control orientation change, identifying procedures common to various studies.

MacDonald, Majumder and Greener (1972) described the three main themes at that time:

- (i) counselling for changes in response style, which focused on challenging and confronting external statements, rewarding internal statements, and focusing on the result of behaviour;
- (ii) action programs which proposed the planning and the carrying out of new behaviours, through the support of the counselling relationship;
- (iii) behavioral reinterpretation, where the central theme is changing the individual's perception about a particular behaviour, which was felt to be externally controlled.

Connolly (1980) concluded that the main thrusts in individual counselling were:



- (i) facilitating awareness.
- (ii) facilitating responsibility.
- (iii) identifying deficits.
- (iv) options counselling.

These steps are very similar to the first general theme mentioned by MacDonald et al. Another review focused in on much the same points, in an attempt to make applications to a work setting (Felton, 1979). The important ingredients of a successful approach were felt to be:

- (i) praising statements reflecting on internal approach;
- (ii) confronting statements which implied external orientation;
- (iii) clarification of problems and possible solutions;
- (iv) focusing on the here and now;
- (v) using the language of responsibility.

As can be seen in these summary findings, there is general agreement about factors which are important to change. The change process must be initiated through a process of confrontation, to facilitate awareness of the need for change. The internal viewpoint must be introduced, clarified and reinforced by the counsellor or the group. Actions to be undertaken must be clarified, with regard to the anticipated result, and new behaviour must be supported. A summary of control orientation change attempts concludes that the more action-oriented programs, stressing the learning of and

effecting of contingent results, seem to be optimal approaches for changing perceptions of causality (Lefcourt, 1982).

### Cognitive Developmental Models and I-E Change

Another area of research which offers direction for program development for I-E change in career counselling is the cognitive developmental one. Cognitive Developmentalism, a term designating a collection of cognitive developmental models, grew from the cognitive development work of Piaget and Erikson. These models have two main similarities. Firstly, they adopt a stage approach, describing individuals' cognitive development to include sequential stages and characteristic activities and organizations for each stage. Usually higher stages of cognitive development represent higher levels of differentiation and integration. Secondly, they use a constructivist explanation of personality, focusing upon the cognitive structures which color how people perceive, organize, and evaluate the meaning of events.

Of particular interest to our current investigation is Perry's model of intellectual development (Perry, 1970). Perry, in working with male undergraduates at Harvard, found that individuals at different developmental levels view knowledge, learning, and values quite differently. He proposed a nine stage hierarchy, describing the developmental stages students pass through. The importance of these

approaches lies in the fact that they are descriptive of the cognitive processes underlying career choice, and also prescriptive in the sense that they offer programming to improve career decision making.

The career developmental theory designed by Knefelkamp and Slepitz (1976) was conceived as a measure of college student cognitive development, as well as a blueprint for career intervention. Basically, this model describes the movement of a student from a simplistic, categorical view of careers, career counselling, and career decision making to a more complex, pluralistic view. The phases through which students are felt to progress are called dualism, multiplicity, and relativism. The variables which are of importance to this process of change are: (1) locus of control, (2) analysis, (3) synthesis, (4) semantic structure, (5) self processing, (6) openness to alternative perspectives, (7) ability to assume responsibility, (8) ability to take on new roles, and (9) ability to take risks with self. Of these nine variables, locus of control is felt to be one of the main factors to be considered in working with "Dualistic" students. This stage is characterized by simplistic, /dichotomous thinking about the career planning. Students at the lower level of this stage are

almost exclusively controlled by externals in their environment. Adhering to the belief that there is only one career for them they tend to turn to

parents, teachers, counsellors, interest inventories, the job market, and economy, as well as such factors as prestige, power, and financial reward, to define self and the right career decision (Knefelkamp and Slepitz, 1976, p. 55).

These authors contended that as students move upward along the hierarchy they display qualitative changes in their career decision making. These changes could be from an external orientation to a more inner-directed view, with an increased ability to accept responsibility, and an increased internal locus of control orientation. They would also display change from thinking in absolutes to cognitively complex ideas, and from being egocentric to having increased empathy with others.

Another contribution to the literature on cognitive development theory has been made by Blocher and Siegal (1981). They proposed six postulates of human cognitive behaviour, which were felt to be a basis for career development theory:

Postulate 1: Humans are active stimulus-seeking organisms.

Postulate 2: Humans are motivated to develop, when presented with information discrepant with existing information.

- Postulate 3: Interaction of humans with their environments, leads to the formation of cognitive structures, through which events are construed, interpreted, and evaluated.
- Postulate 4: Human cognitive activities vary on both structure and content.
- Postulate 5: Individuals vary widely on cognitive levels of development:
- Postulate 6: Psychological intervention should involve, first, thorough understanding of present conceptual systems, and second, the presentation of optimally discrepant information.

Relevant, especially, are postulate 3, which suggested the development of external control orientation, dependent on environmental factors, and postulate 6, which suggested procedures for change. Intervention strategies proposed by Blocher and Siegal focus on person-environment interactions. Strategies suggested include encouraging risk taking, challenge, support, structure, and/or practical tryout of skills.

Another model of cognitive development is the reflective judgement model (Kitchner & King, 1981). This model is based, in part, on the work of Perry (1970), and draws from various theories. According to Kitchner and King (1981):

The reflective judgement model consists of seven stages, which show how a network of logically related assumptions about reality and knowledge, interact to form the basis of peoples' beliefs. This model posits that the reasons a person chooses to explain and justify his or her point of view, are inextricably related to his or her assumptions about knowledge and reality. These assumptions provide categories, however implicit, to perceive and organize information in order to make judgments (p. 2)

Concerning the nature of the change which occurs as an individual develops cognitively, Brabeck (1980) commented:

Critical examinations of one's beliefs is an essential characteristic of high levels of reflective judgement. That is, logic and evidence must be applied, to objectively evaluate one's beliefs. Such thinking does not involve blind adoption, unreflective response nor imitation of models (p. 69).

Welfel (1982) discussed the application and implications of the reflective judgement model for career counselling, by comparing two different stages of the model. She described the reflective judgement model as providing a map to understand client responses, and suggested that use of client

descriptions of his or her career dilemma is an important factor to consider in determining career counselling goals and strategies.

These various approaches to an understanding of the cognitive developmental influence on the career process are different variations on a similar theme. This similarity is even more pronounced when they discuss how cognitive development can be enhanced. The proposed method is one of "challenge and support". These approaches suggested that information that is perceived to be somewhat different from the present cognitive structure, act as stimuli leading to more complex conceptualizations. However, information must be only minimally discrepant to have the desired effect; information that is too discrepant would not be accepted by the individual. Further, the necessity of "support" is stressed so that the changes are not too threatening.

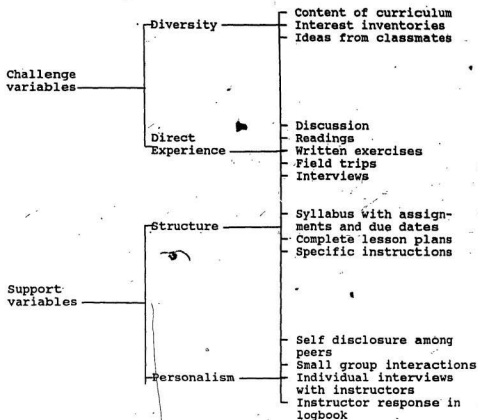
Several research efforts have assessed this approach when it is operationalized in a career development course. These studies have focused on providing students with appropriate levels of challenge and support. Research has concluded that this can best be achieved through variation in four components of instruction: personalism, structure, experience, and diversity (Knefelkamp et al., 1974; Widick et al., 1975). Touchton, Wertheimer, Cornfeld, and Harrison (1977) provided descriptions of the various sources of challenge and support that they used with a career planning course for Maryland

University undergraduates. Diversity was introduced by interest inventories, content of the curriculum, and ideas from classmates and instructors. Direct experience consisted of discussion, role playing, field trips and interviews. Structure consisted of a syllabus with assignment and due dates, complete lesson plans and specific instructions for exercises. Personalism consisted of self disclosure among peers and from instructor, small group interactions, individual interviews with instructor, and instructor responses in logbook (See Figure 2).

Results of the Touchton et al. study showed significantly higher levels of complexity of thinking about careers. Also significantly more students in the experimental group showed movement to a higher level of cognitive development.

Stephenson and Hunt (1977), using the same type of approach as shown in Figure 2, had similar results with the experimental group showing an average stage growth of .85 and the control groups showing an average stage growth of .25. Similar support also is to be found in the studies by Widdick, Kniefelkamp, and Parker (1975), and Mason (1978, cited in King & Parker, 1978).





**Figure 2:** Sources of Challenge and Support for Students in Dualism.

**NOTE:** From "Career Development and Decision Making: A Developmental Approach to the Classroom" by J.G. Touchton et. al., 1977, The Counselling Psychologist, 6(4); 45.

In summary of the contribution of the cognitive developmentalists to this discussion, these models provided descriptions of developmental stages effecting career planning, and suggested effective intervention techniques. Especially important is the attention paid the locus of control variable and relevance of programming to the present study.

As can be seen, these models presented blueprints for career programming. They have a theoretical base inclusive of several influencing variables, including semantic structure, openness to alternative perspectives, analysis, self processing, locus of control orientation, among others. Control orientation is felt to be a central factor, and one primary goal of the cognitive developmental theories is to move the student from primarily an external definition to a more internal one. As Kuhn, Ho, and Adams (1979) commented, the probability of perceiving changes as somewhat predictable and orderly is greater for those who possess the sort of cognitive strategies that enable them to feel some control over their environments. In the diagram in Figure 2, of a recommended program, the orientation change is accomplished by confrontation through readings, inventories, peer discussion, role playing, field trips, interviews, and support through structure and personalism.

The overlap between the process recommended by control orientation literature and that proposed by the developmental

theorists is quite extensive. However, the two literatures are not well cross-referenced and do not openly draw on each other. Because of this, an examination of their complementary characteristics appears necessary. Developmental models provide a framework for conceptualizing the cognitive task approach skills at play in career planning. The contribution that is made to the science of program development is significant. The major role given control orientation, in some of these developmental approaches, further suggests its importance as a vital task approach skill, a conclusion already well supported by the general control orientation literature.

#### Action-Based Decision Counselling

Because of the recommendations from the I-E literature concerning the use of an action oriented program, a method of counselling called Action-Based Decision Counselling (Peavy, 1985) was felt to be appropriate to review. This conception of career counselling has been developing since 1978 and has had as its own aim "to enable individuals to make good decisions, and to take action, when appropriate, consequent to decisions" (p. 121).

In this framework counselling is felt to be an educational activity through which an individual is assisted to develop an understanding of self and life situations, to

develop a critical evaluation of self and life situation, and to undertake a conscious and goal directed use of his/her possibilities within one's life situation.

Important in action based counselling are the following pragmatic questions (Peavy, 1981):

- (i) How does the individual at the time and in the particular context, perceive himself or herself and his or her surroundings?
- (ii) How can the individual's decisions be accounted for?
- (iii) What is the status of the individuals cognitive and behavioral competencies for achieving the tasks or goals under consideration?

Peavy maintained that in counselling efforts must be made to develop methods whereby individuals utilize their own feelings, concepts and behaviours as the information to be considered in bringing about alternatives, problem solving, and decision making. A problem the counsellor often faces is that the individual has learned beliefs, values, and attitudes which stand in the way of effective career planning, and present as misconceptions which must be refuted. Peavy (1981) noted:

Action-based counselling has the tasks: (i) searching for the convictions, beliefs, and notions that individuals have about themselves and which have a limiting, self defeating, or other

undesirable consequence for the person; (b) providing the guidance, instruction, and learning conditions so that the individual can learn conceptions which support the self in reliable, reality oriented ways (p. 62).

A central theme of ABC is that individuals are assumed to be agents capable of action on their own initiative. The social order the individual finds himself in is assumed neither to be given or inherited, but negotiated. The counsellor assists the individual to negotiate new alternatives, by the creating and implementing of career oriented actions. In ABC actions refer to behavioral acts, communicative acts, and mental acts. Tasks used by counsellors following this model involve clarifying, defining goals, locating alternatives, evaluating alternatives, observing, negotiating actions plans, teacher specific skills, dealing with feelings and supporting new acts.

The use of group counselling is encouraged by Peavy (1981) who suggested that the group should "support and require members to engage in experiential, critical enquiry into their own socialization as it effects their future development in terms of competencies, goals and strategies for achieving goals (p. 60)." Groups would also require frank, communication in individuals describing their situations and would support the testing out of new thoughts, perceptions, and acts.

The applicability of the ABC approach is apparent in its focusing on the beliefs and resultant actions of individuals, and in its focus upon supporting the development and implementation of new actions.

#### Summary

From the literature reviewed, it is apparent that the concept of locus of control orientation has a role to play in the understanding of, and the programming for, career decision making. From the review the following observations can be stated:

- (i) Control orientation appears to function as a mediating variable with regard to achievement behaviour (Lefcourt, 1982).
- (ii) Control orientation is correlated with level of career aspiration (Mugsud, 1980), and with discrepancy between aspiration and expected occupation (Burlin, 1976).
- (iii) Control orientation is correlated with measures of career maturity (Thomas, 1974).
- (iv) A strong relationship exists between control orientation and many information gathering and processing behaviours which are important in self and occupational exploration (McNulty, 1983).

- (v) Control orientation has been found to be correlated with socioeconomic factors (Breton, 1972), and therefore would be influenced by high levels of unemployment.
- (vi) A rationale for using the control orientation variable in career counselling has been developed by several researchers (Thornton, 1978; Deng, 1984).
- (vii) The literature has come to a consensus as to the components required in a control orientation change intervention (Felton, 1979; Connolly, 1980; McDonald et al., 1972).

Due to these conclusions, it appears quite appropriate to build into career interventions, programming for I-E change, especially in geographic areas where it is felt students control orientations are impeding their career planning.

This conclusion is further supported by the literature of the cognitive developmental approaches. The concept of control orientation is a factor recognized by several of these approaches and much overlap can be seen between programs recommended by these models and the control orientation change models. The contribution offered by the developmental model is seen in the well described career education models they promote. Their detailed descriptions of career planning can be easily infused with more emphasis upon control orientation

change, as suggested by the control orientation literature. This is especially useful because the I-E change literature is rooted mainly in individual and group counselling and has had little direct application to career counselling.

The literature of Action-Based Decision Counselling (Peavy, 1985) provided a counselling framework for program development. It contains, appropriately, a strong emphasis upon moving the student from his/her particular beliefs and behaviours, to ones which are both more accurate, and more active.

Overall, the literature suggested the benefits of infusing a career counselling intervention with a control orientation change emphasis. In the research that follows a program of approximately sixteen periods was run with fifteen level one senior high school students. The dependent variables were locus of control orientation, career exploration, and career maturity. It was suggested by the literature that locus of control orientation is associated with many components of career exploration. Also suggested was the correlation between locus of control orientation and career maturity, implying that an internal control orientation mediates many of the beliefs and behaviors involved in the concept of career maturity. Specific interests in running the program were: What effect would such a program have upon students locus of control orientation? Would involvement in the program increase students' levels of career maturity, and



self and occupational exploration? Would students initially assessed as having an external locus of control benefit as much from the program as internals? Finally, what components of the program would be of most benefit to increasing students involvement in career planning?

Specific research questions for the study are described in the following section.

### Research Questions

The following research questions were derived from a review of the literature of control orientation, and cognitive developmental career counselling. The questions attempt to evaluate the effectiveness of the program recommended by this study. A description of the specific variables analyzed can be found in Chapter IV.

