EFFECTIVENESS OF A MINI COURSE
CAREER EDUCATION PROGRAM

by

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ABSTRACT

The purpose of this research was to assess the effect of a mini-career education program on students' career maturity as measured by Crites Career Maturity Inventory (CMI) Competence test, using a pretest/posttest design. The relationship of sex, grade point average (GPA), academic/vocational streaming (curriculum), and Career Maturity Inventory Attitude Scale scores with scores obtained on the Career Maturity Inventory Competence subtests was analyzed.

The location chosen for this study was a medium-sized city in the Interior of British Columbia. The sample consisted of ninety-five senior high school students from one of three local senior secondary schools. Fifty-one students were in the experimental group, the remainder (44) formed the control group. The entire sample was administered both the Crites Career Maturity Inventory Attitude Scale and the five Competence subtests as a pretest. Only the five Competence subtests were given as a posttest.

A review of the literature indicates that, although career education is being implemented, there is a continuing need to investigate what format career education should take to be most productive for the individual and for society. The career program was developed, in part, to be similar in content to career education materials available to schools in B.C. The theoretical background included Super's ideal/real occupational self concept theory, and emphasis was placed on personal assessment of abilities, interest, and experiences related to the world of work.

There are a variety of tests available to measure the effectiveness of a career education program. Crites Career Maturity Inventory, in a study of six career development tests (Westbrook, 1974), appeared to encompass cognitive, psychomotor, and affective domains of career maturity more
completely than did other tests. The Career Maturity Inventory Competence subtests relate to specific topics, eg. planning, knowing about jobs, which provides a framework for assessing areas of students' strength and weakness.

Three objectives of this study were as follows: a) to compare the level of career maturity, using adjusted posttest mean scores, of a group of students receiving instruction (experimental group) with a similar group of students not receiving instruction (control group); b) to compare pretest and posttest scores, of the experimental group only, to determine if there was a statistically significant change following treatment (career education); c) to investigate whether sex, grade point average, academic/vocational streaming, and Career Maturity Inventory Attitude Scale scores correlated with the career maturity level of the students.

The analysis of results showed there was a statistically significant increase between pretest and posttest mean scores of the experimental and control groups (using adjusted posttest scores) for the Career Maturity Inventory subtests "Knowing Yourself" and "Knowing About Jobs".

When comparing pretest mean scores and posttest mean scores of the students in the experimental group only, "Knowing About Jobs" was the only one of the five subtests to register a statistically significant gain. The individual items were analyzed to determine whether one item, or group of items, contributed specifically to the attained scores, however this did not appear to be the case.

There was a positive relationship (Spearman r = .30) between all Competence subtests and the scores obtained on the Attitude Scale. Grade point average correlated positively (r = .31) with all of the Career Maturity Inventory subtests, except "Problem Solving"; the type of program
(curriculum) and career maturity scores showed statistically significant correlation (Pearson point biserial $r = .22$) for the subtests "Knowing Yourself" and "Choosing a Job" and there was no statistically significant correlation observed between sex and scores on the Career Maturity Inventory subtests. The relationships studied could suggest that grade point average and Attitude Scale scores may be used as predictors of students' career maturity levels, the higher the scores, the greater the career maturity level.

Crites has indicated that gains can be expected on the Career Maturity Inventory Competence subtests following career education. Although the Career Maturity Inventory subtest "Problem Solving" could stand further research, it would seem that a mini, or short, career program of the nature implemented has limited usefulness in increasing the career maturity level of students. Future recommendations include lengthening the time of career programs, and enriching the content presented in this study.
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Grade Point Average
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Chapter One
INTRODUCTION TO THE STUDY

Social conditions at the turn of the century stimulated research into the concept of vocational guidance, and today ever increasing numbers of people in the education system and in the work force are concerned about the process of realistic career planning and vocational decision making. Psychology Today (May, 1978) has devoted most of an issue to the world of work, and related behaviours and attitudes prevalent in our present economic environment. Crites (1965), in an article on vocational development, refers to the pioneer work of Parsons at the beginning of this century in the field of vocational psychology. Although vocational development has been studied extensively since Parsons' original contributions, there still appears to be confusion in the minds of educators as to the best method of helping youth select a career field that is congruent with his abilities and interests, that will ultimately be personally satisfying, and that will also be productive for society.

In an attempt to provide answers to vocational choice problems, career education programs are springing up across the country in schools and colleges. The programs range in form from formal class structure, to workshops involving fairly in-depth personal psychological assessment (Tichenor, 1977), to consulting with a computer (CHOICES, Canada Manpower).

Some school programs have been thoroughly investigated and planned, such as described by McKinnon and Jones (1975), where the need and educational format were studied over a period of two years before implementation procedures commenced. This is in contrast to programs developed on a "crash" basis, which soon flounder and are discarded, as Leonard and Vriend (1975) have indicated, "this is a clear and present
danger in these days of career education" (p. 670).

Prediger, Roth and Noeth (1974) in a nation-wide (U.S.) study on career development of youth, focus on what students say about their career development and about current guidance needs. Over one-half of the students in this study indicated they received no help. "We (the authors) believe . . . many counsellors and administrators have failed to accept and communicate career planning as an appropriate responsibility of the school and that, as a result, students do not expect or request help with career planning" (p. 100). Prediger, et al (1974) state "if we were speaking of physical development rather than career development, we would describe American youth as hungry, under-nourished and physically retarded" (p. 103). The authors urge teachers to make subjects more relevant to the real world, to avoid "floundering and prolonged states of indecision that are costly both to the individual and to society" (p. 103). They suggest that society may prefer to absorb these costs rather than the costs inherent in remedy of this situation. "This is the course of least resistance, and its acceptance may involve the least controversy, especially since the remedies currently receiving attention are largely untested" (p. 103).

Many researchers recommend the need to develop career education programs and to measure their effectiveness in order to obtain the best possible method of implementing successful programs in schools. Crites (1971) states that "investigations should be conducted of the factors which facilitate vocational maturity, including counselling, occupation information, role-playing, simulation games, programmed instruction, visits to business and industry, etc." (p. 69). Doctoral dissertations of Diana (1974), LaBozetta (1973) and Cross (1975) have experimented with short term career interventions in high school settings, such as counselling and career
testing, and found that there was no significant change in their testing of career awareness levels. They recommend further attempts should be made to develop and implement career awareness in schools.

Omvig, Tulloch and Thomas (1975) studied the effect of career teaching in grades 6 and 8 classes, and while the evaluation process indicated some growth of career maturity, there was no established curriculum that could be replicated by others. It does not seem particularly useful to know something works, if you do not know what the "something" is.

Clinical observations by this researcher and school counsellors contacted in three British Columbia high schools corroborate what is found in the literature. Students in one high school received no career education, and guidance for future planning was available only upon request. Students who had no apparent scholastic or discipline problems rarely, if ever, saw a counsellor. Some of these students discovered, upon completing high school, that they did not have prerequisites necessary for admission to post-secondary learning institutions, or that the world of work was not prepared to employ young adults with inadequate work skills. Another school offered mini-career education packages, but whether this intervention changed the career maturity level of the students was not assessed. One school limited career planning to administration and self-interpretation of a general abilities test battery (Canada Manpower GATB).

In the business sector, problems encountered by both employer and employee were similar to those documented in Psychology Today (May, 1978); women reentering the work force unprepared; people in the work force stating "years ago I made a bad mistake and now I'm trapped in it" (p. 67). This investigation has been involved with men and women in career planning courses and placement agencies who are now suffering from unsuitable and unrealistic
career decisions, but for them no direction had been available. To quote from Darcy Truax (1975) of Honeywell Corporation, "while some industrial representatives recognize that the total concept of education for life (career education) should relate to more than education for work, few have been able to design programs that effectively cover the employment aspect of career education within their own work forces. Evidence of this is the lack of ongoing programs to counsel present employees on career paths..." (p. 664).

Nature of the Study

It is apparent that there is a need to develop career education programs to help individuals decide on a career future that will be satisfying for themselves and productive for society. Students in high school must make some decisions about their educational and career future, and current evidence suggests many students are confused and appear unable to make appropriate decisions.

There are methods of predicting the career needs of students, such as vocational testing, career maturity inventories, and occupational questionnaires. One method of assessing where a student is in relation to the development of career maturity is to obtain scores for the student on the measurable variables of this construct. In this study the career maturity level of students before and after a mini-course career education program was of particular interest. A ten hour program in career education was developed (Appendix A), designed for senior high school students, to be instructed by this researcher. Grade 11 and 12 students were chosen because career education becomes more realistic for students at a time in their schooling when future planning decisions are imminent (Crites 1976).

Crites Career Maturity Inventory (CMI) has been used in total, or in
part, by researchers testing for career maturity gains or levels in a
student population (Omvig, et al, 1976; Westbrook, 1976b), or testing for
the sensitivity of this instrument to measure career maturity (Crites,
1974). Crites (1973a) indicates gain scores can be expected on the Competence
test subtests for students enrolled in a career education program, dependent
to some degree upon direct focus of content on the world of work.