Research Question #1. Locus of Control Orientation - relationship to demographic factors, and different career education programming.

- 1 (a). Were there differences in scores of students who were in honors, academic, and general programs on a pretest measure of locus of control orientation?
- 1 (b). Were there differences in scores of male and female students on a pretest measure of locus of control orientation?

- 1 (c). Were there differences in scores of students who participated in the treatment group and those who participated in the control group on a measure of control orientation, between pre and post administrations?
- 1 (d). Were these differences in scores of students who participated in the treatment groups, and those who participated in the Self-Directed Search group, on a measure of locus of control orientation, between pre and post administrations?
- 1 (e). Were there differences in scores of students who participated in the Self-Directed Search group, and those who participated in the control group, on a measure of locus of control orientation, between pre and post administrations?

Research Question #2: Career Maturity - relationship to demographic factors, differential career education programming, and the mediating variable of locus of control orientation.

- 2 (a). Were there differences in scores of students who were in academic, honors, and general programs on a pretest measure of career maturity?
- 2 (b). Were there differences in scores of male and female students on a pretest measure of career maturity?

- 2 (c). Were there differences in scores of students who participated in the treatment group and those who participated in the control group in a measure of career maturity, between pre and post administrations?
- 2 (d). Were there differences in scores of students who participated in the treatment group, and those who participated in the Self-Directed Search group on a measure of career maturity, between pre and post administrations?
- 2 (e). Were there differences in scores of students who participated in the Self-Directed Search group and those who participated in the control group on a measure of career maturity, between pre and post administrations?
- 2 (f). Were there differences in scores of students who were initially internally oriented and those who were externally oriented on a pretest measure of career maturity?
- 2 (g). Were there differences in scores of treatment students who were initially oriented, and those who were initially externally oriented on a measure of career maturity, between pre and post administrations?

Research Question #3: Career Exploration - relationship to demographic factors, different career education programming, and the mediating variable of locus of control orientation.

- 3 (a). Were there differences in scores of students who were in academic, honors, and general programs, on a pretest measure of career exploration?
- 3 (b). Were there differences in scores of male and female students on a pretest measure of career exploration?
- 3 (c). Were there differences in scores of students who participated in the treatment group, and those who participated in the control group on a measure of career exploration, between pre and post administrations?
- 3 (d). Were there differences in scores of students who participated in the treatment group and those who participated in the Self-Directed Search group on a measure of career exploration, between pre and post administrations?
- 3 (e). Were there differences in scores of students who participated in the Self-Directed Search group, and those who participated in the control group on a measure of career exploration, between pre and post administrations?
- 3 (f). Were there differences in scores of students who were initially internally oriented, and those who were initially externally oriented on a pretest measure of career exploration?

- 3 (g). Were there differences in scores of treatment group students who were initially internally oriented, and treatment students who were initially externally oriented on a measure of career exploration, between pre and post administrations?

## CHAPTER III

### METHODOLOGY

#### Introduction

The review of the literature clearly established the utility of an internal locus of control orientation, and the mediating effect it can play in the career choice process. The question which has been posed is to what extent can a control orientation change focus impact upon a career counselling intervention. This study developed a program or intervention, using a control orientation change focus, and examined its impact at the secondary school level.

#### General Design

As the literature review indicates, the cognitive developmental approach is perhaps the most comprehensive model of career intervention which is inclusive of the concept of control orientation. However, the specific locus of control change techniques from the literature are not included in model designs reviewed. This study attempted to modify the cognitive developmental model for career intervention by including a focus on control orientation change techniques.

The specific model used for the program was outlined in Figure 2 on page 69. In adapting this cognitive-developmental model, the main change was to add a direct attempt to alter

locus of control orientations through the discussion and experiential components of the program.

The four main components of the cognitive-developmental model for career education were described as diversity, direct experience, structure, and personalism (Touchton, et al., 1977). The changes which were introduced to these components to establish the focus upon control orientation change were as follows:

(i) Diversity - the content of the program included traditional areas such as self exploration, occupational exploration, and decision making. However, also included was programming for locus of control orientation change. This programming took the form of a unit specifically designed to have students identify external beliefs interfering with their career planning, confront these beliefs and consider more internal viewpoints. There was a focus on increasing awareness of alternative viewpoints and the need for individual-based planning. Ideas from classmates were solicited to provide alternative viewpoints, and special emphasis was given to control orientation views. Confrontation of external statements was encouraged by the group members and practiced by the instructor.

(ii) Direct Experience - this second challenge variable included an emphasis placed upon challenging external statements, and was achieved through discussions, readings, role playing, written exercises, field trips, and interviews.

Internal statements were developed, along with internally oriented plans and action programs.

(iii) The support component of structure consisted of the recommended elements of course structure, complete lesson plans, and specific instructions when completing exercises. The necessity of structure was stressed by both cognitive developmental and control orientation literature.

(iv) The support component of personalism consisted of self disclosure among participants and from the instructor, small group interactions, individuals interviews, and instructor response in logbooks. Focus was centered upon the reinforcing and developing of internal statements and actions.

In this modification of the cognitive developmental model, the following counselling techniques for changing locus of control orientation were included:

(i) The change process was initiated through a process of confrontation, to facilitate awareness of the need for change-through discussions, readings, written exercises, student and instructor responses; student views and beliefs were clarified and responded to. Specifically, the career education program was started with a unit challenging student beliefs which contained external locus of control orientations. In this exercise which was adapted from Carney (1978), students were taught how to confront and replace irrational beliefs. For this program a focus was placed upon identifying and confronting external beliefs. In addition,



in each subsequent unit relevant external beliefs which might have been at play were brought up for discussion, and confrontation. The process of confrontation was also assisted through exposure to the differing views of other group members, speakers, and instructor responses. The program used in this study is described fully in Appendix A.

(ii) The internal viewpoints were introduced, clarified and reinforced by group and instructor; with the support of small groups external views were challenged and refuted, and more internal beliefs and actions were reinforced.

(iii) Actions to be undertaken were clarified with regard to the anticipated result, and new behaviour was supported - through the exercises on modifying external beliefs, exploring values, interests, aptitudes, lifestyles, and occupational areas, and through homework assignments, students developed skills in self and career exploration and decision making.

(iv) An action orientation was followed stressing the learning of, and effecting of contingent results - through the use of the method of Action Counselling (Peavy, 1985). Emphasis was placed upon assisting the student to become a more active interpreter of his life situation and more adept at planning and implementing career oriented actions.

Sample

The student sample consisted of forty-five level one students enrolled in classes at Laval High School, Placentia. The students were from the communities of Placentia, Freshwater, Jerseyside and area. The area is suffering from economic recession with high unemployment rates and school dropout rates in the moderately high range.

Students in level one classes in this school have, for the past four years, received a career awareness intervention of about 6 periods built around the Self-Directed Search. Our sample was from the students who were about to participate in this intervention.

Initially, all students were administered a measure of locus of control orientation. Three groups consisting of 15 students in each, were then chosen. Students were ranked from low to high with reference to their scores on the pretest of locus of control orientation, and were assigned, in order, to one of the three treatment groups. During assignment, care was taken to insure that each group had equal distribution with regard to sex, locus of control orientation, and academic stream. The exact distribution is shown in Table 1.

Table 1

Distribution of Students to Groups by Sex, Locus of Control Orientation, and Academic Stream

Treatment Groups	Sex		Academic Stream			Control Orientation	
	Male	Female	Honors	Academic	General	Internal	External
Treatment Group	7	8	5	8	2	8	7
Self-Directed Search Group	7	8	4	9	2	8	7
No Treatment Control Group	6	9	5	8	2	6	9

The group participating in the developed program met as a separate group as they were taken from various classes. The schedule of group meetings was designed so that they met during school time, and, so that class time was not missed from any one class in particular, the times of the meetings varied.

The 15 students who received the Self-Directed Search intervention only met as a group to complete pre and posttesting. They participated in the Self-Directed Search in whichever of the Level One classes they were from.

The 15 students, in the control group met only as a group to complete pre and posttesting. Students in the treatment and control groups did not participate in the self-directed activity with the rest of the level ones, but instead had a study period.

### Instrumentation

Instruments included in the study were measures of control orientation (Rotter Internal-External Control Scale), career maturity (Career Development Inventory), career exploration (Career Exploration Survey), and process evaluation through student comment forms and worksheets.

(i) Rotter Internal-External Control Scale - Orientation to Locus of Control was measured by the instrument developed by Rotter (1966). Originally the Internal-External

Control Scale consisted of 100 forced choice items. A factor analysis was performed by Liverant et al. (1960) on the scale which yielded two major factors. On the basis of this, the item number was reduced to 60. It was determined that the scale correlated highly with the Marlow-Crowne Social Desirability Scale (Crowne & Marlow, 1964), and that the subscales were not generating independent production. This was corrected by means of a series of item analysis, further reducing the scale to 23 items, each of which correlated highly with behavioral predictions. The final correlation with the Marlow-Crowne Social Desirability Scale was reported to be between  $-.07$  and  $-.35$  (Rotter, 1966).

The Internal-External Control Scale used in the present study included the 23 items mentioned above plus six filler items. The filler items are intended to make the purpose of the test more ambiguous (Rotter, 1966). Each item consists of two statements, of which the examinee must select the one he/she believes to be more true. The maximum score is 23, and the higher the raw score, the greater the perception that reinforcement or rewards in life are externally controlled.

Reliability measures reported for the Internal-External (I-E) Control Scale are consistent and acceptable. Reported test-retest reliabilities range from  $.49$  to  $.83$  for various samples and time periods (Hersch and Shiebe, 1967; Joe, 1971; Lefcourt, 1966; Rotter, 1966).

Concurrent validity for the scale is high. The Internal-External Control Scale correlates between .55 and .60 with the James-Phares likert type scale of locus of control (Blackmen, 1962). It correlates with the Adams-Webber (1963) Story Completion Test, and also with the Card (1962) measure of locus of control from a semi-structured interview, where locus of control was recorded on the basis of judges' ratings.

Although Rotter (1966) contended that there was no differences among college students on the scale due to sex, a study by Feather (1967) demonstrated that females earned significantly higher external scores than males, at the University of England.

A relationship has also been found between scores and age (Distefane, Pryer and Smith, 1971). Mean external control scores for the 8th, 9th, 10th, and 11th grades were 10.7, 9.2, 9.4, and 7.8.

McNulty (1983) concluded that with a few exceptions (Buck and Austin, 1971; Ferguson and Kennedy, 1974; and Martin, 1975), researchers using Locus of Control scales have ignored the secondary school level. The adult scales have primarily been used with elementary children.

In reviewing the literature it was noted that the Rotter Internal-External Control Scale has been used extensively in research (Lefcourt, 1982). In recent commentary on measures of locus of control orientation Ward and Thomas (1985) commented that assessment in that area has been most often

accomplished through the use of the Rotter (1966) Scale. Flemming and Spooner (1985) reported after reviewing locus of control measures that the Rotter scale was one of the most widely used instruments and had validity well established. It should be noted, however, that the field of locus of control measurement contains many other instruments aimed at measuring specific types of locus of control orientation, and aimed at specific populations (Lefcourt, 1982). As the Rotter Scale has had such wide use, and as it has been used in several recent studies examining control orientation and career maturity (Altman et al., 1982; Denga, 1984; McNulty, 1983) it was the scale chosen for the current study.

(ii) Career Development Inventory - Vocational Maturity was measured by the Career Development Inventory (CDI) Form IV (Thompson, Lindeman, Super, Jordan & Myers, 1981). The CDI measures five aspects of vocational maturity as postulated by Super (1974): planning orientation, use of resources, career decision making, knowledge of the world of work, and knowledge of preferred occupation.

The "Career Planning" scale is reported to assess planfulness. Students are asked to report on how much time they have given to thinking about and planning various career related activities, such as their junior and senior high school courses, their in school and out of school activities, and their post school education and occupational careers. It

also inquires how far their planning has progressed and how much they think they know about jobs and occupations.

The "Career Exploration" scale assesses attitudes toward the use of resources in exploration. Students are asked which resources they would use in seeking information, and understanding opportunities, which of these they feel are useful, and how much they know about each of these.

The third scale "Decision Making" seeks to measure knowledge and application of career decision making principles. General statements as well as specific examples are used.

The fourth scale "World of Work Information" is designed to test knowledge of the world of work and general career awareness. It questions such areas as classifications of occupations, types and amounts of training, etc.

The fifth scale "Knowledge of Preferred Occupational Group" measures specific knowledge of the occupational group, or cluster of occupations which the student feels is of interest. Questions are asked regarding education required, nature of the job, physical demands, and personal characteristics related to success, etc. Three other scales provided by the Career Development Inventory are combinations of these five scales, and are reported to have increased reliabilities (Thompson et al., 1981). The Career Development-Attitudes scale (CDA) combines Career Planning and Career Exploration scales which are reported to be highly



intercorrelated and to share factor loadings. Career Development - Knowledge and Skills (CDK) combines Decision Making, and World of Work Information. Career Orientation Total (COT) combines Career Planning, Career Exploration, Decision Making, and World of Work Information, and is promoted by the authors as approaching a measure of career maturity. However they note that it only measures four of the five basic dimensions of Super's (1974) model of adolescent career maturity.

Reliability estimates in terms of internal consistencies (Cronbach alpha coefficients) of the five scales and the reliability estimates of the combined scales (Career Development Attitudes, Career Development-Knowledge and Skills, and Career Orientation Total) have been reported to be between .79 and .88, with a median of .86 (Thompson et al., 1981). The subscales of Career Planning, Career Exploration, and World of Work Information are reported to have median reliabilities of .89, .78, and .84 respectively. However the subscales Decision Making, and Knowledge of Preferred Occupation have lower reliability estimates reported as .67, and .60.

Measurement of a concept such as career maturity is not an area free from measurement problems. As Savickas (1984) commented "the growing number of career maturity instruments has outstripped counsellors' understanding of them. The differences among measures bearing similar titles is often

confusing and has led to their misapplication or misinterpretation." (p. 223) He differentiates measurement devices into those measuring stimulus variables, response variables and intervening organismic variables. The intervening variables are described as personality characteristics connecting vocational coping responses to developmental task stimuli. In this grouping are included attitudes toward vocational development tasks and decisional competencies acquired. These attitudes mediate readiness to cope with tasks, while the competencies structure coping responses. Savickas (1984) commented that "the CDI is most comprehensive measure of intervening career maturity because it measures all three types of intervening variables." (p. 228) These are described as motivation (awareness, direction, and maintenance of coping behaviors), structure (cognitive schemes used to organize experiences), and content (the material being processed by the mediating system).

Pinkey (1985) reported that Cronback alpha coefficients and standard errors of measurement (SEM) are available, indicating that the internal consistency of the CDI is generally good, except for the DM scale and the PO scale. He cautions that these scales have lower reliabilities and their use is questionable with individuals, although the other scales appear more appropriate. Also, as would be expected, all is not clear with regard to validity of this instrument. In our review of measures of career maturity, the Career

Development Inventory presented as a measure appropriate to use, however, has to be viewed as still in developmental stages.

(iii) Career Exploration Survey - The third measure used in the study was the Career Exploration Survey (Stumpf and Lockhart, 1983). This measure is concerned with several dimensions of career exploration beliefs, and behaviours. It consists of seven measures of the career exploration process, three reactions to exploration, and six beliefs about exploration.

Measures of the career exploration process include Self-exploration, Environmental Exploration, Number of Occupations considered, Intended-Systematic Exploration, Frequency of Exploration, Amount of Information, and the Focus of the exploration. These scales attempt to determine where the exploration has occurred, how it was done, how much was done, and whether it was focused or not.

Measures of beliefs about exploration include Beliefs About the Employment Outlook, Certainty of Obtaining Career Exploration Outcomes, External and Internal Search Instrumentality, Method Instrumentality, and the Importance of Obtaining the Career Preference. The Internal Search Instrumentality scale attempts to measure student attitudes toward the probability that learning about the self will result in obtaining career goals. The External Search Instrumentality scale attempts to measure attitudes toward

the probability that obtaining information on the labour market and job opportunities will result in obtaining career goals. Method Instrumentality refers to the probability that being intentional and systematic in career planning will result in obtaining career goals.

Other measures in the Career Exploration Survey are concerned with reactions to the exploratory process. These scales measure satisfaction with information obtained, exploration stress, and decisional stress.

The authors of the scale provided rigorous preliminary data with regard to the factor analysis of the scale items and the independence of the various subscales. Results of a factor analysis with varimax rotation indicated twelve of the fourteen dimensions included in the analysis emerged as separate factors. Two dimensions, Amount of Information and Certainty of Career Information Outcomes, were factorially complex (Stumpf, Colarelli, and Hartman, 1983). Concerning this, these authors commented:

The analysis of the dimension factor loadings relative to the model presented suggests that the complex loadings and multidimensional factors may reflect the reality of career exploration rather than a measurement problem. Specifically the three items that load on factors 1 and 4 suggest that Environmental Exploration and Amount of Information one obtains are related constructs. Because the

environment is a primary source of career information, its exploration would be expected to relate to the amount of information obtained (p. 200).

With regard to the intercorrelation of subscales, Stumpf et al. (1983) reported the median correlation among the sixteen dimensions was low with a median absolute of  $r = .15$ . Although the seven exploration process dimensions and the six belief dimensions were more highly correlated among themselves, even then the reported median correlation was low, with the median exploration process correlation being  $r = .25$ , and the median belief correlation being reported as  $r = .18$ . Those dimensions which were reported previously to be factorially complex showed higher intercorrelations. These were reported between the following dimensions: Environmental Exploration and Amount of Information; Amount of Information, Focus, and Satisfaction With Information; Employment Outlook and Certainty of Outcome; Amount of Information and External Search Instrumentality.

Overall, the scale factor analysis provided by the authors of the scale, offered strong indication that separate factors exist, and that dimensions of the exploration process, reactions to exploration, and beliefs regarding exploration, can be defined and measured reliably by self report. The lack of rigorous work with this scale by other researchers reflects the early life of the scale, and suggests some caution be

taken in interpreting results derived with its use. However the excellent model for examining the process of career exploration offered by the Career Exploration Survey strongly supports its use.

### Analysis

Data were gathered on each student's age, gender, and academic program. Two administrations were conducted of each of the following scales: Rotter Internal-External Control Scale (I-E Scale); Career Development Inventory (CDI); and the Career Exploration Survey (CES). In addition, anecdotal data from activity and comment sheets were collected and examined.

From the three scales, data were examined, using an Analysis of Variance, to determine differences among Treatment, Self-Directed Search, and Control group students, between pre and post administrations.

In addition, the possible mediating effect of the variable of control orientation was examined. The median I-E score for the full group of 45 students was used to divide the treatment group into internals (students scoring 9 and below), and externals (students scoring 10 and above). The advantage of the median split was to create equal sized groups for comparison. The procedure has also been used in the literature on the effects of locus of control orientation on student achievement (Altmann & Arambasich, 1982). These

students pre and post scores on the Career Development Inventory, Career Exploration Scale, and also anecdotal records, were then examined for internal and external groups.

The variables of gender and academic program were examined to determine differential career education programming needs of these groups. The pretest scores for the scales, CDI, CES, and I-E were examined with an analysis of variance for the groups differing on academic program, and for those differing on gender.

The next chapter presents a description of the findings as per the research questions.

## CHAPTER IV

## RESULTS

Introduction to Chapter

In this chapter the data and analysis information for the research questions is described. The format used includes a presentation of data and analysis information for each specific research question. At the end of the chapter a summary of main results is presented. Discussion of results, recommendations for practice, and recommendations for research are presented in Chapter V.

Data and Analysis Information

Research Question 1(a): Were there differences in scores of students who were in honors, academic, and general programs, on a pretest measure of locus of control orientation?

The question was examined in an attempt to determine differential career education needs of various academic streams. As can be seen in Table 2, no significant differences were seen between the I-E scores of these groups. However it may be worthy of note that the groups tended to score in an interesting direction, with the honors students most internal, followed by the academic students, and then by the general students. This trend if significant would have



Table 2

Full Sample Scores on the Rotter Internal-External Control Scale by Academic Stream

Academic Stream	N	Pretest I-E Score	
		Pretest M	Pretest SD
Honours Group	17	8.5	3.28
Academic Group	22	9.4	3.03
General Group	6	10.0	3.57

$F = .66, P > .05$

Table 3

Full Sample Scores on the Rotter Internal-External Control Scale by Gender

Gender	N	Pretest I-E Score	
		Pretest M	Pretest SD
Male	20	9.6	3.25
Female	25	8.8	3.13

$T = .88, P > .05$

supported the I-E literature relating internal control with academic achievement. From the perspective of this study, a significant difference would have implied that general students might require more emphasis upon control orientation in career education programming. Results in the present study may have been influenced by the small numbers in each group.

Research Question 1(b): Were there differences in the scores of male and female students on a pretest measure of locus of control orientation?

Again, this question was posed to determine differential programming needs with regard to the variable of control orientation between gender groups. As can be seen in Table 3, a trend was evident, although not a significant one, for female students to score more internal than males. This result supports studies which suggest control orientation differences between these groups.

Research Question 1(c): Were there differences in scores of students who participated in the treatment group and those who participated in the control group on a measure of locus of control orientation, between pre and post-administrations?

As can be seen in Table 4, the students in the treatment group did not lower their scores on this measure significantly more than control group students. There was evident a slight suggestive difference which may have been larger except it was affected by two extreme scores which reduced the mean change for the treatment group. The number of students in each group

whose posttest control orientation scores were at least two points more internal than pretest scores, also suggested change, as seven treatment group students reported such an orientation shift compared to four students for the control group.

Considering both of these points, a trend, although not a significant one, can be ascertained for the treatment group to have lowered their Rotter Internal-External Control scores, and to have become more internal in their locus of control orientations.

Research Question 1(d): Were there differences in these scores of students who participated in the treatment condition, and those who participated in the Self-Directed Search group, on a measure of locus of control orientation, between pre and post administrations?

No significant difference was seen here, indicating the treatment did not lead to a change in the internal-external locus of control orientations of treatment group students. However there were indications of slight change in the required direction which may have been significant if programming had been more intense in terms of control orientation change attempts. As can be seen in Table 4, the Self-Directed Search group had a slight mean shift in an external direction, between pre and post-administrations, as compared to the treatment group's larger mean shift in an internal direction. Also, with regard to the number of

students in each group whose Internal-External Control scores became more internal by at least two points, the treatment group had seven students in this category, while the Self-Directed Search group contained only four.

Observations on student behavior during programming further supported this trend, as the treatment group's level of interest in the programming continued to increase as the units progressed. The treatment group also became more active in their discussion of career plans, and requested more information relating to their career interests. These changes were not seen as often in the Self-Directed Search group.

Research Question 1(e): Were there differences in scores of students who participated in the control group, and students who participated in the Self-Directed Search group, on a measure of locus of control orientation, between pre and post-administrations?

Students in the Self-Directed Search group did not demonstrate an increase in internality compared to students in the control group (Table 4). No significant differences were seen in the control orientations of these two groups. Also, several observational indicators suggested that there was no change in the control orientations of control and Self-Directed Search group students. Both the Self-Directed Search group and the control group had four students each moving in an internal direction by at least two points. Observations of the Self-Directed Search group suggested that

instead of increasing their interest in career planning, students in this group became more passive in their level of career planning. This was somewhat understandable as the Self-Directed Search program did not lead to active discussion or planning.

Research Question 2(a): Were there differences in scores of student, according to academic program, on a pretest measure of career maturity?

Students in the Level One program were registered in three levels of mathematics; honors math -- a university preparatory math for advanced students; academic math -- a university preparatory course for average students; and general math -- a math stream designed for the non-university bound student. On the three summary scales, that were provided by the measure of career maturity used, the Career Development Inventory, the students enrolled in the honors program scored highest on one scale, (Table 5). Students enrolled in the honors and academic programs scored higher in the scale Career Development Knowledge. This scale measured career decision making ability; and knowledge about career development tasks. Students enrolled in the general program scored nonsignificantly higher on Career Development Attitude, which measured attitudes toward exploration and the usefulness of career information resources. These students had more exposure to job search, as they were closer to the employment

Table 4.

Scores on the Rotter Internal-External Control Scale by Treatment Condition

Treatment Condition	Rotter I-E Scale Scores			No. of Students Moving Internal by Two Points
	Pretest	Posttest	Post-Pre	
	M	M	M	
	N = 15	N = 15	N = 15	
Treatment Group	8.9	8.6	-.30	7
Self-Directed Q				
Search Group	9.2	9.5	+.40	4
No Treatment Group	9.3	9.2	-.13	4

$F = .25, p > .05$

Table 5

Full Sample Pretest Scores on the Career Development Inventory by Academic Stream

Career Development Inventory	Academic Stream						
	Honours N = 17		Academic N = 22		General N = 6		F Value
	M	SD	M	SD	M	SD	
Career Development Attitude	88.6	20.04	87.5	15.16	92.3*	13.81	0.17
Career Development Knowledge	107*	11.35	104.4	11.56	89.1	16.59	4.89*
Career Orientation							
Total	97.1	17.23	95.5	13.16	88.3	17.32	0.47

\* Program with the highest mean for that scale.

\*  $p < .05$

market than students enrolled in the academic and honors programs, and would have been expected to score highest on Career Exploration. These students would have more friends who were in the work force and would be required to make employment decisions earlier than academic and honors students, as post secondary training periods for general students are usually shorter in duration.

It is worthy of note that the scores these different groups received suggested differential career education needs of these groups. Students enrolled in the honors program, having scored low in career planning, are suggested to need to be alerted to the importance of looking ahead, and making tentative plans (Thompson et al., 1981). Students enrolled in the general program, besides being low in the Career Planning scale, also were low in the Decision Making and World of Work scales. Programming needs suggested were help in decision making, knowledge about and skills in dealing with career development tasks, and experiences to provide knowledge of the range of occupations open to them.

Research Question 2(b): Were there differences in scores of male and female students on a pretest measure of career maturity?

The data relating gender to career maturity pretest scores was also observed for trends. As seen in Table 6, female students scored significantly higher on Career Development Knowledge. The scales comprising this summary

Table 6

Full Sample Pretest Career Development Inventory Scores by Gender

Career Development Inventory Scales	Males N = 20		Females N = 25		F Value
	M	SD	M	SD	
Career Development Attitude	87.3	19.52	89.6	14.47	-0.43 NS
Career Development Knowledge	98.1	15.63	107.5	9.29	-2.51 *
Career Orientation Total	91.2	18.19	98.4	11.84	-1.55 NS

\*P &lt; .05

NS, not significant at .05 level



scale measured the ability to apply knowledge to career planning and decision making, and career awareness and occupational knowledge. No differences were recorded on Career Development Attitude Scale made up of Career Exploration and Career Planning scales..

Research Question 2(c): Were there differences in scores of students who participated in the treatment group, and those who participated in the control group on a measure of career maturity, between pre and post administrations?

As can be seen in Tables 7 and 8, the students in the treatment group and the control group made comparative and significant gains on several of the Career Development Inventory scales. The changes which resulted, occurred on those scales of the Career Development Inventory which were attitudinal, as opposed to those which were mainly cognitively or factually oriented. These scales were Career Planning, Career Exploration making up the summative scales, Career Development Attitude, and Career Orientation Total. These scales measured the reported amount of career planning the student was involved in, and student perceptions of sources of career information. Increases in the Career Planning scale was suggested by Thompson and Lindeman (1981) to suggest:

"arousal of the need to obtain and use information, and development of the curiosity about careers and the world of work." (p. 11)

Table 7

Posttest Scores on the Career Development Inventory  
By Treatment Condition

Career Development Inventory Scales	<u>Treatment Group</u> N = 15		<u>Self-Directed Search Group</u> N = 15		<u>No Treatment Control Group</u> N = 15		F Value
	M	SD	M	SD	M	SD	
Career Development Attitude	105.7	20.76	90.3	20.15	94.1	14.26	2.78NS
Career Development Knowledge	104.8	11.74	107.8	12.01	102.8	17.66	.36NS
Career Orientation Total	107.0	15.40	98.9	13.68	99.3	16.43	1.33NS

NS  $p > .05$

Table 8

Pretest and Posttest Differences on the Career Development  
Inventory by Treatment Condition

Career Development Inventory Scales	<u>Treatment Group</u> N = 15		<u>Self-Directed Search Group</u> N = 15		<u>No Treatment Control Group</u> N = 15		F Value
	M	SD	M	SD	M	SD	
Career Development Attitude	11.5	16.07	-7	10.51	13.5	15.54	4.35*
Career Development Knowledge	-9	10.10	3.3	8.97	2.4	7.04	.95NS
Career Orientation Total	7.3	12.11	1.73	8.56	10.5	8.69	3.02*

NS Treatment Group Scored Higher but  $p > .05$

\* Treatment Group and Control Group Scored Higher,  $p < .05$

Increases in the Career Exploration scale were suggested to reflect the development of exploratory attitudes toward career activities and sources of career information.

As previously reported, both the treatment group and the control group made significant gains. These gains were felt to be attributable to programming effects for the treatment group, however for the control group these changes could be attributable to expectancy and regression to the mean effects. In support of this possibility is the fact that the treatment group still had higher scores on the career maturity posttest, even though both groups made significant gains from pretest to posttest. A nonsignificant trend was ascertained for the treatment group to have had higher scores on the Career Development Attitude, and Career Orientation total posttests. These scales measured attitudinal changes in students' orientation toward career planning, self exploitation, and occupational exploration. Treatment group students did complete the programming with higher, although not significantly so, levels of these components of career maturity.

♦ Research Question 2(d): Were there differences in scores of students who participated in the treatment group and those who participated in the Self-Directed Search group, on a measure of career maturity, between pre and post administrations?

In contrast to the fact that both the treatment and control groups improved on several Career Development Inventory scales, the Self-Directed Search group demonstrated no change (Tables 7 and 8). The treatment group had significantly more change on the Career Development Attitude scale. They also reported higher scores on the Career Orientation Total scales, but these were not significant.

These results were interesting because, though both the treatment and control group had become more interested in career planning, and improved their attitudes towards sources of career information, the Self-Directed Search did not. As the Self-Directed Search Manual notes, after using the Self-Directed, students may not feel the need for further exploration and therefore, would not increase attitudes toward planning and exploration (Thompson et al., 1981).

Research Question 2(e): Were there differences in scores of students who participated in the Self-Directed Search Group, and those who participated in the control group on a measure of career maturity between pre and post administrations?

As can be seen in Table 8, the students in the control group improved their scores on the Career Development Inventory Scale, Career Development Attitude, more than the Self-Directed Search Group. The significance of the scales has been outlined in previous sections. The Self-Directed Search Group obviously did not improve attitudes toward

planning and exploration. A point worth noting, however, is that the pretest Career Development Inventory Scores for the control group were lower than for the Self-Directed Search Group, and some of the gain made by this former group could be attributed to regression to the mean.