The program was designed to include content that was representative of existing material available for counsellors and teachers instructing career education classes in high schools in an attempt to make the results of this study more meaningful to other career educators.

The development of career maturity of students can be altered by a variety of factors not directly connected to any education process. Many studies have examined the effects of sex, age, grade, intelligence, home influence, socio-economic status, self-concept, and other variables on the level of career maturity. Of some interest in this study is the relationship of sex, intelligence, attitude, and curriculum to the initial assessment of the career maturity level of the student. Westbrook and Cunningham (1970) suggest two important uses for career maturity measures could be to assess pupil readiness to make education/vocational decisions, and to compare students' scores to norms to locate areas of need to focus vocational development. The method involved in doing this research eliminated any opportunity to conduct the teaching program differently to accommodate for group differences on the variables, but the availability of information regarding influences on career maturity as seen in this study, may provide useful information for implementation of other career education programs.

Purpose of the Study

Research evaluating career planning programs is minimal. The purpose
of this study was to obtain information about the specific effects of a career education course on the career maturity level of students in grades 11 and 12.

Three objectives of this study were: a) to compare the level of career maturity, using adjusted posttest scores, of the group of students receiving instruction (experimental group) with a similar group of students not receiving instruction (control group); b) to compare pretest and posttest scores, of the experimental group only, to observe whether career maturity levels of the students changed, and whether this change could be attributed to the treatment; and c) to investigate the effect of sex, Grade Point Average (GPA), academic/vocational streaming, and Career Maturity Inventory Attitude Scale scores to career maturity levels.

**Definition of Terms**

Terminology that may have ambiguous meanings are defined to enable the reader to understand the context in which they are used in this study. The definitions primarily are those used by Tolbert (1974) and Pietrofesa (1975).

**Career**

A career is the sequence of occupations engaged in over a lifetime, including those occupations involved in preparing for work or activities engaged in following retirement from paid work.

**Vocation**

This term is used interchangeably with "career".

**Streaming**

Streaming in this study refers to the type of school program or curriculum the student has selected, eg. vocational or academic. This term was used interchangeably with vocational/academic program (or curriculum) and the context in which the terms are used with be self-explanatory.
Work
A mental or physical activity for which remuneration is received; *job* is used as a synonym.

Career Education and Guidance
Career education is part of the process of career development occurring within, and outside, a school setting and involves learning how to live and earn a living, and career guidance is the process of aiding another person to accomplish this. In this study, career education and career guidance may be used synonomously.

Vocational Development
This is defined as a lifelong process of developing work values, crystallizing a vocational identity, learning about opportunities, and trying out plans. Career development at one point was thought to be continuous and primarily irreversible, much as any growth and development phase (Erikson, 1963), but it is assumed that in vocational or career development, the process is affected by the individual's freedom of choice, in relation to course of studies and career selection.

Vocational Maturity
Pietrofesa (1975, p. 145) defines vocational maturity as "an operational, normative concept which emanates from vocational choice and development theory. It is symbolized by maturity of behavior in the actual life stage (regardless of whether it is the expected life stage)". Super (1963) suggests that vocational maturity could be judged by the nature of the vocational development task with which a person is attempting to cope, and that "life stage" refers to where the individual is currently functioning, which may not be related to his chronological age. Super elaborated on the concept of vocational maturity as being a construct that
permits the observer to assess the rate and level of a person's vocational development. For purposes of this study, Crites (1973a) operational definitions of the construct career maturity will be used. Crites divides this measure into Attitudes and Competencies. Attitudinal measures are to include: (Crites, 1971)
(a) involvement in the process of vocational choice,
(b) orientation toward the problem of vocational choice,
(c) independence in decision-making,
(d) preferences for factors in vocational choice, and
(e) conceptions of vocational choice
Competency measures are primarily in the cognitive domain and include self-appraisal, occupational information, choosing a career, planning (or looking ahead), and problem solving.

Implications of the Study

It was hypothesized that if the results of this study indicate that there is no significant gain on the measures of career maturity following participation in the career education program, then two factors could be responsible: a) the mini-course program was insufficient to increase career maturity levels of the student, or b) the instrument used to measure the career maturity level of the students was not designed to reflect change on the course content presented.

A third possibility would be that the program did affect the career maturity of the students, that the test was a sensitive instrument, but that for some reason, perhaps a time factor (short course), there was insufficient opportunity for the students to have obtained statistically significant gains.

Finally, if statistically significant gains are realized, then it could be assumed mini-course career education programs can result in an
increased career maturity level as measured by the CMI Competence tests.

The results appear on five different measures of career maturity and each of the above implications are taken as indicative of change on each individual test. The criterion for assessing change in career maturity was whether the experimental group achieves significantly higher scores on posttest measures.

A second implication of this study was to discern on what individual subtests there has been a change in the students' career maturity level for the group receiving the education. If the experimental group showed a statistically significant gain on one of the subtests, then it could be assumed that the program was successful on that measure. This would allow career educators to assess the course content and reappraise the content to make adjustments in whatever direction is desired. For example, if the students' mean score for 'Planning' indicated no significant gain, and it seemed important that students improved their skills in this, course content could be suitably altered, taught, and tested.

If the results indicate significantly positive correlations between the variables investigated and career maturity levels, then these measures could be considered when planning the method of implementation of a career education program, as predictive of learnings needs, eg. if sex should be found to be a significant factor in career maturity levels, then this variable could be considered when implementing a career education program.

Limitations of the Study

There were some differences between the students in this study that provide for limitations that may affect the generalizability of this study.

1. The students were an intact group, not randomly assigned. Some students selected to take a gymnastics option and others selected a career guidance option. This may in some way make the two groups
different. Differences are noticeable in the academic/vocational streaming and numbers of grade 12 students (See Table 1).

2. A few of the students had some previous exposure to career education, one or two remembered having some career classes, but their "memory" was not sufficiently accurate to be able to assess this in light of the present program.

3. The implementation of the career education program was unique for this group of students. Some of the factors involved included: a) poor physical setting: large cafeteria, large tables, resulting in a "spread out" group, too many students (up to 43 in one class); b) the posttest was written after mid-year school examinations, which may have caused test-fatigue; c) the instructor was not a member of the school staff. This could permit the instructor to direct group learning so as to "teach the test". To avoid this, the test (or instrument) was not used as a planning guide; d) the course had no credit or grade value. Students generally seem to be more attentive in class if it is a "pass/fail" situation. Substitute teachers often complain that students are unruly. Some of this behavior was noted, although the teacher of these classes indicated the students were inclined to be rambunctious in class.

4. The CMI is a lengthy instrument, and some of the students expressed dissatisfaction on completing the Competence section a second time. Nine students were excluded from final statistical tabulation due to spoiled measures. The students were not individually identified in class. However, there were a similar number of unused tests between the experimental and control groups (5 experimental, 4 control).
Overview of the Study

The introduction to the study included the rationale for the research and the purpose of the study. Chapter Two describes the theoretical base of understanding the developmental process of career maturity; a review of literature pertaining to career education and the factors affecting career maturity; the career program designed for this research; and a description of Crites CMI with emphasis on the Competence test. Chapter Three explains the method used to test the hypotheses postulated in Chapter Two, and concludes with a detailed presentation of these hypotheses. Chapter Four gives the results of the investigations and discussion of the implications, and the thesis concludes with a summary and recommendations for future study.
Chapter Two

REVIEW OF LITERATURE

This chapter is designed to present an overview of the theory of career development and the theoretical framework of Crites Career Maturity Inventory (CMI). It includes a review of literature related to career maturity, the rationale for and preparation of an education program, and a presentation of hypotheses arising from the literature and observations.

Theoretical Framework Used to Develop and Evaluate Career Education

There has been a great deal of research into the process involved in career development and factors which have an effect on career maturity. The ages and stages theory of growth and development (Erikson, 1963) is based on specific ages when children are best suited to learning certain developmental tasks. This developmental theory has been examined in relation to career maturity development by Super, Ginzberg, Tiedeman, and others, and they have identified specific career development tasks along an age continuum. It is also recognized that many variables affect the developmental process of career growth; such as individual characteristics and needs, self-concept, family, and environment (Pietrofesa, 1975). Although vocational theorists approach this topic in their own particular way, the fundamental principles are not mutually exclusive.

Crites tends to draw on several of the developmental theorists in his attempt to formulate the process of career development into measurable variables. As a result, he has developed an inventory that enables researchers to observe more scientifically the effect of career education and guidance on an individual's development of career maturity, and to be able to examine a variety of variables, such as age, sex, and intelligence, that influence vocational development.
Gasper and Omvig (1976) refer to the recent theory that career choice is a process that spans a period from late childhood into early adulthood and interest in assessing career maturity has developed from the apparent need to help individuals make realistic career decisions. Hansen and Ansell (1973) describe vocational maturity as one of the prime constructs of vocational development and say it provides a basis for assessment of an individual's development in career planning.