Research Question 2(f): Were there differences in scores of students who were initially internally-oriented and those who were externally-oriented on a pretest measure of career maturity?

When the full sample of 45 students was divided into internally and externally oriented groups, there was no significant difference in the career maturity scores of these groups as measured by the Career Development Inventory. The results did show some suggestive findings for internals to score higher in several areas, however these were not statistically significant. Internals tended to show higher levels of involvement in a variety of career planning tasks, from discussing plans with friends, to gathering career related experiences. Their attitudes toward sources of career information tended toward being more positive, also.

There were no indications of difference on the summary scale of Career Development Knowledge (Table 9). This summary scale measured the ability to apply decision making skills, knowledge of career planning tasks, occupational structures, techniques for getting and holding a job, and specific knowledge of preferred occupations. These types of skills

most students would not have been expected to have developed at the grade 10 level. Therefore, it was not surprising that no differences between internals and externals were suggested.

Research Question 2(g): Were there differences in scores of treatment group students, who were initially internally-oriented, and those who were initially externally-oriented, on a measure of career maturity, between pre and post administrations?

When the treatment group was divided into an internal and external group to examine differences in career maturity, both groups were seen as making gains in several Career Development Inventory scores (Table 10). The internally-oriented and externally-oriented subgroupings made equal gain on the Career Development Attitude Scale measuring career planning attitudes and involvement and measuring attitudes toward sources of career and occupational information. It is worthy of note that externally-oriented students became interested in obtaining and using career information and curious about careers and the world of work, to the same degree as internally-oriented students.

Research Question 3(a): Were there differences in scores of students, according to academic program, on a pretest measure of career exploration?

As described in question 2(a), the variable of academic program was examined by assigning students to the categories of honors, academic, and general, as indicated by their

Table 9

Full Sample Pretest Career Development Inventory  
Scores by Locus of Control Orientation

Career Development Inventory Scales	<u>Internal Students</u>		<u>External Students</u>		T Value
	M	SD	M	SD	
	N = 22		N = 23		
Career Development Attitude	91.1	15.72	86.2	17.66	0.98NS
Career Development Knowledge	103.1	9.09	103.6	16.5	0.91NS
Career Development Total	96.4	12.67	94.1	17.80	0.50NS

NS  $P > .05$

Table 10

Pretest and Posttest Differences on the Career Development  
Inventory by Locus of Control Orientation, For Treatment  
Students

Career Development Inventory Scales	<u>Internal Students</u>		<u>External Students</u>		T Value
	M	SD	M	SD	
	N = 8		N = 7		
Career Development Attitude	12.6	14.97	10.1	18.37	.29NS
Career Development Knowledge	-1.3	10.44	-0.6	10.52	-0.13NS
Career Orientation Total	8.5	12.04	6.0	13.01	.38NS

NS  $P > .05$ , however trend evident for internals to score higher.

respective mathematics program. As indicated in Table 11, students enrolled in general math reported higher scores on the scales Intended Systematic Exploration, and Explorational Stress. These scales measures the amount of exploration stress the students were reporting, and their beliefs about the usefulness of systematic career exploration. Students enrolled in the general program, possibly being closer to actually seeking full-time employment, appeared to have more involvement in career exploration. Students enrolled in the honors program scored suggestively higher on the scales Frequency of Exploration, Employment Outlook, and Importance of Obtaining Preferred Position, but not significantly so. These students reported slightly more frequent exploration, being more optimistic about the job market, and feeling that their preferred occupational position was important to reach. It was interesting to note that although the students enrolled in the general program reported that they were involved more exploration, the students enrolled in the honors program specifically reported more information search.

Research Question 3(b): Were there differences in the scores of male and female students on a pretest measure of career exploration?

Males and females were similar on most of the Career Exploration Survey Scales, however males scored higher on one scale, as reported in Table 12. On the scale Intended-Systematic Exploration, males scored significantly higher,



Table 11

Full Sample Pretest Career Exploration Survey  
Scores by Academic Stream

Career Exploration Survey Scales	Academic Stream						
	Honours N = 17		Academic N = 22		General N = 6		F Value
	M	SD	M	SD	M	SD	
Environmental Exploration	1.6	0.51	1.6	0.42	1.8a	0.52	0.36
Self Exploration	2.2	0.88	2.0	0.63	2.7a	0.90	1.71
Intended-Systematic Exploration	1.6	0.02	1.6	0.62	2.3a	0.34	4.12*
Frequency of Exploration	0.8a	1.73	0.4	0.77	0.1	0.77	0.42
Explorational Stress	2.0	0.95	3.4a	1.65	3.2	1.26	4.25*
Decisional Stress	2.8	0.95	3.6	1.30	3.7a	0.57	2.50
Employment Outlook	3.6a	0.94	3.1	0.80	3.1	0.47	1.60
External Search Instrumentality	2.5	0.82	2.4	0.74	2.9a	0.25	1.23
Internal Search Instrumentality	2.8	0.81	2.8	0.64	3.1a	0.55	0.38
Importance of Obtaining Preferred Position	3.7a	1.01	3.4	1.02	3.2	0.78	0.80

a Group scoring highest mean for specific scale

\*  $P < .05$

NOTE: Most Career Exploration Survey responses are on the continuum 1-5.

Table 12

Full Sample Pretest Career Exploration Survey  
Scores By Gender

Career Exploration Survey Scales	Gender Groups				
	Males		Females		F Value
	M	SD	M	SD	
	N = 20		N = 25		
Environmental Exploration	1.8	.45	1.6	.54	1.50NS
Intended System Exploration	2.0	.67	1.5	.47	2.55*
Amount of Information	2.5	.66	2.3	.68	1.18NS
Satisfaction with Information	3.0	.66	2.7	.68	1.03NS
Explorational Stress	3.1	1.55	2.7	1.48	0.91NS
Method Instrumentality	2.5	.55	2.3	.91	0.93NS

\* Males scored higher,  $P < .05$

NS Trend apparent for males to score higher but  $P > .05$

indicating that they had experimented more with different career activities, including being involved in opportunities to demonstrate skills and try out roles. Scales in which a slight trend was seen for males to score higher, though not significant, were Environmental Exploration, Explorational Stress, and Method Instrumentality. Higher scores here would have indicated males being higher in measures of the exploration process, in that they reported more information about occupations, had experimented with more activities, and had acquired more information. They also would have tended to have higher levels of satisfaction with information they had acquired.

Research Question 3(c): Were there differences in scores of students who participated in the treatment group and those who participated in the control group, on a measure of career exploration, between pre and post administrations?

Of the formal measures which were used in the study, the most significant differences were the comparisons between treatments with the Career Exploration Survey. The treatment group had higher posttest scores and post-pre differences on many of the Career Exploration Survey Scales. It was quite noteworthy, that the control group reported very little change in their measures of career exploration, while the treatment group recorded higher changes, some significantly so, and some suggestive of trends. These results are reported in Tables 13 and 14.

Table 13

Pretest and Posttest Differences on the Career Exploration Survey Scores by Treatment Condition

Career Exploration Survey Scales	Treatment Group		Self-Directed Search Group		No Treatment Control Group		F Value
	M	SD	M	SD	M	SD	
	N = 15		N = 15		N = 15		
Environmental Exploration	0.9	0.75	0.5	0.70	-0.0	0.80	5.09*
Self Exploration	0.5	0.64	0.3	0.76	0.1	0.62	1.41NS
Intended Systematic Exploration	0.6	0.84	0.6	0.85	0.1	0.84	1.52
Frequency of Exploration	-0.5	1.13	-1.8	1.06	-1.1	1.18	3.41
Amount of Information	0.7	0.63	0.2	0.59	0.2	1.08	2.08NS
Satisfaction with Information	0.2	0.91	0.0	0.91	-0.2	0.66	.53NS
Explorational Stress	1.1	1.15	0.9	1.87	0.0	1.59	1.69NS
Decisional Stress	0.6	0.92	-0.4	1.58	-0.1	1.44	1.58NS
External Search Instrumentality	0.6	0.57	0.3	1.04	0.1	0.73	1.63NS
Internal Search Instrumentality	0.3	0.65	0.0	0.87	0.1	0.64	0.55NS
Method Instrumentality	0.3	0.84	0.5	0.92	0.1	0.61	0.94

NS Treatment group had highest mean, but not significant,  $P > .05$

\* Treatment group had significantly highest mean,  $P < .05$

Table 14

Posttest Career Exploration Survey Scores by  
Treatment Condition

Career Exploration Survey Scales	<u>Treatment Group</u>		<u>Self-Directed Search Group</u>		<u>No Treatment Control Group</u>		Value
	M	SD	M	SD	M	SD	
	N = 15		N = 15		N = 15		
Environmental Exploration	2.8	0.85	2.1	0.88	1.6	0.56	8.85*
Self Exploration	2.9	1.11	2.7	0.97	2.1	0.68	3.19*
Intended Systematic Exploration	2.6	0.89	2.2	0.90	1.6	0.61	5.29*
Frequency of Exploration	1.7	0.91	0.5	0.85	0.9	0.57	5.93*
Amount of Information	3.2	0.67	2.6	0.84	2.5	0.66	4.36*
Satisfaction with Information	3.2	0.88	3.0	0.83	2.7	0.64	1.70NS
Explorational Stress	3.8	1.48	3.0	1.74	3.1	1.93	0.91NS
External Search Instrumentality	3.3	0.64	2.8	0.82	2.5	0.90	4.12*
Internal Search Instrumentality	3.4	0.60	3.0	0.84	2.9	0.99	1.41NS
Decisional Stress	4.0	1.38	3.2	1.37	3.2	1.47	1.54NS
Method Instru- mentality	3.0	0.79	2.8	0.69	2.6	0.78	1.52NS

NS Trend evident for treatment group to score higher but  $P > .05$

\*  $P < .05$

With regard to the differences between pre and post scores, the treatment group had significantly higher increases in Environmental Exploration, and Frequency of Exploration. Trends, though not significant, were ascertained for larger treatment group increases on the scales, Self Exploration, Amount of Information, Explorational Stress, and Decisional Stress.

On the posttest, treatment students recorded significantly higher scores on Environmental Exploration, Self Exploration, Intended Systematic Exploration, Frequency of Exploration, Amount of Information, and External Search Instrumentality. Trends, though not significant, were evident for increases in Satisfaction with Information, Explorational Stress, Decisional Stress, and Method Instrumentality.

Overall, these results showed the treatment group became more involved in the career exploration process than the control group. These changes were in the areas of exploration of occupations, self assessments, increased experimentation with career activities, and more frequent information seeking. Also, a significant difference was seen in career exploration beliefs as the treatment group students increased their beliefs that exploration of career opportunities would lead to reaching career goals.

No difference between groups was seen on the scales, Employment Outlook, Certainty of Obtaining Preferred Position and Method Instrumentality. These first two beliefs, although

expected to change for the treatment group did not. It is expected that as the treatment did not involve a focus on investigating specific occupations, information to encourage reappraisal of these beliefs was not acquired.

As previously mentioned, these results were reinforced by the informal observation, that the treatment group students were more interested in information search, and actively made plans to gather career information. The Explorational Stress scale which suggested increased awareness of the need to explore, increased by a point for treatment students, and for controls remained unchanged. This could also be observed in active suggestions of new ways to initiate group occupational exploration, by treatment group members.

Research Question 3(d): Were there differences in scores of students who participated in the treatment group, and those who participated in the Self-Directed Search Group, on a measure of career exploration between pre and post administrations?

Overall, students who participated in the treatment group increased their career exploration more than those in the Self-directed Search Group, but these differences were not as large as between treatment and control group members. A trend, although not a significant one, was evident for treatment group students to have higher increases in scores on the scales Environmental Exploration, Self Exploration, Frequency of Exploration, Amount of Information, Explorational

Stress, Decisional Stress, and External and Internal Search Instrumentalities. On the posttest scores, the treatment group was significantly higher on the scales Environmental Exploration, Frequency of Exploration, and Amount of Information. The treatment contributed most in the areas of amount of information gathered, the level of decisional stress perceived, and in the amount of environmental exploration. The Self-Directed Search treatment was equally effective in improving beliefs in the benefits of systematic career search. However, the Self-Directed Search treatment was most deficit in increasing belief that internal and external career exploration leads to achieving career objectives. The treatment group students appeared to be better, more active information gatherers.

Research Question 3(e): Were there differences in scores of students who participated in the Self-Directed Search Group, and those who participated in the control group, on a measure of career exploration, between pre and post administrations?

There was no significant difference in CES scores of the Self-Directed Search group and the control group. However, consistent higher scores (although not significant) for the Self-Directed Search students were suggestive of possible trends in the data. The Self-Directed Search Group tended to produce more change in the scales Environmental Exploration, Self Exploration and Intended Systematic Exploration



components of career exploration process. However, in the process components of Frequency of Exploration, and Amount of Information, The Self-Directed Search Group improved no more than the control group. In the Career Exploration Survey Scales concerning reactions to career exploration, the Self-Directed Search students scores suggested increases in Explorational Stress, but not in Decisional Stress or in satisfaction with the career information they possessed. With regard to the Career Exploration Survey scales, concerning career exploration beliefs, the Self-Directed Search treatment resulted in nonsignificant increased Method Instrumentality, but no change in Internal and External Instrumentality, Employment Outlook, or Certainty of Obtaining Preferred Position.

In general, the trend suggested that the Self-Directed Search treatment was effective in increasing exploration, but not amount of information processed. It was effective in increasing belief that exploration should be systematic, but not in increasing the perceived value of self and occupational exploration to achieving career outcomes. However due to the nonsignificant level of results no conclusions are possible.

Research Question 3(f): Were there differences in scores of students who were initially internally-oriented and those who were initially externally-oriented, on a pretest measure of career exploration?

In the full sample of 45 students, those who had an internal locus of control orientation, in terms of the group median, scored higher on only one measure of career exploration, in comparison to those who had an external locus of control orientation (Table 15). A significant difference was seen in the scale Amount of Information, indicating that internals saw themselves as having more information acquired on jobs, organizations and themselves. A suggested trend, although not a significant one, was seen in internals scoring higher on the scales Environmental Exploration, Internal Search Instrumentality, and External Search Instrumentality. Overall, internals appeared to have gathered more information and held more positive attitudes to the value of self and occupational exploration. These results were suggestive that the internal group were much better processors of career information.

Research Question 3(g): Were there differences in scores of treatment students who were initially internally-oriented, and those who were initially externally-oriented, on a measure of career exploration, between pre and post administrations?

When the treatment group students were assigned to internal and external subgroupings, for the purposes of analysis, internals showed significant improvement on only one CES scale, Employment Outlook (Table 16). Trends in the data were also reviewed and these suggested possible relationships which appear relevant for further investigation. The

Table 15

Pretest Career Exploration Survey Scores by  
Internal-External Locus of Control Orientation

Career Exploration Inventory Scales	<u>Internal Students</u>		<u>External Students</u>		T Value
	N = 22		N = 22		
	M	SD	M	SD	
Environmental Exploration	1.8	0.54	1.5	0.47	1.50NS
Amount of Information	2.6	0.54	2.1	0.70	2.97*
External Search Instrumentality	2.6	0.60	2.4	0.88	1.04NS
Internal Search Instrumentality	3.0	0.43	2.6	0.90	1.62NS
Importance of Obtaining Preferred Position	3.3	1.08	3.7	0.85	-1.28

NS Internals had nonsignificant higher scores,  $P > .05$

\* Internals had significantly higher scores,  $P < .05$

Table 16

Pretest and Posttest Differences on the Career Exploration Survey Scores by Internal-External Control Orientation, For Treatment Students

Career Exploration Survey Scales	Internal Students		External Students		T Value
	N = 8		N = 7		
	M	SD	M	SD	
Focus	.2	.83	.1	.94	0.24a
Environmental Exploration	1.1	.76	.7	.74	0.91a
Self Exploration	.6	.61	.3	.67	1.09a
Frequency of Exploration	1.8	1.06	1.1	.49	0.78a
Satisfaction with Information	.1	.50	.3	1.42	-0.34b
Explorational Stress	1.4	1.14	.6	1.12	1.14a
Employment Outlook	.3	.72	-.5	.47	2.27*
External Search Instrumentality	.6	.52	.7	.70	-00.41b
Internal Search Instrumentality	.3	.62	.4	.77	-.41b
Method Instru- mentality	.6	.72	-.1	.87	1.42a
Importance of Preferred Position	.5	.85	-.1	.68	1.11a

a Trend evident for internals to score nonsignificantly higher,  $P > .05$

b Trend evident for externals to score nonsignificantly higher,  $P > .05$

\* Internals scored significantly higher,  $P < .05$

internals showed higher nonsignificant increases in eight of the Career Exploration Survey Scales, while the externals had larger increases in only three scales. Most of the difference, as can be seen in Table 16, was in the scales Environmental Exploration, Self Exploration, Frequency of Exploration, Explorational Stress, Employment Outlook, and Method Instrumentality. The internals tended to respond with higher levels of exploration than externals, and improved their beliefs in systematic exploration, and the employment outlook. The external group showed more gain in Internal Search Instrumentality, a scale in which they had low pretest scores, and which was a deficit area for them. The external group of subjects, while showing overall lower gains in career exploration than internals, did report more gains on most Career Exploration Survey scales than both internals and externals from the control and Self-Directed Search Groups.

#### Summary

From the results of the study reported in the previous sections, the following summary statements were arrived at:

- (1) Students with internal locus of control orientations did not demonstrate higher scores on measures of career maturity. Higher Career Development Attitude scores indicated internals with more positive attitudes toward career planning, however these were not at significance level. Internal

students did have higher scores on one scale of the measure of career exploration, Amount of Information. This indicated internals favored having access to more career information than the external students. Some nonsignificant trends also suggested internals with positive attitudes toward the value of self and occupational exploration.

(ii) Internal-external locus of control orientation was found not to change significantly following the short career education intervention. Some indicators of change were present, however, and a revised program with more intensive control orientation change techniques was suggested.

(iii) Students' level of career maturity increases in several of the measured areas following the treatment program. More change was evident in the areas of increased interest in career planning, and improved attitudes toward career planning. However, increases shown by the no treatment control group, which may have been a regression to the mean affect, placed some confusion over actual impact of the treatment program.

(iv) Students' levels of career exploration improved significantly after treatment specifically in their attitudes toward, and frequency of, environmental exploration. The comparison of posttest scores on the measure of career exploration showed higher treatment group levels in the amount of career exploration of self and occupations, and in their beliefs that career exploration would lead to career goals.

(v) A trend was evident for the Self-Directed Search activity to have no impact upon career exploration attitudes. This was seen, specifically, in attitudes towards the instrumentality of career search, and in observational data.

(vi) A trend was seen for students of differing academic program and different gender, to have specific areas of career education programming needs.

These results, subsequent conclusions, and implications are discussed in the next chapter.

## CHAPTER V

## CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

A career education program, comprised after an extensive review of the literature and programs, was piloted with Level One High School students. The program contained an emphasis on changing students' internal-external locus of control orientation, a variable suggested by the literature to mediate career maturity and career exploration. As previously reported in Chapter IV, information was gathered pre and post on locus of control orientation, career exploration, and career maturity. Following, is a discussion of the findings, with recommendations for further practice and research.

Programming For I-E Change


As previously reported, the treatment program did not produce a significant change in the locus of control orientation of students receiving that program. At this point it was not apparent what program components would require improvement, or whether or not the variables focused on would require a longer intervention. However, there were indications that slight change might have been occurring, however below significance levels. Results which suggested slight change were: the nonsignificant but decreasing I-E scores for the treatment group; the greater number of



treatment students who moved internally by at least two scale score points; and observations that the treatments became more active in their career planning. Whether or not a longer or more intensive treatment program would have had a significant effect on control orientation remains a question for further research. The current study does suggest that further examination of the I-E variable with a revised treatment program might be worthwhile.

The specific programming used in the treatment program, as previously reported, was adopted from models suggested by Cognitive-Developmental Career Counselling, and the literature on change in Internal-External Locus of Control. Touchton et al. (1977), outlined the basic structure for programming, designed to move students developmentally, as requiring components of challenge and support. The components were found to be supportive of cognitive development growth away from dualistic thinking, allowing for a qualitative different view of the information available, and encouraging more individual responsibility. Challenge variables in the model were a high degree of program diversity in the form of content, interest inventories, different viewpoints, and larger degrees of experiential learning, such as discussion, written exercises, interviews, etc.

The literature of Internal-External locus of control change strongly promoted the confrontation of external statements, to facilitate the need to change, through



individual or group process (Felton, 1979). McDonald, Majumder, and Greener (1972), reported a main challenge strategy to be counselling for change in individual response style, focusing on challenging and confronting external statements and focusing upon the results of behaviour.

In the current study, in which these procedures were included in the treatment, some of the most lively discussion occurred when student beliefs were confronted, and different viewpoints exchanged. In the unit formally designed to challenge beliefs, and in subsequent confrontations, students became interested with, and involved in questioning and reviewing their beliefs toward career planning. Several students reported these units to be the most beneficial components of the program. On comment forms used for program evaluation, specific student preferences were noted regarding some of challenge variables. Challenge components involving discussion, and questioning and confronting beliefs, were most often preferred by internally oriented students, whereas externally-oriented students tended to prefer such activities as reviewing print material. As the program progressed, students who moved in an internal direction by two points or less, on the Rotter-Internal-External Scale, all continued to report preferring traditional career education activities. However, students in the treatment group who moved in an internal direction by three Rotter Internal-External Scale points or more, all preferred program activities such as

planning future steps, discussion of reasons people do not career plan, discussion with resource people and considering pros and cons of various alternatives. This observation strongly suggested the importance of these challenge variables to change in locus of control orientation.

One of the limitations of the current study, and a possible factor which contributed to weak results was that individual confrontation as a technique was not incorporated in this study as much as had been intended. Confrontation was utilized, however, through the medium group discussion.

Another major programming variable was that of support. This variable is broken down by the Cognitive-Developmental Model into structure and personalism. One major support found to contribute to program variables was group format used. During introductory sessions, space and scheduling problems delayed implementation of a group format. As soon as students began to meet as a group, there was a noticeable change in student behaviour. As the program progressed, students began to demonstrate higher levels of interest. Also, they became more involved in, and more relaxed with, small group discussion. In general, the group format, as opposed to the classroom format, appeared much more supportive of program goals. The group format was supported also by Peavy (1981), who acknowledges the supportive role provided by the use of this method. The group format supports and encourages members to engage in critical enquiry of their own

ideas and beliefs and supports frank exchange of thoughts. Cognitive-Development Models also promote the use of small group interactions (Touchton et al., 1977). Further support for this type of method was seen in the many studies concerning locus of control change which used a group counselling approach.

Structure also presented as an important support component, especially in early meetings when some treatment group members appeared to find the idea of career planning to be too intimidating. Structure was provided by the use of set activities, structured units, activity sheets, and small group discussion. These variables were recommended in the literature of Cognitive Developmental Career Counselling (Touchton et al. 1977). Internal-External Control change literature recommended structure variables of identification of specific beliefs and behaviours, focusing on specifically what the student could do, in terms of new career search behaviours and provision of reinforcement through the instructor and/or the group (Lefcourt, 1981). In general there appear enough suggestive evidence to provide encouragement for further research.

#### Programming For Increased Career Maturity

The treatment program did lead to increases in some measured areas of career maturity. The treatment group did

make gains in the areas measured by the Career Development Inventory's Career Development Attitude, and Career Orientation Total Scales. The Self Directed Search Group made almost no gain on these measures of career maturity and the treatment group made significantly more gain at the .05 level of significance. The treatment group reported significantly more career planning involvement, and more positive attitudes towards sources of career information. However, the results are not quite as clear, as the no treatment control group made comparable gains to the treatment group on these CDI scales. The movement of the no treatment control group is felt to be due to several factors. Firstly, the no treatment control group had scores on the CDI pre test lower than the other two groups, and their subsequent increase could be partly explained as a "regression to the mean" effect. Secondly, this group involved 20 students out of a Level One class of 100 students, the remaining 80 of which were receiving a career education program that semester. It is quite possible that part of their score increases were due to an expectation effect, or due to an increase in their perceived value of career planning.

The post test scores for the treatment group were higher than both other groups, and a trend was evident, though not significant, for the treatment to have contributed to the career maturity of students in the areas of Career Planning and Career Exploration, to a larger degree, than both control

and Self-Directed Search conditions. This suggests that treatment group students reported more planfulness in their approach to careers, and were more alert to the importance of looking ahead and making tentative career plans. Also they reported more positive exploratory attitudes towards sources of career information.

With comparisons to the norms provided with the Career Development Inventory, the students in the treatment group, had a mean Career Planning score at the fifty-fourth percentile. The control and Self-Directed Search groups had means at the thirty-second percentile. For the Career Exploration Scale, the treatment group mean was at the seventy-second percentile, as opposed to the fifty-fourth percentile for the other two groups. It was worthy of note that the local samples were most deficit, compared to CDI norms, on the Career Development Attitude scale. According to Thompson and Lindeman (1981), this scale suggested a "programming need not so much for information, as provided by most career education courses, but for arousal to the need to obtain and use information, and for the development of curiosity about careers and the need to work. Students whose scores are average or compared to their friends, may be considered ready, for other types of career education activities." (p. 8)

This point highlights the importance of the type of change encouraged by the treatment program. From the

perspective of Social Learning theory, attitudes measured by the Career Development Attitude Scale would be considered as primary task approach skills, and would be expected to mediate the impact of future career planning activities. From the perspective of career maturity literature Savickas (1984) describes intervening career maturity variables as: "personal characteristics that connect vocational coping responses to developmental task stimuli, including attitudes toward vocational developmental tasks. These attitudes mediate readiness to cope with tasks." (p. 223)

A trend in the data for increased career maturity in conjunction with increases in locus of control orientation would have supported previous research correlating these variables (Breton, 1972; Gable et al., 1976; Khan et al., 1983; Lokan, 1982; Thomas, 1974; Thomas et al., 1976). However, in the current study as results were not significant, but only suggestive, no conclusions can be reached concerning the mediating role of control orientation in the development of career maturity.

#### Programming For Increased Career Exploration

The treatment program did affect the career exploration beliefs and behaviours of the students involved. The treatment group, on posttest CES measures, scored significantly higher than the other groups on Environmental

Exploration, Frequency of Information, and Amount of Information. They scored higher than the SDS group and significantly higher than the no treatment control group on Intended-Systematic Exploration, and Self Exploration. Treatment group students clearly reported more career exploration than other groups. The SDS group did report more self and occupational exploration than did the no treatment control, however, in the frequency of exploration variable and the amount of information gathered, the SDS group's scores were no higher than controls. In the career decision making process, the ability to collect and utilize information is considered of prime importance. McNaulty, (1984) has described components of information processing as being attending to information, distinguishing relevant from irrelevant information, extracting information from ambiguous situations, and using collected information. The data of this study supports previous literature associating information gathering with internal-external locus of control orientation, (Crandell & Lacy, 1972; Davis & Phares, 1967; Ducette & Wolk, 1973; Seeman, 1963). This study was not supportive of the important role locus of control orientation might play as a mediating variable, as the results although were only mildly suggestive in this direction.

CES measures of career exploration beliefs include the scales, Employment Outlook, External Instrumentality, Internal Instrumentality, Method Instrumentality, and Importance of



Obtaining Preferred Position. The perceptions of the labour market and the certainty of obtaining the preferred position were not greater for treatment students. However, External Search Instrumentality was significantly higher, and Internal Search Instrumentality scenes were suggestive. Again the Self-Directed Search group performed no better than no treatment controls.

Beliefs that search behaviours are instrumental in achieving career goals have been related to motivation to search, direction of search and method of search (Vroom, 1964; Wanous, 1980). Individual beliefs that they can affect desired outcome, influence the amount of effort they are willing to exert. (Dweck, 1975; Langer, 1975). In the present study, the fact that the beliefs in the instrumentalities showed a tendency to improve provided mild support to the benefits of the treatment. However, results cannot be viewed as anything but suggestive, as the mild supportive evidence could be chance determined. It is interesting to note the similarity between the constructs of control orientation and the instrumentalities of career search beliefs. Possible ways by which locus of control orientation might mediate career exploration are suggested in these variables.

CES measures of reaction to exploration attempt to measure feelings about the information acquired, or not yet acquired (Stumpf, Colarelli, and Hartman, 1983). With regard to Satisfaction with Information scale, the treatment group

post tested nonsignificantly higher. Also both Explorational and Decisional Stress increased, although again not at .05 level of significance.

The main areas of improvement, in the areas of career exploration for the treatment group, were career exploration behaviour and the instrumentality of career search. The process model of Career Exploration (Stumpf, Colarelli, and Hartman, 1983), outlined in Figure 3, shows where these factors fit into career exploration.

This process model describes how career-related beliefs, career exploration, and effects of exploration are related in a system of career exploration (Figure 3). Stumpf et al. (1983) comment on the role that instrumentalities of career exploration play:

"The assumption that career exploration is a conscious process implies that at any given time individuals are acting upon a set of beliefs and perceptions, regardless of whether they are realistic" (p. 193). In this model the placement of the beliefs in the instrumentality of career search, at the beginning, underscores the mediating effect they have on the whole career search process.

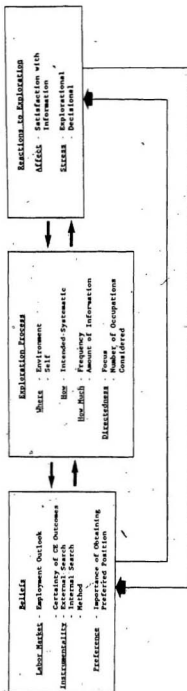


Figure 3: A Process Model of Career Exploration

NOTE: From "Development of the Career Development Survey" by S. L. Spruyt et. al., 1993 Journal of Vocational Behavior, 22, 196.

### Program Effectiveness For Internal/Externals

Overall, the literature previously reviewed has suggested that students with internal locus of control orientations gain more from career education than do externals (Thornton, 1978). In the current study, internals had higher increases in most scale measures, however only one was significant at the .05 level of significance. As the treatment group only provided low numbers for our internal and external groups, these results could be indicative of a trend the statistics could not verify.

Significant change was recorded in employment outlook, where internals became more optimistic about the employment picture. In other areas, results were only suggestive as no significant levels were seen. These areas, where results were suggestive, included attitudes toward career exploration and sources of information, the instrumentality of career exploitation, explorational stress, and career exploration.

Compared to externals and internals in other treatment conditions, the treatment external group scores were nonsignificantly higher in the areas of career exploration and career exploration instrumentality.

Although not significant, a trend was evident for the treatment to increase the amount of exploration in which externals were involved. Of note, also, was the fact that both externals and internals increased their Career Planning equally and significantly. The treatment was equally

effective for internals and externals in arousing them to the need to obtain and use information, and developing curiosity about careers and the world of work. Also, worthy of note, a trend was evident, although not significant, for the external treatment students to increase their beliefs in the instrumentalities of career search to a larger degree, than any other group. Associated with these increases for externals was the move in the I-E scores of all treatment externals in an internal direction.