Crites, as previously mentioned, studied various approaches to career development of several theorists, eg. Super, Ginzberg and Roe, and it is these theories that are fundamental to the Career Maturity Inventory (CMI). Their theories also provide a basis for formulation of career awareness intervention programs, involving education, testing and counselling.

**Vocational Theorists**

**Super**

Super began to crystallize his ideas in the early 1950s. He was influenced by Carl Roger's ideas of self concept (ie, the ideal self and the self concept must be congruent in the healthy individual). Super's approach focuses on four major elements (Tolbert, 1974, p. 31):

(a) vocational life stages

(b) vocational maturity

(c) translating the self-concept into a vocational self-concept

(d) career patterns

He feels that psychological, physiological and environmental conditions contribute to a person's vocational development, that the development progresses along a continuum, and that a career pattern may be predicted when sufficient data is available to the individual.

Vocational self-concept is a part of the total self concept and is a continuously developing entity; awareness of the relationship to others, the
differences between self and others, which lead to decisions about education and work that, in an integrated person, are consistent with self concepts. This process of differentiation includes three stages (Osipow, 1973):

(a) **Identification:** Awareness of similarities between self and significant others.

(b) **Role-playing:** Child takes on in play a particular occupational role, and as the child matures the role playing becomes more sophisticated.

(c) **Role modelling:** Individual takes on and integrates characteristics of a role into his behavior.

Super was influenced by writings of developmental psychologists; in particular, Charlotte Beuhler, who viewed life in terms of stages. Super has redefined these and called them vocational life stages (Super, 1957):

1. **Growth Stage (Birth - 14 years):** Self-concept develops through identification with key figures in family and at school. Interests and capabilities become more important with increasing social participation.

2. **Exploration Stage (15 - 24 years):** From 15 - 17 years, needs, interests, capacities, values and opportunities are important. Tentative choices are made and tried out in fantasy, discussion, courses, work, etc. From 18 - 21 years, reality is important. The individual enters the world of work, training or education, attempting to implement his/her self-concept. At ages 22 - 24 a beginning job is obtained and tried out.

3. **Establishment Stage (24 - 44 years):** A suitable work field is found. The person has a desire to earn a permanent place in an occupation. There may be some trial periods (job changes) and some shifting within the occupation.
4. **Maintenance Stage (45 - 65 years):** The individual builds his/her place in the world of work (Tolbert, 1974, p. 33).

From within the context of life stages, Super proposed vocational development tasks and defined them for late adolescence and early adulthood. These definitions have educational implications as they can be applied to a person at any life stage who is changing jobs or entering the work force for the first time. Crites required a specification of the variables to be quantified in the approach to a rational-empirical measurement of vocational maturity and drew from Super's proposal of developmental tasks and essential elements of vocational maturity (Crites, 1974).

Super's vocational developmental tasks are as follows (Super, 1963):

1. **Crystallization (14 - 18):**
   
   (a) The individual formulates ideas about work appropriate for him or herself, to develop occupational and self-concepts that will help make relevant educational decisions.
   (b) The individual has tentative vocational choice in mind.
   (c) The person possesses some information for preferred occupations.
   (d) The person makes some plans. Planning is an important element of all tasks.

2. **Specification (18 - 21):** A general career direction is narrowed to a specific one and necessary steps are taken to implement a decision, e.g., entering a university in a related field, or entering specific training courses.

3. **Implementation (21 - 25):** Training is completed and a relevant employment entered. Although the following are of less importance to development of the Career Maturity Inventory (CMI), the CMI is designed to measure development tasks at any age as vocational age and chronological age may not be the same, and the CMI has been
effectively used in adult populations (Crites, 1974).

4. **Stabilization (25 - 35):** There is a settling down in the field of work. The person will change positions during stabilization, but rarely his vocation.

5. **Consolidation of Status and Advancement (35 - ):** The individual establishes self, skills and seniority in order to generate a secure comfortable vocational position as career matures.

Vocational maturity is defined as congruence between an individual's vocational behavior and expected vocational behavior. Super outlined five dimensions of vocational maturity (Crites, 1965, p. 4):

1. Orientation to vocational choice.
2. Information and planning about the preferred occupation.
3. Consistency of vocational preferences.
4. Crystallization of traits.
5. Wisdom of vocational preferences.

Super's (Super and Overstreet, 1960) research included a longitudinal study (25 years) of 142 ninth grade boys and summarized his findings. He found that vocational maturity in ninth grade boys is related to:

- degree of intellectual and cultural stimulation
- degree to which they are intellectually able to respond to that stimulation
- their aspiration to higher rather than lower socio-economic levels
- ability to achieve reasonably well in a variety of activities.

After a ten year follow-up it was concluded that vocational maturity was generally predictive of career satisfaction, self-improvement, and occupational satisfaction. Super suggested that school curricula should encourage planning and should be aimed at helping youth become aware of
their level of occupational aspiration and general amount of education
required to achieve that level.

Not only did Super's work provide a basis for Crites Career Maturity
Inventory (CMI), but it also presents implications for career education;
for example, to realize that individuals develop at differing rates, and
apply relevant behaviors to the varying vocational tasks to avoid the
pitfalls of incongruence, poor self-concept and stagnation, and to help
individuals integrate data concerning cultural, social and biological
background to aid in career decision making.

Super's ideas were built upon Anne Roe's needs theory and Ginzberg's
developmental theory.

Ginzberg:
At one time, Ginzberg (1951) felt the vocational choice process was
irreversible, but after research on the work lives of men and women, thought
it to be life-long and open-ended (Tolbert, 1974). The principal challenge
to young people during their teens is to keep all avenues open for entrance
into further education and admission to a desired field of work. Ginzberg
asserted that it is more logical to believe that an occupational choice is
the result of a development process, rather than of a single event.

Ginzberg's three main developmental stages are summarized by Tolbert

1. **Fantasy Period: (Preschool to 11 years)** In this time there is a change
   from play orientation to work orientation. Ability, potentiality, and
time perspectives are not important.

2. **Tentative Period: (11 - 18 years)** Crites Career Maturity Inventory
   (CMI) is appropriate to assess career maturity of youth entering this
   period (Crites 1974). There are four phases a child goes through in
   the tentative stage of occupational choice:
(a) **Interest** - The individual becomes aware of his likes and dislikes for certain occupations, and choice is made on this basis.

(b) **Capacity** - A student begins to introduce the notion of ability into vocational considerations. He begins to evaluate interests and activities.

(c) **Value** - The individual incorporates his values into his tentative choice of occupation. He becomes aware of other aspects of occupation besides satisfying his own needs. He also becomes aware that his interests and values may be compatible.

(d) **Transition** - The end of the values stage meets the teenager when he is able to integrate his interests, abilities and values into reality. At this time he usually faces college entrance or a job.

3. **Realistic Period: (18 - 25 years)**

   (a) **Exploration** - Clarification of occupational choice between themselves and reality, make a decision between interests.

   (b) **Crystallization** - The person is able to recognize a possible conflict between capacities and interests and values, and is able to make plans about the future.

   (c) **Specification** - Selection of the specifics of an occupational choice after a general choice has been made.

Ginzberg's theory is that occupational choice is a lifelong process of decision making in which the individual constantly seeks to find the optimal fit between career goals and realities of the world of work.

**Ann Roe:**

Ann Roe was one of the first theorists to adopt a semblance of a developmental process to career maturity. Although Roe's theory is labelled as a "needs theory", she contributed to subsequent development
theorists (Osipow, 1973).

Roe related genetic factors and early childhood experiences to vocational behavior. She leaned heavily on Maslow's hierarchy of needs (Appendix A-4), and felt motivation is the result of intensity of needs. Her research involved personality characteristics, intelligence, environmental background and aptitude. She found there seemed to be differences in the age when persons crystallized a career choice, e.g., scientists in high school years, psychologists in college years or later.

Roe believed that while heredity determines the range of man's abilities, it is the environment which determines the place within that range. Roe developed occupational classifications as related to home climate, relating factors such as acceptance or avoidance in parent-child relationships as ultimately directing the individual toward or not toward persons, and then identified occupational groupings.

The field by level occupational theory developed by Roe provides her major contribution to Crites Career Maturity Inventory (CMI). Research has been more on fields of work. Roe's hypothesis that loving and casual homes would fulfill personal needs and free the individual to look at other factors, such as ability, is related to levels, the intensity of the need strongly affecting the level a person will achieve in a chosen field. Some of the Crites Career Maturity Inventory (CMI) items are designed to assess a person's differentiation between an occupational level, for example, a person with a high level of academic ability and a potential interest in the field of health, working as a laboratory aide.