Informal data, in the form of comment forms, indicated that internals consistently rated program components as being more helpful, however both internals and externals increased their ratings during the program. As previously mentioned, externals who changed their I-E scores internally by at least 3 points, also had improved career maturity scores and reported more preference for program components involving process components.

#### Demographics

From the data, differences were seen in the variables of career maturity and career exploration pretest measures, between groups of different gender and academic program. Other demographic variables which might impact such as community size, age, school, did not vary for the current study.

On the variable of gender, results indicated significant differences between males and females. Females scored higher on the Career Development Inventory summary scales of Career Development Knowledge. The scales comprising this summary scale measured the ability to apply knowledge and insight to career planning, and career awareness and occupational knowledge. The scales tend to measure cognitive rather than attitudinal factors. In the norming data for the Career Development Inventory, grades XI and XII females tended to score higher on the cognitively oriented scales of World of Work Information and Decision Making (Thompson & Lindeman, 1981). In previous Newfoundland studies gender has been associated with aspiration level (Campbell et al., 1975), and post secondary attendance (Shave, 1984). Thompson and Lindeman suggest differences in these scale scores between gender groups reflect correlation of gender and academic achievement for these ages. However, if these differences are indicative of true gender differences in career maturity, then males would require more help in learning career decision skills, becoming aware of career developmental tasks and coping behaviours, and acquiring world of work information.

With regard to level of academic programming, student's levels of career maturity and exploration did not vary significantly. Correlations may not be present among these variables, or may not be present at the particular level of education sampled. However some suggestive trends were

evident and could warrant further exploration. Generally highest levels of career maturity were seen in honours students, except for measures of career exploration, in which general students tended to score higher. The general students tended to score highest on these areas, possibly due to their need to make job decisions sooner, as many of them will enter the work force before academic and honors students. It is interesting to note that this group who, perhaps, have the most immediate need for career maturity, scored quite a bit lower than both academic and honors groups on the CDI scale of Career Development Knowledge.

#### Summary

The following are felt to be the most significant findings of this study:

- (i) Locus of control orientation was not significantly influenced by a short career education program. However slight trends in the data, along with recorded observations suggested that further investigation of similar programs would be in order.
- (ii) The career exploration variable--career information seeking--was seen to be related to students' locus of control orientation, and was also a variable influenced most by a short career program.

- (iii) Career exploration beliefs and behaviors in the instrumentality of career search were improved by the program, and were considered main program benefits. These changes are felt to be vital to whole process of career exploration. (Stumpf Colarelli, and Hartman, 1983)
- (iv) An interesting finding was program effectiveness in assisting students, with external locus of control orientations, to make significant gains equal to students with internal locus of control orientations, in contrast to previous research.
- (v) Also of importance was the finding that demographic data such as gender, academic program, and locus of control orientation were suggestive of specific programming needs for these populations.

#### Recommendations For Research

The current research, because of the fact that results tended to be suggestive rather than conclusive, offers several possibilities for further research.

- (i) It is felt that, in the current study, the amount of I-E change would have been larger if the group counselling component had been more intensive. A more intensive approach including higher levels of



confrontation and group support could be examined in further research.

- (ii) There is a need to further examine the relative benefits of the small group approach with and without an emphasis on internal-external locus of control change.
- (iii) In the current study, the Rotter I-E scale was used. This is a global measure of locus of control orientation, and further research could examine the use of a measure more related to career planning beliefs. These measures could either be located in the literature or developed.

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## APPENDICES

## APPENDIX A

## OUTLINE OF TREATMENT PROGRAM

UNIT ONEINTRODUCTION TO CAREER PLANNING

- GOAL: - Participants will be introduced to career planning, and will become more aware of the myths that can block effective planning. They will be encouraged to adopt a more internal orientation to career planning.
- OBJECTIVES: - Students will be able to describe the concepts of career, and career decision making;
- Students will be able to describe some myths that interfere with career planning;
  - Students will be able to use the ABCD Model to refute misconceptions;
  - Students will be able to recognize misconceptions from examples provided from their own experiences.
- MATERIALS: - Handout "Getting Started In Career Planning", a method of identifying and confronting irrational beliefs adapted from "Removing Attitudinal Blocks To Career Decision Making", published by Clarke Carney in "Counselling and Human Development", Vol. 11, No. 4, Dec., 1978.

## METHOD:

- The concepts of career and career decision making will be introduced to the class, with examples.
- Discussion of how many people use career planning skills, and reasons why people might not use them.
- Concept of "irrational beliefs" will be presented in the framework of the ABCD Model of irrational career planning.
- Small groups will generate examples of misconceptions they have experienced, and will confront these misconceptions.
- Large group discussion with examples being brought back from small groups. Examples referring to external locus of control, will be focused upon. Leader will reinforce the process of reflecting upon and confronting misconceptions held.

## HOMEWORK:

- Complete "Reaction to Class."
- To identify a misconception personally held, with regard to career planning, and to refute it.

### GETTING STARTED IN CAREER PLANNING

Conventional wisdom tells us that we get what we expect from our lives. It is easy to find examples of this in everyday life. If we feel we are not going to succeed, we often make poor decisions, and create disasters for ourselves. These may include not studying for a test, or missing a social opportunity by being afraid of embarrassment. Another example could include losing a summer job by not applying.

Many of these events are caused by beliefs we hold, that may lead us to exaggerate a situation, or otherwise misinterpret it. These have been called "irrational" because they prevent us from taking an objective and realistic view of the situation we might be in. These beliefs are often tied to our ideas about success and failure; how we feel we should be doing in our lives. When we follow these beliefs without checking them out, we often prevent ourselves from trying new ways of doing things.

Much of the difficulty students experience in making career decisions, is caused by beliefs they have about themselves, society, and career planning, that are not accurate. Some of these difficulties are caused by the information and misinformation we find around us. Often it can be exaggerated by the media, politicians, and people of strong views, (some of these may even be friends or family members).

One of the challenges of career planning is to make our own decisions, based on as many facts as we can gather. An example of how we can be affected, is found in the beliefs we have about how much opportunity exists for young people. Current media coverage of our high levels of unemployment, and strong views of certain people, can support the belief that young people today have no opportunity. This belief would result in feelings of depression and alienation, and certainly could lead to low level career planning, or even none at all.

The activity that follows identified this, and other inaccurate or irrational beliefs that can operate in career decision making. The activity teacher the ABCD method which helps people who want to change certain behaviours.

The first part of the activity will teach you how to identify faulty, or irrational beliefs that currently affect your career planning. The second part will teach you how to correct these beliefs and change your decisions and behaviours toward more rewarding directions.

PART ONE:WHY WE DO NOT PLAN MORE

These first four steps will help us find out some reasons why we do not plan more than we do.

Step One: Activating Events

As we go through life, there are often situations which cause us to think about your future (training, jobs, career, etc.). We respond to these situations with constructive thinking at times, and at other times, with worry, doubt, or inaction. In other words, often, when we could be considering our career plans, we don't. Let's look at this situation by first picking out these times and happenings which get you thinking about career planning. From the following list, or from our discussion, choose any 3 events that get you considering career plans, and write them in the Activating Events section of Exercise One.

## Possible Activating Events:

- Choosing courses in high school.
- Being asked what you will do after high school.
- Trying to decide on plans for after high school.
- Being asked which university or trades program you will take.
- Choosing speakers for a career day.
- Taking part in a career education class.
- Looking for a part-time job.

Step Two: How We Feel in These Situations

Often when the above mentioned situations occur, we have specific feelings or emotions. Some of these are listed below, and others will be brought up in discussion. Try and pick the feelings you have in the situations you chose in Part One, and record them in the What I Feel section of Exercise One.

## Possible Feelings:

- |           |             |
|-----------|-------------|
| - angry   | - inferior  |
| - nervous | - resentful |
| - bored   | - dependent |

- like a failure
- hopeless
- guilty
- unsure
- cautious
- foolish

### Step Three: What We Do In These Situations

The behaviours in the following list are what often do when put in a situation calling for career planning. Try and choose behaviors you might do in the situations previously chosen, with the feelings you have described. Record these behaviors in the What I Do section of Exercise One.

#### Possible Behaviours:

- Put off deciding
- Don't check things out
- Ask others what I should do
- Get nervous
- Do nothing
- Change my mind a lot
- Make a snap decision
- Get depressed
- Take what comes my way
- Look for a test to advise me
- Make no attempt to plan
- Do what my friends are doing
- Ask my parents
- Choose something too easy
- Choose something too hard

### Step Four: Beliefs Which Cause Us Not To Career Plan

The following is a list of beliefs we often have about career planning which do nothing to get us going, but rather do everything to hold us back. Other such beliefs from our own experience will arise during discussion. Choose those which occur in the situations you describe in Exercise One and record them under What I Think Or Believe.

#### Possible Hindering Beliefs:

- There is only one right career for me!
- Everyone else knows what they are doing except me.
- Others always know what is best for me.
- There is a career test which can tell me what to do.
- Everything must be checked out extremely well or plans will fail.
- If I wait till next year, then I will know what to do.
- Things change so fast - how can you make plans?
- No matter what I do, I will probably be unemployed.
- Life is unfair!
- What I will do depends upon what the companies and the government come up with:

## Part Two: Let's Make Some Changes

Now that we have some notes about when you encounter career planning, how you feel about it, and how you deal with it, let us take a look to see if some changes are in order.

### Step One: Questioning Some of Our Beliefs

In this section are two samples of how we can question beliefs we have about career planning.

#### Example One:

Belief - There is no opportunity for young people today!

The Facts - Youth unemployment is high, but even if 30% of youth are unemployed, opportunities exist for 70% of youth. Even the ones originally out of work eventually find positions after a period of time.

New Improved Belief - Even though the picture could be brighter, opportunities are still there, and the better prepared I am, the more change I have of getting them!

#### Example Two:

Belief - Things change so fast, it makes no sense to career plan.

The Facts - Sure, we do not have total control of the future, but neither do we have no control. You can take control when you look for the change and try and understand it. Some jobs do become obsolete, however most remain much the same with minor change. Changes can be understood by watching trends or even keeping in touch with people in the jobs you are considering.

New Improved Belief - Times do change, but every bit of planning and checking that I do gives a better understanding of what changes are happening.

Now consider the beliefs you have recorded in Exercise One. Do they make sense? Can they be questioned? If so, try and change them and record the new beliefs under What I Now Think in Exercise Two. The Activating Events section should be the same as in Exercise One.



Step Two: Feeling Any Different Now?

The following is a list of more positive feelings which could result from changing the beliefs in Exercise One. Try and record feelings which might follow from the revised beliefs recorded in Exercise Two.

## Possible Feelings:

- |              |              |
|--------------|--------------|
| - Relaxed    | - Dependable |
| - Worthwhile | - Planful    |
| - Happy      | - Able       |
| - Confident  | - Active     |
| - Energetic  | - Competent  |

Step Three: Changes In Your Career Planning

Let's look at the changes that have been made in Exercise Two, and now choose new behaviours which are now likely to happen in the three career planning situations listed. Don't forget that your beliefs and feelings have changed, and what we do will also change. Following is a list of possible behaviours which could occur, however other will be mentioned in our discussion. Record possible behaviours under the What I Would Do Now section of Exercise Two.

## Possible Behaviours:

- Making decisions on my own.
- Gathering occupational information based on my interests and abilities.
- Looking for part-time work or visiting an area I'm interesting in.
- Taking classes that will build up skills I will need.
- Choosing a general to start considering.
- Talking through my plans with friends.
- Preparing a plan to explore different possibilities.
- Taking courses which I can handle and which I may need.

EXERCISE ONE

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NAME: \_\_\_\_\_

Situation One      Situation Two      Situation Three

A. Activating  
Events

B. What I Think  
Or Believe

C. What I Feel

D. What I Do

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EXERCISE TWO

177

NAME: \_\_\_\_\_

Situation One      Situation Two      Situation Three

A. Activating  
Events

B. New Improved  
beliefs - What  
I now think

C. What I Now Feel

D. What I Would Do  
now!

UNIT ONESMALL GROUP ACTIVITY - QUESTIONING BELIEFS

**BELIEF:** (Describe a belief towards career planning you think could get in the way of good planning)

**THE FACTS:** (Question this belief by trying to state the real facts of the situation focused on in the belief)

**NEW IMPROVED BELIEF:** (Describe a belief which follows more closely from the facts as described above)

**NOTE:** TRY AND USE ACTUAL BELIEFS THAT ARE HELD BY MEMBERS OF THE GROUP, AND BE PREPARED TO SHARE YOUR ANSWERS WITH THE LARGE GROUP.

UNIT ONEHOME ASSIGNMENT

1. What did you learn from the first unit of this program?

\_\_\_\_\_

2. Was this new material, or had you come across these ideas before?

\_\_\_\_\_

3. How important were these ideas to you, for example, can you see what you learned in this unit, and if so, where?

\_\_\_\_\_

4. If you believed that there are no jobs for young people today, you probably would not do much career planning. Also, if you felt that getting a job really depended upon what grants are around and/or if new companies set up, you would not plan much, but just wait and see. These are examples of beliefs affecting career planning. Give an example of a belief you hold which affects your career planning?

\_\_\_\_\_

5. If someone came to you with the belief that you described in (4) what do you say to them to get them to change that belief? How would you argue against it?

\_\_\_\_\_

INSTRUCTOR COMMENTARY

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

UNIT TWODECISION MAKING

- GOAL: - Participants will achieve an understanding of both the concepts of decisions and decision making, and their own experience and style. Through discussion and exploration they will reflect on internal/external factors affecting decision making, and the various styles people use.
- OBJECTIVES: - Students will be able to describe decisions and decision making, using everyday examples.
- Students will be able to differentiate decisions based upon importance and planning required, (i.e.: critical decisions).
- Students will be able to describe various internal and external factors affecting decision making.
- Students will be able to recognize different styles of decision making, and be aware of the styles they, themselves, use.
- MATERIALS: - Selected exercises from "Decisions and Outcomes":
- (a) "Relative Importance of Decisions".
  - (b) "To Decide or Face the Consequences - Petes Day".

- From "Career Planning - Skills to Build Your Future"

- (a) "Choose a Strategy" handout.
- (b) "Decision Style" work sheet.

METHOD:

- The unit will be introduced by generating a definition of decision and decision making, from the group. Personal examples will be solicited.
- The exercises from "Decisions and Outcomes" will be completed with group discussion to generate different opinions of the importance of decisions.
- Small groups will discuss the following questions to be brought back to the group as a whole:

- (a) What decisions do I make?
- (b) What affects how I make them?

Groups will be requested to use real examples, and for part (b), to consider personal factors and factors from outside of them.

- Large group discussion will follow with examples of the types of factors affecting decisions being generated. These will be broken down into internal/external factors. Personal examples will be highlighted.

- Small groups will then complete an exercise describing how they make decisions. Using examples, students would develop descriptions of the methods they use to make decisions. The handout on decision styles would be handed out, and students would complete the "Decision Style Work sheet".

- Large group discussion would follow, of the styles used by students, with examples being generated for discussion

HOMEWORK:

- Maintenance of a record of decisions students currently have to make, and indication of styles they will use for each.



## UNIT TWO - DECISION MAKING

## GROUP ACTIVITY

Discuss the following questions recording notes for group discussion which will follow.

What types of decisions do people my age make? (Use personal examples in your answer.)

- (1) \_\_\_\_\_
- (2) \_\_\_\_\_
- (3) \_\_\_\_\_
- (4) \_\_\_\_\_
- (5) \_\_\_\_\_

What factors effect how I make my decisions? (Use real examples and include personal factors, and factors from outside you. An example of a personal factor would be your interests; an example of a factor outside you would be what others think I should do.