Tiedeman and O'Hara:

A further contribution to career development theory is postulated by Tiedeman and O'Hara's career development system. Tiedeman and O'Hara (1963) say that career development occurs as the individual develops a
"vocational identity through differentiation and integration of the personality as one confronts the problems of work in living" (p. v) and goes on to develop a paradigm of the processes in problem solving, similar to that postulated by Super: exploration, crystallization, choice, and clarification.

Time and discontinuity are elements in career development; for example, how much time a person puts into preparation for work, and how a person plans for and handles discontinuity in their life, eg., preparation for leaving high school.

Tiedeman and O'Hara (1975) have drawn heavily upon Super and Ginzberg in formulation and testing of their theory. Studies indicate there are changes in the vocational self-concept with increasing age, that clarification of the self-concept and increased self-knowledge occurs, that steps in the differentiation and integration process can be identified, and different individuals approach vocational problem solving in their own unique way. Tiedeman has researched career decision making and has been involved in computerized career guidance systems (Tolbert, 1974).

Crites:
Crites favours the developmental theory of vocational growth. His theoretical base is divided into two categories: a) vocational choice, and b) vocational adjustment.

Career maturity is a construct related to general personal adjustment, intelligence, and scholastic achievement (Crites, 1971), and Crites (1976) says girls seem more career mature than boys. Crites has drawn from Super's theory a model of career maturity that he calls Vocational Choice Competencies and Vocational Choice Attitudes. "Along with the Consistency and Wisdom variables, these dimensions were incorporated in the construct
of vocational maturity" (Crites, 1974, p. 27).

Crites (1973c) states it is important to identify the career-immature as early in the decision making years as possible. Crites has examined a variety of factors which may influence career maturity.

Factors Which May Influence Career Maturity

In most of Crites research cited, there is an indication that a variety of variables influence the individual's level of career maturity. This would imply that career education or intervention is only one of several factors that could cause change on a career maturity measure. Family is one of the main influences (Pietrofesa, 1975) as it is the basic social and psychological unit in the transmission of culture and development of personality. Roe relates early determinants of vocational choice to family interactions. Crites refers to physique as related to bodily capabilities, race as occupational opportunity availability, and sex as role stereotyping. In this research, the relationship of sex, curriculum, (vocational/academic) and Attitude Scale scores and the level of career maturity as measured by Crites Career Maturity Inventory Competence tests is investigated. In the literature reviewed there was only one research dealing with the relationship of Attitude Scale to a measure of competence. Westbrook (1976a) in a study of interrelationship of Career Choice Competencies and Career Choice attitudes of ninth grade pupils found a positive correlation existed (.59), between Career Maturity Inventory Attitude Scale and career choice competency variables (not Career Maturity Inventory Competence test).

Grade Point Average and Curriculum:

It appears that grade point average, or some other measure of intelligence (eg., Otis Lenon Mental Ability test, Lawrence and Brown, 1976) correlates
positively with scores obtained on career maturity tests. Crites (1971, 1973, 1976) found more intelligent students scored high on the Career Maturity Inventory. This is supported by studies of Lawrence and Brown (1976) and Maynard and Hansen (1970).

Studies often equate intelligence with curriculum choice and find that academic students are often more intelligent, or have higher grade point averages, and therefore choose a curriculum content that is more intellectually demanding or stimulating.

Echternacht (1976) attempted to identify variables from a lengthy omnibus questionnaire and a set of test scores that would distinguish students in high school vocational education programs from those in academic and general programs. The results indicated vocational students were lower than academic students in tested academic ability. Vocational students were as low as general students, although vocational students who achieved higher grades were more focused on the world of work.

Herr and Enderlein (1976) in a study investigating the usefulness of the Career Maturity Inventory found that Career Maturity Inventory scores increased by grade level (as Crites has stated), but the level of this increase is influenced by sex, school, and curriculum effects.

Egner and Jackson (1978) found that career maturity was significantly related to decision making and more non-academic programs than academic groups increased their decision making scores. This could be attributed to the fact that the vocational students were about to enter the world of work and had made a decision. The appropriateness of the decision was not being tested.

Banducci (1970) in a study of accuracy of occupational stereotypes of grade 12 boys, found that boys with a high grade point average had more accurate stereotypes of high level jobs, and low socioeconomic and low
grade point average boys had more accurate stereotyping of low level jobs. He felt this presents a limiting factor on consideration of a particular vocation.

Sex as a Variable:
Several studies indicate girls score higher than do boys on career maturity inventories. Crites (1973c) supports this. Omvig et al (1976), using Crites Career Maturity Inventory, found the grade 8 girls in his study were more career mature than the grade 8 boys, although he found no difference at the grade 6 level.

Smith and Herr (1972) found significant mean differences associated with sex on their study of maturation of vocational attitudes among eighth and tenth graders, girls being higher, as measured by Crites Vocational Development Inventory, Attitude Scale.

Herr and Enderlein (1976) found that the Career Maturity Inventory might be used equally well for both boys and girls, and that females' career maturity level increases on an almost linear rate to grade 12, whereas the increase for boys tends to level off after grade 10. (Career Maturity Inventory Attitude Scale used).

Gilrain (1974) indicates future studies should be instituted to investigate vocational development levels of males and females and that career programs should be planned to accommodate differences in levels. Pietrofesa (1975) suggests the sex variable, as related to career maturity, needs further investigation.

Crites Career Maturity Inventory

The development of the Career Maturity Inventory is Crites current contribution to providing an instrument for measurement of variables relevant to the construct, career maturity.
Super initially conceptualized and defined five major dimensions of vocational maturity during adolescence: a) orientation to vocational choice; b) information and planning; c) consistency of vocational preferences; d) crystallization of traits; and e) wisdom of vocational preferences.

Crites (1965) further analyzed orientation, information, and crystallization into what he called Vocational Choice Competencies and Vocational Choice Attitudes. Along with Super's other two variables, consistency and wisdom, these dimensions were incorporated into the construct of vocational maturity (Appendix D). Built into this construct are items related to time that are comparable from one time unit to another to make it "possible to establish norms on the incidence of vocationally mature behaviors both within and between age and/or grade groupings" (Crites, 1974, p. 29). Crites prepared items that were understandable to the adolescent age group.

The variables to be measured by Crites Career Maturity Inventory are as follows:

<table>
<thead>
<tr>
<th>Consistency of Choice</th>
<th>Realism of Choice</th>
<th>Career Choice Competencies</th>
<th>Career Choice Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field</td>
<td>Social class</td>
<td>Self-appraisal Planning</td>
<td>Orientation Preference</td>
</tr>
<tr>
<td>Time</td>
<td>Interests</td>
<td>Goal selection</td>
<td>Involvement</td>
</tr>
<tr>
<td>Level</td>
<td>Personality</td>
<td>Occupational information</td>
<td>Conception</td>
</tr>
<tr>
<td></td>
<td>Abilities</td>
<td>Problem solving</td>
<td>Independence</td>
</tr>
</tbody>
</table>

**Attitude Scale**

The purpose of the Attitude Scale was to construct a standardized measure of vocational development, which unlike interview derived indices, would be objective, easily administered to large numbers of subjects, and related to a measure of time (i.e., age and/or grade). Its items were written from statements made by clients in vocational counselling and
concepts proposed in the vocational development theory to represent the dispositional response tendencies defined by the listed variables (right column, p. 24). To standardize the Attitude Scale, 100 items were selected from a pool of 1,000. Both males and females were included in equal proportions to determine sex differences. Fifty true/false attitudinal statements were monotonically related to grade and consequently chosen as an index of time.

Dimensions measured are:

1. **Involvement in the Choice Process** - Extent to which individual is actively participating in the process of making a choice.

2. **Orientation Toward Work** - Extent to which individual is task or pleasure-oriented in his attitudes toward work and the values he places upon work.

3. **Independence in Decision Making** - Extent to which individual relies upon others in the choice of an occupation.

4. **Preference for Career Choice Factors** - Extent to which individual bases his choice upon a particular factor.

5. **Conceptions of the Choice Process** - Extent to which individual has accurate or inaccurate conceptions about making a career choice. (Crites, 1973c, p. 12)

**Competence Test**

All twenty items in each subtest have a multiple choice format. Subject matter was drawn from real life sources to describe hypothetical problems, plans, or jobs of persons. Item alternatives were based on responses of seventh to twelfth grade students in a city in Iowa. Included in all items multiple choice responses is "I don't know". The test consists of five parts:
1. Knowing Yourself (KY) - Self Appraisal
2. Knowing About Jobs (KJ) - Occupational Information
3. Choosing a Job (CJ) - Goal Selection
4. Looking Ahead (LA) - Planning
5. What Should They Do? (PS) - Problem Solving

An effort was made in item preparation to represent different ethnic groups (not a factor in this study) and sex stereotyping and to make the item content familiar and interesting to young people.