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Describe how you make decisions. Take as an example, a decision that you made recently and tell what you did to make it.

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UNIT THREEDECISION MAKING II

GOAL: - Participants will become more aware of the styles of decision making and focus in on "planful methods". They will actively review examples of "planful" decision making and apply these ideas to their own career planning.

OBJECTIVES: - Students will be able to refute myths suggesting career decision making is too complex, and/or too difficult.

- Students will be able to describe steps usually followed in planful decision making.
- Students will be able to generate steps which could be used with a hypothetical decision.
- Students will be able to modify a planful method appropriate to their own style.
- Students will be able to use "planful method" in personal decision making.

MATERIAL: - From "Career Planning - Skills to Build Your Future."

- (a) "Stages of a Planful Career Decision"
- (b) "Where am I in the Career Decision Making Process"

## METHOD:

- Small groups will refute the myth: "There is too much information about yourself and the changing workplace, and it's impossible to make sense out of it all."
- The handout on planful decision making will be handed out and reviewed.
- Small groups will discuss planful decision making, and prepare examples of planful decision making from personal experiences.
- Large group discussion will review some personal examples, and generate possible steps which could be used. The instructor should reinforce personal adaptations to a formal model, and allow the group to design its own particular model or series of steps.
- Individual completion of "Where am I in the Career Decision Making Process".

## HOMEWORK:

- Complete the "Reaction to Class" section.
- Students should focus in on one decision which has to be made in the near future, and work it through, using a sequence of steps.

### STEPS IN FORMAL DECISION MAKING

The steps usually followed in decision making are described in the following example concerning choosing a summer job.

Step One: The first step in decision making would be to clarify the decision to be made, and to establish objectives which will guide the decision making. In our example the decision is to choose a summer job, which would satisfy our needs which could be good pay, easy work, and good work experience (in that order).

Step Two: The second step would be to gather information on the various alternatives which are around. In the example we would find out what summer jobs are around, and what is involved in them, what they pay, how hard they are to get, etc.

Step Three: This step would involve assigning probabilities to the various alternatives. In other words, trying to figure out what would be the probable outcomes from each alternative. For example, one job might give good pay, but hard work, while a second job might give poor pay, but easy work, and good experience.

Step Four: This step would involve evaluating the various outcomes which would result from the various alternatives. Which of the jobs will give us the best outcome. We could choose a job because it satisfies our most important need (money perhaps) or we might choose one that did not have our main requirement (it paid less) but it satisfied more of our needs by being easy work, and being good experience).

Step Five: Based upon our evaluation of the outcomes in step four, we would either make a decision for one of the alternatives or we could go back to a previous step. In our example at this point we would choose a job based on our judgement of which one would satisfy us best, or we rethink what do we really want in a job, seek more alternatives, or go after some information we need before we can decide.

STUDENT COMMENT FORM  
DECISION MAKING UNITS

1. This unit discussed the factors which influence the decisions that we make. For example, internal factors would be such things as our interests, our needs, etc. External (outside) factors would be such things as the ideas of our friends, community, etc. Do think internal or external factors affect our decisions more. Should this be so?
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
2. We use different ways of making the many decisions we make. Sometimes we let others decide for us (dependent); sometimes we let our feelings decide (intuitive); sometimes we consider all factors ourselves (planful). Give an example of decisions for which you use each type:

Dependent: \_\_\_\_\_

Intuitive: \_\_\_\_\_

Planful: \_\_\_\_\_

3. How helpful was this unit in helping you become a better decision maker?

Not Helpful    1    2    3    4    5    Very Helpful

4. Which part of these classes on decision making do you feel was most helpful to you? (importance of decisions; decision making styles; inside/outside influencers; making planful decisions; other).
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

5. Which part of these classes on decision making would you change and why?
- \_\_\_\_\_
- \_\_\_\_\_

**HOME ASSIGNMENT  
DECISION MAKING UNITS**

1. What did you learn from this material on decision making?  
\_\_\_\_\_
2. Was this new material or had you come across this material before?  
\_\_\_\_\_
3. How important were these ideas to you, for example, can you use what you learned in this unit on decision making?  
If so, how?  
\_\_\_\_\_  
\_\_\_\_\_
4. As you know, some of our decisions are made based on feelings, some on advice of others, and some on planning. Record an example of each which you are currently involved in.

Decision:

Method of Deciding:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Choose an important decision you currently have to make, and describe how you would make it in a planful way.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**INSTRUCTOR COMMENTARY:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

UNIT FOUR"INTRODUCTION TO SELF ASSESSMENT"

GOAL: - Participants will achieve an understanding of the types of information about themselves, which are important in career planning. They will also specifically become more aware of how values are important, and engage in some values clarification.

OBJECTIVES: - Students will be able to describe types of personal (internal) factors which affect career choice.

- Students will be able to refute the myth that "today, you have to take what you can get, whether or not you prefer it."

- Students will be able to describe values which can affect career decision making.

- Students will be able to describe ways of clarifying their values.

- Students will complete-follow up exploration exercises.

MATERIALS: - Handout "Factors affecting our Vocational Self Concept"

- "Values clarification exercise from "Decisions and Outcomes".

- Exercise "Exploring Personal Values" from "Career Planning - Skills to Build Your Future"
- Unit two group activity sheet.

METHOD:

- The topic of self assessment should be introduced as the focus of this unit. The Handout "Factors Affecting Our Vocational Self Concept" will be passed out and discussed briefly, to insure it makes sense to participants.
- Small groups will then be asked to complete the following tasks:
  - (1) Answer the question - what should you know about yourself, in order to plan a career properly? Prepare examples of some actual decisions they have made and the self information that was used. These examples can be decisions about courses, summer jobs, potential plans, etc.
  - (2) Refute the myth - "today you have to take what you can get - whether you prefer it or not".
  - (3) Describe where do values come from, and how can we discover our values. Again, use real examples.
- Large group discussion will follow during which small groups will share the conclusions



and alternatives they have generated. Group leader (instructor) will attempt to clarify, paraphrase, focus, etc., throughout the discussion. The large group discussion could be used to generate a list of alternatives put forward in the small groups.

- After the large group discussion, students will complete the exercise from "Decisions and Outcomes" with self disclosure from group leader to model exploration.
- Homework assignment will be discussed.

HOMework:

- Students will be asked to complete "Exploring Personal Values" exercise.
- Students will complete "Reaction to Class" section.

GROUP PROJECT  
UNIT-SELF ASSESSMENT

1. Sometimes people feel that "today, you have to take what you can get in the way of a job or career, whether or not it is what you prefer." Discuss this and try and argue against this.

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2. What you should know about yourself, in order to plan a career properly? Prepare examples of some career decisions you have made, and the self information you have used (decisions about courses, potential plans, etc.)

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3. What are values? \_\_\_\_\_

Give an example of where values come from? \_\_\_\_\_

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How can we discover our values, give an example of a value that you feel you have and how you are aware of it. \_\_\_\_\_

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UNIT FIVEINTERESTS

## GOAL:

- Participants will arrive at a clearer understanding of their interests, how they develop and continue to change. They will engage in self exploration activities and plan follow up activities.

## OBJECTIVES:

- Students will be able to describe how their interests develop, and types of factors which influence them.
- Students will be able to describe the importance of interests in career choice.
- Students will know ways of exploring interests.
- Students will plan strategies for self exploration.

## MATERIALS:

- Handout on the Holland System.
- Handout from "Interest and Ability Self-Assessment Activities".
- "Interest and Self-Assessment Activity".
- "Myths About Interests".

## METHOD:

- The topic of "interests" should be briefly introduced as the focus of this unit.
- The handout from "Interests and Ability Self-

"Assessment" will be passed out and discussed briefly.

- Small groups will address the questions:

- (1) where do my interests come from?
- (2) how do I decide what my main interests are?
- (3) why are interests important?

Groups will be asked to prepare examples from members own experiences to bring back to the group. It should be emphasized that common examples of interests are appropriate, such as musical preference, choice of movies, course preference, etc.

- Large group discussion will follow, in which the leader will clarify, reinforce, paraphrase, etc., to focus discussion. Brainstorming of alternatives for the discussion questions should follow, with examples from personal experiences being gathered. Eg. In selecting a course, a student may have reviewed past courses to get a picture of his/her area of interests.
- Small group discussion of some of the external myths of the role of interests, should follow. The sheet of myths will be passed out, and

small groups will prepare refutations to bring back to the group at large.

- After the discussion about myths, students will be introduced to the Holland system, and the "Interest Self-Assessment Activity", as being one information gathering activity.
- The "Interest Self-Assessment Activity" will be completed.

**HOMEWORK:**

- Students will be asked to generate a way to gather information on their interests, and to complete this and make a written record.
- "Reaction to Class" form will be completed.

UNIT SIXAPTITUDES

- GOAL: - Participants will achieve an understanding of their aptitudes, and how they develop. They will reflect upon the importance of self knowledge of ones aptitudes, and improve their skills in exploring them.
- OBJECTIVES: - Students will be able to describe aptitudes, and know the main types.
- Students will be able to describe the importance of knowledge of aptitudes in career choice.
  - Students will be able to refute the myth "it's not what you know, but who you know that counts."
  - Students will know ways of exploring or identifying their abilities.
  - Students will undertake, both in class and at home, self exploration exercises.
- MATERIAL: - "Ability Self-Assessment Activity" from "Career Planning - Skills to Build Your Future"
- Handout on the Holland System.

## METHOD:

- The topic of "aptitudes" will be introduced, and a definition and examples placed upon the board.
- Small groups will address the following questions:
  - (1) What types of aptitudes are there, and where do they originate from?
  - (2) How do I determine my aptitudes?
  - (3) Why are aptitudes important?Groups will be asked to use examples from their personal experiences.
- Large group discussion will follow, during which answers will be shared, clarified and focused on by instructor. The discussion will focus on generating, or brainstorming, types of aptitudes, and different ways students have used to determine them.
- Small groups will refute the myth "it's not what you know, but who you know, that counts." Refutations will be shared with the group at large.
- After discussion about myths, the various aptitudes at play in the Holland codes, will be reviewed, and the "Ability Self-Assessment" will be completed.

- HOMEWORK:
- Complete "Reaction to Class" section.
  - Students will choose one method of Self-Assessment (from group discussion), act on it, and write up the results.



### SUMMARY OF SELF EXPLORATION

USE THIS SHEET TO INDICATE SOME OF YOUR MAIN VALUES, INTERESTS,  
AND ABILITIES, THAT YOU CAN HAVE IDENTIFIED EITHER FROM THE  
GROUP EXERCISES, OR YOUR OWN IDEAS.

1. Three values which I feel are most important to me are:

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2. Three main interests which can direct my job search are (these can be from the Holland interests: Realistic, Investigative, Artistic, Social Enterprising, Conventional; or from your own ideas):

\_\_\_\_\_

3. Three areas of strength in terms of my abilities are:

\_\_\_\_\_

4. Some occupational areas I am considering are (indicate what objective each job area would satisfy; why are you thinking of this area?):

OCCUPATIONAL AREA: REASON FOR CONSIDERING:

OCCUPATIONAL AREA:

REASON FOR CONSIDERING:

[illegible]

UNIT SEVENOCCUPATIONAL EXPLORATION

- GOAL: - Students will become more aware of the variety of occupational and career paths available. They will learn structures to use in organizing information about types of occupations. They will reflect on, and expand upon, their knowledge of alternatives.
- OBJECTIVES: - Students will be able to describe how jobs can vary in terms of kinds of work, levels of work, and places of work.
- Students will be able to refute some commonly held misconceptions about occupational exploration.
- Students will be able to describe or generate occupational possibilities within reach, from the various categories described above.
- MATERIAL: - "Where am I going? A Map of the World of Work," from "Career Planning - Skills to Build Your Future".
- METHOD: - The topic of occupational exploration will be introduced, and placed in the framework of career decision making.

- The handout on kinds, levels, and places of work will be passed out, and gone through with the large group. This framework can serve as a structure, both to understand the differences between occupations, and to generate, or brainstorm alternatives.
- Small groups will discuss the following commonly held (externally oriented) misconceptions about occupational exploration:
  - (a) "There is one correct answer for everyone".
  - (b) "No opportunity exists for youth today."
 Small groups will refute these and be prepared to discuss with the large group.
- Large group will now generate or brainstorm, alternatives available locally, using the typologies from the handout as a guide.

#### HOMEWORK:

- Students will complete "Reaction to Class" section.
- Students will describe possible areas they might consider to explore further, in terms of occupational alternatives, and will explain why these areas were chosen.

UNIT EIGHTOCCUPATIONAL INFORMATION I

- GOAL: - Students will reflect upon their current information gathering, and will identify types of information required in career decision making. They will become more familiar with the sources of occupational information available to them, and more skilled in using them.
- OBJECTIVES: - Students will be able to describe the types of information which are needed to evaluate various occupational alternatives.
- Students will be able to describe their own information seeking, and will be able to identify myths, or misconceptions that can affect information seeking.
- Students will be able to describe the sources of occupational information.
- Students will be practiced in reviewing print material, and gathering specific information.
- MATERIAL: - Handout on occupational information from "Career Planning - Skills to Build Your Future".

## METHOD:

- The topic of occupational information will be introduced briefly.
- Small groups will discuss the following questions:
  - (a) What information about alternatives is presently gathered by students? What information is required for sound decision making?
  - (b) What misconceptions or myths can block or interfere, with information gathering? Small groups will refute the myth "a job is like a calling - someday it will come to you."
- Large group discussion will follow. Students will generate various answers to questions (a) and (b), above. The instructor will clarify and question points, as they are raised. The myth provided for discussion will be refuted. External myths will again be given some focus.
- The handout will be reviewed and examples of print material available, will be shown to the group.
- Students will be asked to select information they require, and a possible source where it might be found.

- HOMEWORK:
- Complete "Reaction to Class".
  - Complete self assigned reading in a chosen area, and pass in a summary of information gathered.

OCCUPATIONAL INFORMATION UNIT  
SMALL GROUP ACTIVITY

1. What kinds of information about possible career choices is presently being gathered by students in your group? (example: one student may have found out salary ranges for electricians).  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. What kinds of information do you think would be useful for you to gather about career choice you are considering?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Can you give some reasons why the following is incorrect? "A job is like a calling; someday it will come to you what you should do."  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. What feelings or beliefs might keep people from checking out some jobs that they are considering? Try and think of as many as you can.
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
  - (c) \_\_\_\_\_
  - (d) \_\_\_\_\_
  - (e) \_\_\_\_\_

UNIT NINEOCCUPATIONAL INFORMATION II"ASK AND YOU WILL RECEIVE"

GOAL: - Students will become more reflective of the information available in the human resources around them. They will develop their skills in generating possible resource persons, and in dealing with blockages to their approaching these individuals.

OBJECTIVES: - Students will be able to generate names of possible resource persons available to them.

- Students will be able to recognize and confront myths (external and otherwise), which would prevent them approaching possible resource persons.

- Students will be able to select a resource person, contact them, and collect relevant information.

MATERIAL: - Handout on occupational information from "Career Planning - Skills to Build Your Future."

METHOD: - The unit will be introduced, and reference made to the various types of occupational information, of which human resources are on.