As these subtests form a major part of this study, each of the five will be described separately.

Part 1 - Knowing Yourself:

To know oneself is considered to be the prime factor in developing career maturity. This test is based on the assumptions that individuals who can accurately appraise the career-relevant capabilities of others are good self-appraisers. The item stems give a third person situation involving something a person has done, eg. taking a woodworking course in school, and being successful at it, then trying to decide what these skills and interests might mean to his career future. The alternative selections are: 1. a dependence upon others; 2. a need for certainty; 3. overestimation of one's capabilities; 4. accurate self-appraisal, and 5. I don't know. (Crites, 1973b).

Part II - Knowing About Jobs:

In preparing this measure, it became apparent that occupational information can be assessed in many ways depending upon content covered, such as job requirements, employment opportunities, or occupational roles. The occupations chosen for these items were representative of frequently chosen occupations in which employment opportunities were good and for
which commonly used vocational interest inventories are available. Roe's field and level classification was revised to develop the occupational classification. The items describe work a person is doing and from the description, the student selects the job from five alternatives, including "I don't know".

Part III - Choosing a Job:
This subtest is based on the theory that a career-mature adolescent should be able to select career goals relevant to his capabilities. Roe's field and level classification was adopted as a scoring criterion. Again, using a third person situation, this subtest operationally defines the ability to correctly match people with jobs. Each item lists job activities and skills related to something a person is doing, and the student is to identify which job it could be. Each situation combines a statement inferring a person's abilities and indicates an interest and skill level of some occupation. The student is expected to select the most appropriate occupation from the list provided.

Part IV - Looking Ahead:
This subtest asks the student how to go about attaining an occupational goal. There are many steps in planning, but this test restricts itself to the ordering of steps, eg. "Fred wants to be a policeman. Three steps he can take to become one are: 1. pass police qualifying tests; 2. go to a police academy for training; 3. take a general course in high school. What is the correct order of these steps? 1, 3, 2.... and other combinations, including the usual "I don't know" (Career Maturity Inventory Competence test, p. 30). The correct alternative is related to something similar to the job steps identified in Volume Two of the Canadian Classification and Dictionary of Occupations (CCDO), distributed by Canada
Manpower. It involves a sequence of obtaining relevant training, gaining employment in the occupation, and then certifying in the field.

**Part V - Problem Solving:**

This subtest is involved with problems that may arise in the process of career decision making; the criteria for selecting the correct answer follows the general rationale that the best solution to a problem is one which minimizes denial and distortion of reality, trial-and-error, and escape, and maximizes using creative alternatives or seeking consultation. One measure of career maturity is how effectively an individual can solve problems in the career development task he is expected to accomplish.

For example, "Betty wants to be a lawyer. But, her guidance tests indicate that she does not have enough ability. What should she do?". The answers offered are: get married; go into law anyway; tests can be wrong; increase her ability to be a lawyer; enter a related field at a lower level, like a legal secretary; and don't know. The correct answer according to Crites (1973a) is entering a related field. It is the opinion of this author that the suitability of the expected answer is open to a great deal of discussion. Although it does meet the criteria of minimizing denial and distortion of reality, it does not appear to maximize consideration of creative alternatives. Many of the indicated 'right' answers in this subtest could be similarly challenged.

Item selection of the Competence test was completed with standardization of the test, using a middle-class suburban school system in California. No sex or ethnic information was obtained, and any differences in results were allocated to sources of variance error. Monotonic functions of grade were noted, with spurts in early grades (6 - 7), levelling off in grades 8 - 10, and an upward trend, grades 11 - 12. The Problem Solving subtest
results indicated some conflict with findings for other subtests, suggesting a reversal in the increase by grade trend. The reliability of this subtest is less secure, and Crites acknowledges it requires further research (Crites, 1974).

The scores to be used for normative purposes, are available for the Attitude Scale and the Competence test. The Attitude Scale scores are converted into percentile scores and are recorded under grade and States where the tests were normed. The Competence test scores are also converted to percentiles, but recorded under grades only, as the test was normed in only one State, California.

Literature Relevant to Career Maturity and Career Education

A review of literature has indicated there is a great deal of research relevant to career maturity development and career education. Some studies involve looking at career maturity measurements in an attempt to find the most sensitive instrument for measuring the variables designated as indices of the construct of career maturity. The more recent theory (since 1950) of career maturity being developmental in nature, has provided some concrete structure for creating a framework in which to design career measurement. For example, a certain level of maturity can be anticipated to occur at a particular age, or grade; much as ability to walk unsupported can be anticipated at a certain growth development age. There appears to be very little research using the Competence test in assessing career education effectiveness. There also appears insufficient assessment of the effectiveness of many career programs in literature. This section will look at the Career Maturity Inventory as an appropriate measure, and career programs that have had some evaluation of the effect on career maturity of students.
Career Maturity Research

Westbrook (1974) analyzed the content of six different career development tests. He categorized the results in terms of twelve major components, six classified in the cognitive domain, three in psychomotor, and three in the affective domain. The analysis consisted of 117 behavioral statements which described the behavior required of the learner and the situation in which the behavior occurs. His results show that the Career Maturity Inventory provides for an assessment of behaviors in all three domains, it deals with the ability to identify appropriate jobs for given individuals using twenty items, in relation to another test using only seven items. This study indicates that the Career Maturity Inventory is most involved with the cognitive domain: the learners' self-knowledge, occupational information, job selection, school and career planning and problem solving. There appears slight involvement with career planning activities. In the affective domain, the Career Maturity Inventory has items involving attitudes, preferences, and perceptions of the learner.

Other tests analyzed for purposes of comparison are (Westbrook, 1974, p. 172):

1. Readiness for Vocational Planning (Gribbons and Lohnes, 1968) - few items, mostly cognitive domain.


3. Career Development Inventory (Super, et al, 1971) - primarily occupational choice and involvement in activities related to preferred occupations.

5. Education Testing Service Guidance Inquiry (1958) - involving what the learner knows and course and curriculum information.

Apart from the lengthy (267 items) Assessment of Career Development, the Career Maturity Inventory appears to cover a more comprehensive range of behaviors studies by Westbrook.

Prior to his 1974 test content analysis (above), Westbrook and Cunningham (1970) were criticizing Crites Attitude Scale as yielding only one measure (total score out of 50 items) of career maturity instead of the five variables it purports to measure. They suggested a test should be developed that is able to assess pupil readiness to make educational/vocational decisions; graph areas of pupils' maturity for diagnostic purposes and compare to norms to locate areas to focus vocational development. Westbrook (1976b) has utilized, among other tests, Crites Attitude Scale in a study to assess the maturity and appropriateness of vocational choices of ninth grade pupils.

The Career Maturity Inventory has also been selected as a measurement of vocational maturity in many studies, including those of Lawrence and Brown (1976), Gasper and Omvig (1976). Crites (1973a) indicates that the Competence test in particular is "ready for use in research on the nature and course of career development" (p. 35).

Norton (1970) in a study on the status of measurement of vocational maturity, included, among others, the Career Maturity Inventory. He says Crites talks about the consistency of choice and wisdom of choice, neither of which he measures. His results showed scores on the Career Maturity Inventory increase with each grade (except grade 11). Younger respondents answer "true" more frequently than do older students, but he generally found Crites' Career Maturity Inventory to be the most comprehensive
test of its kind.

It is to be noted that most of the research involves Crites Attitude Scale measure. When reviewing the literature often this does not seem to be totally clear.

Research Related to Testing Effectiveness of Career Education

Egner and Jackson (1978) developed a career decision making model and program designed to improve career maturity and found that students in the program significantly increased their career maturity scores, and that career maturity was significantly related to decision making. "The importance of career decision making skill has been underestimated in our educational system and in society" (p. 45). Egner and Jackson reviewed literature and found "no comprehensive research studies related to teaching decision making skills". The study was conducted by counsellors with ten to eighteen grade 11 students in twenty sessions. Crites Career Maturity Inventory Attitude Scale (1973b) was one measure used. They also tested grade point average and streaming as predictors of posttest decision making and found a significant correlation (GPA = .33; Streaming = .23; p < .02). The apparent success of this program in raising the level of career maturity in a relatively short period of time suggests that further investigation into this type of career education would be recommended.

In a study by Omvig, Tulloch and Thomas (1975), the purpose was to assess the effects of a career education program on grade six and eight students' career maturity, using both sections of the Career Maturity Inventory as a measurement tool. Grade six students showed significantly higher scores on Competence subtests Planning and Occupational Information, and grade eight students on Planning only of the subtests. As Omvig et al acknowledge, it would be difficult to replicate the independent variable,
the career education program. The only guideline for the teachers implementing the career education program was a set of objectives for incorporating this teaching into regular classes. The program extended from October to April. Whereas it seems appropriate to implement career education into regular teaching classes, the weaknesses of this program are evident. Although Crites (1973a) says the Career Maturity Inventory test is suitable for grade six level, the questions, on the subtests particularly, involve good reading and integration skills that seem complex for that grade level. It would be of interest to know how the test was administered, numbers being tested simultaneously, and over what period of time. The authors state that the results are encouraging, but without documented career education curriculum, it would be difficult to replicate the factors involved in the study. If Egner and Jackson's (1978) study had used Crites Competence test to measure the results of their career education program, it would allow a more reliable comparison of this program to the research of Omvig, et al (1975), but on the surface it seems that the decision making approach to career teaching, partly because of the short program length, and mainly because of the curriculum control, would be more appropriate to pursue.

Gasper and Omvig (1976) investigated the relationship between career maturity and occupational plans of high school juniors using the Career Maturity Inventory and an Occupational Plans Questionnaire developed by Hershenson. The authors are questioning at what point in a student's life is their maturity level appropriate to the task of making an occupational choice. They found that students with low career maturity chose occupations inconsistent with their abilities, values and interests, and those with high career maturity were able to be more congruent. Gasper and Omvig (1976) suggest that traditional education patterns are not oriented toward
helping student develop skills and attitudes necessary for career decision making. The results of their study supported the hypothesis that "there is no relationship between the career maturity and occupational plan scores of high school juniors" (p. 371).

Babcok and Kaufman (1976) studied a group of undergraduate women enrolled in a career environment and individual development class, 14 hours in duration. There were two other groups: a) walk-in-counselling only, no education, and b) control.

The group receiving instruction showed significantly greater gains on self-knowledge and the relationship of this to occupations. The implications of the results are that a structured learning experience around values clarification and decision making is more effective than the informal counselling assistance received in a casual drop-in basis. Another study by Bogie and Bogie (1976) shows that the more counsellor contact, the less the discrepancy between vocational aspiration and expectation. Babcock and Kaufman's research is supportive of this as their results showed the 'walk-in' group scored higher on the career development inventory designed by Super, than did the control group, although the class group scored significantly higher than both, which implies that some form of career intervention is better than none.

Studies on short term career intervention have given rise to concerns that short career orientations at the high school level are ineffective. For example: La Bozetta (1973) conducted research using four one-hour career orientation periods, one session testing, a second release of aptitude scores with specific occupations, and lastly, investigation and reporting of three occupational preferences. Diana (1974) attempted to determine if tenth grade students had a better understanding of self,
careers, and occupational awareness following counselling and guidance, testing, test interpretation and career exploration. Measures used were varied and included self-report inventories, semantic differential scales, and an occupational-aspiration scale. None of the hypotheses tested in either of the studies showed statistically significant results. Diana recommends future studies should be attempted to implement the most effective approach and methods by which improvement of career awareness can be integrated into secondary schools.

The Career Education Program for this Study

Whereas career programs implemented over a school year (or years) may be more effective in increasing career maturity, the planning process could take several years, and mini career programs are at least an interim treatment for the problem.

Are these courses the answer to increasing the students' level of career maturity? To measure the effect of such programs will give some direction to future career course planning. Programs could be developed for any of the elementary and secondary school years. They could be implemented by teachers of general curriculum, guidance counsellors, or individuals outside the school system. For purposes of this research, a ten hour program was developed (Appendix A) designed for use by senior high school students, grades eleven and twelve, and to be instructed by this researcher.

The career education program implemented different styles of learning situations: a) lecturette, primarily information giving; b) group activities, sharing of knowledge and ideas; c) role-playing and modelling, an opportunity to view oneself in relation to others, experience simulated real-life situations, and learning through imitation; and d) individual exercises,
reinforcement of classroom activities.

Psychological and Theoretical Rationale for the Career Program

The curriculum was primarily established on the theory that self-awareness or self-concept realism (Super, 1957) is a necessary forerunner of realistic vocational choice. Occupational knowledge is important; what the student knows about jobs, skills, and education required, job characteristics in terms of supervisory expectancies, working with others, time commitments, and other job-related factors. Then, finally, "putting it all together", requiring decision-making abilities. The program length, in terms of time, dictated the way in which the content was handled. The program was adjusted from time to time to accommodate the needs of the group.

In Bloom's taxonomy of educational behaviors (DeCecco, 1968), two broad categories are defined: a) knowledge, and b) intellectual abilities and skills. These are further divided into six classes of behavior; knowledge, comprehension, application, analysis, synthesis, and evaluation. All of these basic principles were involved, to some extent, in the career program. The intent of the program was to increase the students' understanding of the world-of-work.

Teaching techniques utilized in the program are theoretically supported by basic psychological principles put forward by Rogers, Maslow, Glasser, Super, Roe, and others. Learning principles of Adlerian and behavior modification philosophies were also involved.

Carl Rogers' theoretically divides people into two broad types, "people in whom the actualizing tendency is vigorously expressed, leading to the enhancement and enrichment of living, as opposed to the people in whom the actualizing tendency is protectively, defensively expressed, leading to the mere maintenance of living" (Maddi, 1972, p. 315). Rogers believes there
are degrees to which people resemble one or the other of these two groups.

The average person working in a job spends approximately half a lifetime involved in careers. If the career decision is congruent with the individual's values and abilities, then that person can attain a type of lifestyle well above Roger's "maintenance" level.

In Maslow's (1968) hierarchy of needs theory, he proposes the most basic of physiological needs (shelter, food) must be met before a person can go on to the next rung of the ladder, safety and security. Herzberg (1959) has developed a pyramid of working conditions and goals that parallel Maslow's hierarchy of needs, and Herzberg relates the psychological needs of safety and security to the most basic level of working conditions, e.g. heat, light, space. Part of the career program was designed to encourage students to assess their personal needs and to realistically relate these to individual expectations when considering the work force; similar to Super's theory of the congruent individual as one whose ideal occupational self-concept overlaps his real occupational self-concept.

The initial part of the career program focused on the realities of the world-of-work; how to go about obtaining a job. The purpose was to set the stage for the students to mentally project themselves into career thinking. The lecturette parts of the career program delivered to the total group, were all designed to be knowledge-oriented, to encourage the students to bring into focus the reality of their self-concept in relation to their planning process for the future. The individual "take home" exercises would be discussed with a counsellor alone, or in small groups. Time did not permit these discussions, so that any incongruencies existent would probably be retained. Rogers says change depends on a person's awareness of his feelings and the extent to which he owns and expresses them. This change
would probably be difficult to determine in a class-learning situation.

Proponents of behavior modification (Corsini, 1973) suggest that if a person actively participates in the treatment, the more likely it is that change will occur. During the program, students, in groups of three or five, worked through a series of questions directed to a specific situation. The learning process was reinforced by bringing group comments to the class as a whole. Practice was encouraged by take-home activities.

Adlerian therapists believe that human problems are primarily social in nature and that working in groups can assist in the solution of problems. Role play is considered to be "action therapy" and has been used in several situations, including police training (Corsini, 1973). Modelling was used as an introduction to role-play learning for developing interview skills. This is a technique of behavior modification, used by Bandura (Lindzey, Hall and Manosevitz, 1973), and reinforcement occurs when the students role-play interviews and critique each others' performance.

Glasser (1969) feels that a success identity comes from involvement with others and is a primary intrinsic force related to all behavior. The process of working in a group role-play experience provides an opportunity for students to share ideas and observe behaviors different from their own, which ultimately provides another way of "looking" at the reality of their behaviors and expectations. Other techniques employed by Glasser include evaluations of behavior, future planning, and decision making, which directly link with the educational behaviors defined in Bloom's taxonomy, eg. analysis, and synthesis. The career program presented made reference to goal setting and goal attainment processes. Time was not sufficient to permit practice and reinforcement of these skills.
Other Career Course Considerations

As well as incorporating vocational and psychological learning theories, it was decided that if the research results were to be meaningful to teachers, the material incorporated into the program should be representative of existing programming in other school districts.

In order to accomplish this, Manpower Canada resources were investigated, and Manpower sponsored career education workshops for teachers and counsellors attended. The Manpower office for the B.C. Region has an active education department. Their research staff is continually revising "educational packages". The Manpower personnel offer instruction in the use of materials to any school requesting this. The educational offices provide brochures, charts and other audio-visual aides to schools for career education. Currently, the Vancouver School District and Manpower have created the Career Action for Youth (C.A.Y.) Centre in Vancouver. Their stated objectives are:

1. To bridge the gap between the protective school environment and the realities of work.
2. To act as a career information resource for Canada Manpower Centres, secondary schools, parents, business and industry, and social community agencies. (Note Appendix B)

Because of the widespread use of Manpower's career education "mini-packages", the program in this study used some of the experimental exercises provided. The "packaged" learning is in a 15 unit format and was published in the Vancouver Daily Province as a home learning service during the spring of 1978. A second major resource of material for program planning was the Manitoba government's publication (1972) of a resource book for groups in guidance. This provides both instructional and experiential guidelines,
and is a popular resource aide.