- The group will discuss the possible resource persons who might be available to students. Brainstorming will be used and instructors will use modelling, structuring, and encouragement, to assist the process.
- Small groups will reflect upon how students use resource persons, and reasons why they might be reluctant to do so. Myths will be recognized, and refuted.
- Large group will discuss points raised in small groups. Ways of approaching resource persons, will be discussed and modelled. Possible questions for resource persons will be generated.
- A short visit will be arranged by a resource person, and questions will be solicited from students.
- Resource person will be encouraged to model some of ways he/she developed accurate or realistic conceptions and planning skills, providing participants the opportunity to identify with the model.

(HOMEWORK:

- Complete "Reaction to Class".
- Contact a resource person from an area of choice and complete a record of interview.

OCCUPATIONAL INFORMATION UNIT TWOSMALL GROUP ACTIVITY

1. An important resource for finding out about career alternatives can be friends, relatives, occupational group members. Which of these have you used in the recent past? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. What beliefs or feelings might keep you from seeking out information from the people resources available to you?
  - (a) \_\_\_\_\_
  - (b) \_\_\_\_\_
  - (c) \_\_\_\_\_
  - (d) \_\_\_\_\_
  - (e) \_\_\_\_\_
3. List as many as possible, potential people resources that you could contact to explore the various alternatives you are considering.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. What are some of the questions that you could ask these people? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

STUDENT COMMENT FORMOCCUPATIONAL EXPLORATION UNITS

1. This units discussed occupations, the various types, the information we need about them, and how to obtain this information. Do you expect to be doing more checking into some occupational possibilities? If yes, how do you plan on doing this? If no, why don't you think you will? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. How helpful were these units in preparing you to explore occupations:  
Not Helpful    1    2    3    4    5    Very Helpful
3. Which part(s) of these units do you feel was most helpful (discussion of types of occupational information, discussion of why we do not do more occupational exploration, working with occupational print material, visit by resource person, planning some future steps)? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Which parts of these units would you change, and why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

UNIT TEN"BRINGING IT ALL TOGETHER"

GOAL: - Students will be able to utilize their skills in decision making, self exploration, and occupational exploration in actual career planning. They will be able to confront myths or misconceptions still blocking career planning, and develop short term plans.

OBJECTIVES: - Students will be able to describe their preferred career route with relation to their interests, abilities and values, etc.

- Students will be able to review where they are in their career planning, and to identify beliefs or emotions which could be still blocking further planning.

- Students will be able to actively reflect on their planning status, and confront any persistent externally oriented misconceptions.

- Students will be able to make short term plans of the next steps in their career planning.

MATERIALS: - Exercises from "Career Planning - Skills to Build Your Future":

- (a) "Ideal Job Description"
- (b) "Strategies for Gathering Information"

## METHOD:

- The unit will be introduced by the discussion of the handout "Ideal Job Description".
- The group will discuss what types of myths or blockages might still be interfering with individuals career planning. The instructor will use self disclosure, modeling, clarification, and focusing, to assist the discussion.
- Small groups will discuss, specifically, myths or blockages individuals still have. Other members will assist in the confronting, or refuting of, these.
- Individuals will complete the projects "Ideal Job Description", and "Strategies for Gathering Information".
- Instructor will sum up the program, wish the students well in their planning, offering further contact if desired.

## FOLLOW UP:

- Several weeks after the project ends, students will complete a survey of actions they have undertaken, and information they have gathered.

Appendix B  
Career Development Inventory

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577 College Avenue (P.O. Box 60070), Palo Alto, CA 94306 (415)857-1444

Bob Bradbury  
P.O. Box 228  
Dunville, Newfoundland  
Canada, A0B 1S0

In response to your request of August 28, 1988  
(Date)

permission is hereby granted you to

include in the appendix of your thesis the enclosed sample items only  
from the Career Development Inventory-School Form.

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Sample Items from the  
Career Development Inventory  
School Form

Part I. Career Orientation

A. Career Planning

How much thinking and planning have you done in the following areas? For each question below choose the answer that best tells what you have done so far.

3. Taking classes which will help me decide what line of work to go into when I leave school or college.

- A. I have not yet given any thought to this.
- B. I have given some thought to this, but haven't made any plans yet.
- C. I have some plans, but am still not sure of them.
- D. I have made definite plans, but don't know yet how to carry them out.
- E. I have made definite plans, and know what to do to carry them out.

B. Career Exploration

Questions 21 through 30 have four possible answers. Choose the one best answer for each question to show whether or not you would go to the following sources for information or help in making your plans for work or further education.

25. Teachers.

- A. Definitely not.
- B. Probably not.
- C. Probably.
- D. Definitely.

C. Career Decision-Making

What should each of the following students do? Choose the one best answer for each case.

42. J.D. might like to become a computer programmer, but knows little about computer programming, and is going to the library to find out more about it. The most important thing for J.D. to know now is:

- A. what the work is, what one does on the job.
- B. what the pay is.
- C. what the hours of work are.
- D. where one can get the right training.

D. World-of-Work Information

Choose the one best answer to each of the following questions about career development and the world of work.

62. When a teacher or counselor encourages students to explore themselves and the world about them, what he or she wants them to do is to

- A. be active in school affairs.
- B. go on field trips.
- C. try themselves out in a variety of situations and activities.
- D. take some aptitude tests.



## Part II. Knowledge of Preferred Occupation

Ability requirements: Occupations differ in the abilities required to learn and do the work. Following is a list of these abilities. Think of how people differ in these abilities and rate your Occupational Group to show how much of each of the abilities is typical of workers in the Occupational Group.

7. Non-verbal reasoning (ability to find relationships among objects, patterns and designs). On this ability, this Occupational Group is typically made up of

- A. the bottom 10% of people in general.
- B. below average people.
- C. average, middle third of people in general.
- D. above average people.
- E. the top 10% of people in general.

### Other Characteristics:

31. Select the response below which shows the amount of education required by your Preferred Occupational Group.

- A. postgraduate degree (M.A. or Ph.D.) from a graduate school.
- B. professional degree (M.D., LL.B., etc.) from a professional school.
- C. B.A. or B.S. from a college or university.
- D. A.A. or certificate from a two-year college.
- E. diploma from a business or technical school after high school.
- F. high school diploma.
- G. none of the above.

Please do not present these items to your readers as any kind of "mini-test", but simply as an illustrative sample of items from this instrument. We have provided these items as samples in order that we may maintain some measure of control over which items appear in the published media. This helps to avoid the appearance of any entire testing instrument in the published media, which in turn protects the test validity and reliability.

Thank you for your cooperation.

## Appendix C

Rotter Internal-External  
Control Scale

(Form used in the study)

### Social Reaction Inventory

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief; obviously there are no right or wrong answers.

Your answer, either a or b to each question on this inventory, is to be reported beside the question. Print your name and any other information requested by the examiner on the bottom of page 1, then finish reading these directions. Do not begin until you are told to do so.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice. For each numbered question make an X on the line beside either the a or b, whichever you choose as the statement most true.

In some instances you may discover that you believe both statement or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you've concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choices.

NAME \_\_\_\_\_

HOMEROOM \_\_\_\_\_

COMMUNITY \_\_\_\_\_

AGE \_\_\_\_\_

MATH \_\_\_\_\_

SCIENCE COURSES REGISTERED FOR \_\_\_\_\_

FATHER'S OCCUPATION \_\_\_\_\_

MOTHER'S OCCUPATION \_\_\_\_\_

NUMBER OF BROTHERS AND SISTERS \_\_\_\_\_ YOUR RANK BY AGE \_\_\_\_\_

## Remember

Select that alternative which you personally believe to be more true.

I more strongly believe that:

1. ☐ a. Children get into trouble because their parents punish them too much.  
☐ b. The trouble with most children nowadays is that their parents are too easy with them.
2. ☐ a. Many of the unhappy things in people's lives are partly due to bad luck.  
☐ b. People's misfortunes result from the mistakes they make.
3. ☐ a. One of the major reasons why we have wars is because people don't take enough interest in politics.  
☐ b. There will always be wars, no matter how hard people try to prevent them.
4. ☐ a. In the long run people get the respect they deserve in this world.  
☐ b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5. ☐ a. The idea that teachers are unfair to student is nonsense.  
☐ b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
6. ☐ a. Without the right breaks one cannot be an effective leader.  
☐ b. Capable people who fail to become leaders have not taken advantage of their opportunities.
7. ☐ a. No matter how hard you try some people just don't like you.  
☐ b. People who can't get others to like them don't understand how to get along with others.
8. ☐ a. Heredity plays the major role in determining one's personality.  
☐ b. It is one's experiences in life which determine what they're like.

9. ☐ a. I have often found that what is going to happen will happen.  
☐ b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10. ☐ a. In the case of the well prepared student there is rarely, if ever, such a thing as an unfair test.  
☐ b. Many times exam questions tend to be so unrelated to course work that studying is really useless.
11. ☐ a. Becoming a success is really a matter of hard work, luck has little or nothing to do with it.  
☐ b. Getting a good job depends mainly on being in the right place at the right time.
12. ☐ a. The average citizen can have an influence in government decisions.  
☐ b. This world is run by the few people in power, and there is not much the little guy can do about it.
13. ☐ a. When I make plans, I am almost certain I can make them work.  
☐ b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.
14. ☐ a. There are certain people who are just no good.  
☐ b. There is some good in everybody.
15. ☐ a. In my case getting what I want has little or nothing to do with luck.
16. ☐ a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.  
☐ b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.
17. ☐ a. As far as world affairs are concerned, most of us are victims of forces we can neither understand or control.  
☐ b. By taking an active part in political and social affairs, the people can control world events.

18. \_\_\_\_\_ a. Most people don't realize the extent to which their lives are controlled by accidental happenings.  
\_\_\_\_\_ b. There really is no such thing as "luck".
19. \_\_\_\_\_ a. One should always be willing to admit his mistakes.  
\_\_\_\_\_ b. It is usually best to cover up one's mistakes.
20. \_\_\_\_\_ a. It is hard to know whether or not a person really likes you.  
\_\_\_\_\_ b. How many friends you have depends upon how nice a person you are.
21. \_\_\_\_\_ a. In the long run the bad things that happen to us are balanced by the good ones.  
\_\_\_\_\_ b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22. \_\_\_\_\_ a. With enough effort we can wipe out political corruption.  
\_\_\_\_\_ b. It is difficult for people to have much control over the things politicians do in office.
23. \_\_\_\_\_ a. Sometimes I can't understand how teachers arrive at the grades they give.  
\_\_\_\_\_ b. There is a direct connection between how hard I study and the grades I get.
24. \_\_\_\_\_ a. A good leader expects people to decide for themselves what they should do.  
\_\_\_\_\_ b. A good leader makes it clear to everybody what their jobs are.
25. \_\_\_\_\_ a. Many times I feel that I have little influence over the things that happen to me.  
\_\_\_\_\_ b. It is impossible for me to believe that chance or luck plays an important role in my life.
26. \_\_\_\_\_ a. People are lonely because they don't try to be friendly.  
\_\_\_\_\_ b. There's not much use in trying too hard to please people, if they like you, they like you.

27. ☐ a. There is too much emphasis on athletics in high school.  
☐ b. Team sports are an excellent way to build character.
28. ☐ a. What happens to me is my doing.  
☐ b. Sometimes I feel that I don't have enough control over the direction of my life is taking.
29. ☐ a. Most of the time I can't understand why politicians behave the way they do.  
☐ b. In the long run the people are responsible for bad government on a national as well as on a local level.
- 7

Appendix D

Career Exploration Survey





**New York University**  
*A private university in the public service*

229

College of Business and Public Administration  
Department of Management and Organizational Behavior  
600 Tisch Hall  
Washington Square  
New York, N.Y. 10003  
Telephone: (212) 998-4100

December 14, 1988

Bob Bradbury  
P.O. Box 228  
Dunville  
Newfoundland, Canada A0B-150

Dear Bob:

You have my permission to use the Career Exploration Survey and to include it in the Appendix of your Thesis.

Sincerely,

Stephen A. Stumpf  
Associate Professor



9. The occupations that are related to your interests and abilities?

1      2      3      4      5

How sure are you?

## Not Too Sure

**Very Sure**

1      2      3      4      5

10. That you know the type  
of job that is best  
for you?

1      2      3      4      5

11. That you know the type of organization you want to work for?

1      2      3      4      5

12. That you know exactly the occupation you want to enter?

1      2      3      4      5

13. In your preference for  
a specific organization?

1      2      3      4      5

14. In your preference for  
a specific position?

1      2      3      4      5

To what extent have you behaved in the following ways over the past 3 months?

Little	Some	Moderate Amount	Substantial Amount	Great Deal
--------	------	--------------------	-----------------------	---------------

1      2      3      4      5

15. Experimented with different career activities.

1      2      3      4      5

16. Sought opportunities  
to demonstrate skills.

1      2      3      4      5

17. Tried specific work roles just to see if I like them.

1      2      3      4      5

	Little	Some	Moderate Amount	Substantial Amount	Great Deal
To what extent have you behaved in the following ways over the last three months?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
18. Investigated career possibilities.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
19. Went to various career orientation programs.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
20. Obtained information on specific jobs or companies.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
21. Initiated conversations with knowledgeable individuals in my career area.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
22. Obtained information on the labor market and general job opportunities in my career area.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
23. Sought information on specific areas of career interest.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>

	Little	Some	Moderate Amount	Substantial Amount	Great Deal
To what extent have you done the following in the past three months.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
24. Reflected on how my past integrates with my future career.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
25. Focused my thoughts on me as a person.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
26. Contemplated my past.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
27. Been retrospective in thinking about my career.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>

28. Understood a new relevance of past behavior for my future career.

1      2      3      4      5

29. How many occupational areas are you investigating? \_\_\_\_\_

How do the employment possibilities look for?

Not  
Good

Very  
Good

1      2      3      4      5

30. The job(s) you prefer?

1      2      3      4      5

31. The organization(s) you prefer?

1      2      3      4      5

32. The occupations(s) you prefer?

1      2      3      4      5

How certain are you that you will begin work upon graduation?

Not  
Certain

100%  
Certain

1      2      3      4      5

33. At a specific job you prefer (e.g., CPA accounts).

1      2      3      4      5

34. For the specific company or organization you prefer.

1      2      3      4      5

35. In the specific occupation you prefer (e.g., accounting, marketing).

1      2      3      4      5

36. On average, how many times per week have you specifically sought information on careers within the last few months?

1      2      3      4      5

	Very Low	Low	Moderate	High	Very High
What is the probability that each of the following activities will result in obtaining your career goals?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
37. Planning my job search in detail.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
38. Developing a specific process for investigating firms.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
39. Developing questions to ask at interviews.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
40. Systematically investigating the key firms in my career area.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
41. Assessing myself for the purpose of finding a job that meets my needs.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
42. Learning more about myself.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
43. Understanding a new relevance of past behavior for my future career.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
44. Focusing my thoughts on me as a person.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
45. Obtaining information on the labor market and general job opportunities in my career area.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
46. Initiating conversations with friends and relatives about careers.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
47. Initiating conversations with several other students about their career interviews.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>

	Not Important			Very Important	
How is important is it to you at this time to?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
48. Work at job you prefer?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
49. Become established in a specific organization?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>

	Not Important			Very Important	
How is important is it to you at this time to?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
50. Work in the occupation you prefer?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
51. Become established in a specific position?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
52. Work in the organization you prefer?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>

	Not Significant			Equal	Very Stressful		
How much undesirable stress have the following caused you <u>relative</u> to other significant issues with which you have had to content?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
53. Deciding what I want to do.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
54. Deciding on a specific occupation?	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
55. Deciding on a specific job.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
56. Deciding on a specific organization.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
57. Exploring specific jobs.	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>

58. Interviewing with  
specific companies.

6  
1 2 3 4 5 6 7

59. Looking for a job.

1 2 3 4 5 6 7