The developed program was examined in relation to what changes, if any, could be anticipated on Crites Career Maturity Inventory Competence test subtests. The following is an assessment of content included in the program that could be related to each of the five subtests.

1. **Knowing Yourself (KY):** Several sections of the program deal with this topic and include: values clarification, self appraisal and goal setting; check list of personal aspects of a job; self-assessment questionnaire; and skill definitions. Apart from the listed specific items, all parts of the program could have an effect on the student's level of career self-awareness.

2. **Knowing About Jobs (KJ):** The kinds of skills that comprise a job were not specifically taught. A career interview assignment, interview role playing, and a library session looking at career information (which appeared to require updating), could serve as a contributory factor to any increased student awareness about jobs in general. Crites indicates students enrolled in a career education program should make "gains" on the five parts of the Competence test, and if the program covers only the acquisition of usable skills "as would be learned in more traditional industrial arts courses" (Crites 1973a, p.36), increases should at least appear on these first two subtests. It seems reasonable to predict some gain on Knowing Yourself, but less, if any, on Knowing About Jobs.

3. **Choosing a Job (CJ):** (See Appendix A - 5 and A - 6). The curriculum deals with the process of choosing a job or being chosen for a job, but not in as concrete terms as the items on this subtest require, that is, job titles and skills required were not matched.
4. **Looking Ahead (LA):** It is recognized that an ability to plan realistically for future studies and career choice is one of the major goals of career education. It was anticipated in a short program that only some career education goals could be emphasized. This program concentrated less on specific occupations and more on realistic self-awareness in career planning.

5. **Problem Solving (PS):** Crites (1974) admits to some difficulties inherent in this subtest due to the different ways in which the same person will approach problem solving. Decision making processes were not an integral part of this career program, although the author recognizes the importance of this factor.

The final three subtests would not likely show "gains". One of the criticisms of short career programs is that, of necessity, the content cannot be dealt with thoroughly, and if one allows for group participation, in a brief time span, the information component of the program is limited. Because of the general stimulation of a career intervention, it could be assumed that there may be slight increases on scores of each of the subtests from pretest to posttesting but there is not a strong likelihood of significant gains.

**Current Trends and Suggestions**

As previously mentioned, the Department of Manpower is continually studying career educational needs. The Goard Commission (1976) recommended that a one-semester course be provided in colleges for all students desiring help in this area. They further recommended that "more college counsellors provide group counselling on career decision making" (p. 11). Breton (1972), with the co-operation of the Federal Department of Labour and the Provincial Departments of Education, has studied in detail the career development of adolescents which can provide career education planners with many guidelines.
He states "the adolescents' formulation of an educational plan and career goal is based on his views of the future and of himself in relation to it" (p. 382).

Daniel Yankelovich (1978), a research professor of psychology in New York, states: "A new breed of Americans, born out of the social movement of the 60's and grown into majority in the 70's, holds a set of values and beliefs so markedly different from the traditional outlook that they promise to transform the character of work in America in the 80's" (p. 47). Yankelovich goes on to refer to America's middle class values of the last quarter century that have been able to "deliver", because of the economy, some of the "props" of psychological well-being; well-defined goals, a sense of self-esteem, and a sense of contributing to the well-being of others. The "New Breed" values expresses work-related values in terms of: the increasing importance of leisure; the symbolic significance of the paid job; and the insistence that jobs become less depersonalized. (Psychology Today, p. 48).

In a survey, quoted by Yankelovich, 21% of the people surveyed said work means more to them than leisure, 60% said work was not their main source of satisfaction. "The New Breed person demands that his or her individuality be recognized" (p. 49). The group surveyed were Psychology Today readers, and as such, these findings could be assumed to have a middle class bias.

Gysbers and Moore (1975) propose that the "meaning of career be expanded to encompass individuals' total lives" (p. 648), and should consider "occupation, education, personal and social behavior, learning how to learn, leisure time activities" (p. 648). They advocate that a "life career perspective of human growth and development" (p. 649)
should be a conceptual framework for developing career education programs.

The career education implementation of research findings for the New Breed of the 80's should be inclusive of the theoretical concepts developed earlier in the century, to make meaningful and effective contributions to the individual's development of career maturity. The challenge is to prepare pertinent career programs for youth, the method is to test for the effectiveness of their implementation.

Hypotheses Derived From the Literature Review

The research questions for this study arose because of the apparent and documented need for experimentation into the most effective career education programs, as it is evident that this type of education is required. Are mini-course career programs able to provide students with sufficiently appropriate knowledge about the occupational world, and to help students integrate this information with individual self perception in order to develop congruence between self concept and career choice? Should career education planning consider the variables, sex, grade point average, attitude, and curriculum (vocational/academic) when implementing career education programs?

Stated in the null form, the following hypotheses were formulated:

1. There will be no statistically significant difference ($\alpha = .05$) on adjusted posttest scores on each of the five Career Maturity Inventory Competence subtests, between the experimental group and the control group, using pretest scores as the covariate.

2. There will be no statistically significant difference between the pretest and posttest mean scores on each of the five subtests in the experimental group only.
3. There will be no statistically significant relationship between the independent variables (sex, program, grade point average, Attitude Scale scores) and the pretest scores on each of the five Career Maturity Inventory subtests.
Chapter Three
METHODODOLOGY

Subjects

In an Interior of B.C. community, population 60,000, the supervisor of secondary school education was approached as to the feasibility of conducting a research study on career education in a local high school. The high school assigned for this project was in School District #24, is one of three senior secondary schools in this city, and had a population of 934 students (1977-78); 395 of whom are in grade 12, 539 in grade 11.

The school vice-principal decided one division of the guidance and physical education program would provide the most suitable group of students for this study, both in terms of student availability, and relativity of career course content to general guidance. The guidance portion of this part of the curriculum allows for flexibility of content and students have some choice as to what they select to attend, within guidance, and within the scope of courses offered; in this case, gymnastics or career education. A teacher from the physical education department arranged class times, location, obtained some information from student files and was available to assist if necessary.

The guidance teacher informed the experimental group that they would receive ten hours of guidance class time. Both the experimental and control group received introductory information about the research study.

Physical Education and Guidance is a mandatory program in either grade 11 or 12. Approximately 500 students were in the total program, and, of these, 148 students were given the option of a Career Guidance Program or Gymnastics. From this group 78 students selected career education, 60 students gymnastics, the latter forming the control group. Absence or
incomplete test results on either the pre or posttesting reduced the group numbers; the experimental group reduced by 35% to 51 students, the control group reduced by 28%, resulting in 44 students. The final sample group used for statistical purposes was as follows:

Table 1
Subject Sample Description

<table>
<thead>
<tr>
<th>Sample Characteristics</th>
<th>Experimental</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual Number</td>
<td>Percentage of Sample (n=51)</td>
</tr>
<tr>
<td>Grade 11</td>
<td>36</td>
<td>70.6</td>
</tr>
<tr>
<td>Grade 12</td>
<td>15</td>
<td>29.4</td>
</tr>
<tr>
<td>Vocational Program</td>
<td>9</td>
<td>17.6</td>
</tr>
<tr>
<td>Academic Program</td>
<td>42</td>
<td>82.4</td>
</tr>
<tr>
<td>Males</td>
<td>22</td>
<td>43.1</td>
</tr>
<tr>
<td>Females</td>
<td>29</td>
<td>56.9</td>
</tr>
<tr>
<td>Averages GPA (1978)</td>
<td>4.60</td>
<td></td>
</tr>
<tr>
<td>Averaged Attitude Scores (CMI Pretest)</td>
<td>36.6</td>
<td>34.3</td>
</tr>
</tbody>
</table>

It was decided to combine grades 11 and 12 for statistical purposes, although there is some evidence that Career Maturity Inventory Attitude scores increase with age and grade (Omvig, et al, 1975; Crites, 1971). The normative mean scores comparison of the Competence Tests (Career Maturity Inventory Administration Manual), showed little difference between these two grades. The Attitude variable was of statistical importance only on the pretest scores. They were similar. The pretest averages of grade 11 and 12 scores on each of the five subtests were as follows:
Table 2
Averaged Scores by Grade on CMI Subtests - Pretests Only

<table>
<thead>
<tr>
<th>Competence Subtests</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 11</td>
<td>13.1</td>
<td>16.7</td>
<td>13.3</td>
<td>13.3</td>
<td>11.1</td>
</tr>
<tr>
<td>Grade 12</td>
<td>14.3</td>
<td>14.1</td>
<td>14.3</td>
<td>13.1</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Instrument

The effectiveness of the career education program was measured by Crites Career Maturity Inventory (1973). All subsections of the test were used on the pretest, only the five Competence subtests were administered on the posttesting. The scores of the Attitude scale of the Inventory were used in assessing the relationship of Attitude scores to scores obtained on each of the five Competence subtests.

Career Maturity Inventory Competence Test

The Competence Test consists of five parts that measure the following choice competencies:

1. KNOWING YOURSELF (KY) - Self Appraisal
2. KNOWING ABOUT JOBS (KJ) - Occupational Information
3. CHOOSING A JOB (CJ) - Goal Selection
4. LOOKING AHEAD (LA) - Planning
5. WHAT SHOULD THEY DO? (PS) - Problem Solving

(The subtests are referred to by either symbols, eg. KY, or by numbers, 1 to 5.)

In each of the five subtests there are twenty questions. The items describe situations related in various ways to occupations, interests, and skills, and the correct answer is selected from multiple choices,
including "don't know". According to Crites (1973c), the more career mature the student, the fewer the "don't know" responses. The tests have been normed in the United States only, on grades 6 to 12 inclusive.

The only reliability data available for the Competence Test are internal consistency coefficients. Kuder-Richardson Formula 20 values were calculated for each grade level, resulting in coefficients ranging from .72 to .90. Problem solving produced the lowest consistency. Crites (1973c) feels this may be due to using different approaches to solve problems, but this theory has not been tested.

Crites (1973a) indicates that if the Competence Tests are administered to students, it can be immediately determined which curricular and guidance needs exist. Crites states, "Students enrolled in career education should make gains on the five parts of the Competence Test" (p. 35). He also suggests that this instrument is ready for research in terms of what kinds of activities and learning contribute to career maturity. (This instrument has been described in more detail in Chapter Two.)

**Career Maturity Inventory Attitude Scale**

The Attitude Scale consists of 50 items, which are scored as true or false. The items are designed to be age and grade related; the premise being, the higher the grade, the greater the number of correct responses. The dimensions measured in this scale are: involvement in the choice process; orientation toward work; independence in decision making; preference for career choice factors; conceptions of the choice process.

The Attitude Scale has been researched more extensively than has the Competence Test. The average internal consistency estimate, using KR 20, gives a reliability coefficient of .74, consistent with expectation, as the items are related but not intended to be homogeneous as they are
measuring five different variables. The test re-test coefficient averages to .71 for students in grades 6 to 12 tested and retested over a one year interval. In a measure of content validity, 80% of ten judges agreed as to attitude items they considered more mature (Crites, 1973c). Test of criterion-related validity generally indicates that the Attitude Scale is useful as a measure of career maturity (Crites, 1971).

The Career Maturity Inventory Attitude Scale and Competence Test was used by Omvig, Tulloch and Thomas (1975), in a similar study, and by Westbrook (1976a), where partial support was obtained for the interrelation of the two dimensions of Career Choice Aptitudes and Career Choice Competency, but less than the .30 to .49 predicted by Crites maturity model.

**Student Information**

From information available on the students' school report forms, the grade point average was obtained. Also the students' course list was reviewed to determine whether the student was on an academic or vocational program. This data, the sex of each student, and their Attitude Scale scores were documented to determine the relationship of these variables to Competence Test scores.

**Design and Data Collection**

The data was obtained using the non-equivalent control group design (Design No. 10, Campbell and Stanley, 1963, p. 47).

**Statistical Design: Non-Equivalent Control Group**

<table>
<thead>
<tr>
<th>Pretest</th>
<th>Program</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>X</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td>0</td>
</tr>
</tbody>
</table>

This design is useful for intact groups such as are found in schools. The more similarity between groups both on pretest scores and overall
characteristics, the more effective is this design. It controls for internal validity in main effects of history, maturation, testing and instrumentation.

The pretest Career Maturity Inventory data was obtained in January 1978, and the posttest data four weeks later. The pretest was given to the students over two class periods. The experimental group and the control group were tested in separate sections. The test material was explained as instructed in the Career Maturity Administration Manual (1973a).

There were two classes designated as the experimental group. The career education content was identical in both classes. The only variations resulted from different individual responses to content (note Appendix A). The teaching program was conducted in seven one hour sessions. The five Competence subtests were then administered as posttests to both the experimental and control groups.

The tests were hand marked and raw score totals obtained for each of the five Competence subtests and for the Attitude Scale, pretest only.

The student files were made available in order to obtain grade point average (GPA), and academic/vocational streaming information. "Streaming" is not identified as vocational or academic on the records and can only be determined by knowing the additional number of academic courses required for university entrance requirements. This course content can alter over the two senior years. For example, a grade 11 student with insufficient academic subjects, could load his program academically in grade 12, thereby altering his apparent grade 11 direction. For this study, the required number of academic subjects for "academic streaming" in whichever grade the student was registered was used as a "streaming" assessment. Grade point average was obtained in lieu of I.Q. information. I.Q. scores were not available.
Statistical Analysis

The data was analyzed in order to obtain the following information: comparison of adjusted posttest scores for both groups; comparison of pretest and posttest mean scores of the experimental group; and the relationship of four variables to pretest scores on the five Competence subtests.

Scores on the five Career Maturity Inventory Competence subtests were tabulated with means and standard deviations calculated for the experimental and control groups.

A one-way analysis of covariance (ANCOVA) was used to determine whether there was a significant difference (α = 0.05) on posttest scores (adjusted), on each of the five Competence subtests, between the experimental group (E) and the control group (C), using pretest scores as the covariate.

HYPOTHESIS: 

\[ H_0 : \bar{X}_{Eadj} = \bar{X}_{Cadj} \]

\[ H_1 : \bar{X}_{Eadj} \neq \bar{X}_{Cadj} \]

To provide further information about the effectiveness of the career education program, dependent measures t-tests of significance (α = 0.05) were calculated, using mean scores from each of the five Competence subtests to determine whether the difference between the pretest and posttest mean scores on each of the five subtests in the experimental group were statistically significant.

HYPOTHESIS: 

\[ H_0 : \bar{X}_{Epre} = \bar{X}_{Epost} \]

\[ H_1 : \bar{X}_{Epre} \neq \bar{X}_{Epost} \]
An item analysis was done to determine whether or not any one item, or groups of items, contributed specifically to any change in group means between pretest scores and posttest scores on each of the five subtests. The method used was to record the number of correct responses for each of the 20 items on each of the five Competence subtests (Appendix C).

Correlation coefficients were obtained between each of the independent variables (sex, program, grade point average (GPA), Attitude Scale scores) and each of the dependent variables (scores obtained on each of the five Competence subtests).

The dichotomous variables, sex and program, were treated as nominal measures to obtain Pearson Product Moment point biserial coefficients. Grade point average and Attitude scale scores were treated as ordinal measures to obtain Spearman rho correlation coefficients. These were compared to the scores on each of the five Career Maturity Inventory pretest scores (interval measures) for both the experimental and the control group.

T-tests were computed to determine whether there existed a statistically significant \( (\alpha = .05) \) relationship between the independent variables (sex, program, grade point average, Attitude Scale scores) and the dependent variables (pretest scores on each of the five Career Maturity Inventory subtests). The hypotheses to be tested were:

i) Between sex(S) and each of the 5 subtests \( (S_t) \)

\( (r_{pb} = \text{point-biserial correlation coefficient}) \)

\[ H_0 : r_{pbSst} = 0 \]

\[ H_1 : r_{pbSst} \neq 0 \]
ii) Between streaming (P = Program) and each of the 5 subtests (St)

\[ H_0 : r_{pbPst} = 0 \]

\[ H_1 : r_{pbPst} \neq 0 \]

iii) Between GPA (G) and each of the 5 subtests (St)

(\( r_s \) = Spearman rho correlation coefficient)

\[ H_0 : r_{sGst} = 0 \]

\[ H_1 : r_{sGst} \neq 0 \]

iv) Between Attitude Scale scores (A) and each of the 5 subtests (St)

\[ H_0 : r_{sAst} = 0 \]

\[ H_1 : r_{sAst} \neq 0 \]
Chapter Four

RESULTS AND DISCUSSION

The data were analyzed and the results tabulated and discussed in order (general to specific), as outlined in the previous chapter. 

Comparison of Adjusted Posttest Scores for the Experimental and Control Groups

The major focus of this study was to investigate the effectiveness of a career education mini-program by examining posttest scores for experimental and control groups on each of the five Career Maturity Inventory Competence subtests. An analysis of covariance, using pretest scores as the covariate, was used to mathematically equate the two groups on the pretest. Each of the subtests was considered separately for discussion of the first hypothesis. Although all are a measure of career maturity, each test measures a different learner behavior.

Table 3 depicts the pretest and posttest mean scores and standard deviations for both groups on the five subtests. Table 4 shows the mean scores and standard deviations for grades 11 and 12 as presented in the Career Maturity Inventory Administration and Use Manual (1973a). Table 5 gives the adjusted posttest means on each of the five subtests.

It can be observed that the means for the posttest of the experimental group increased on all subtests when compared with the mean scores on the pretests. For the control group, the mean scores decreased between pretest and posttest on subtests "KY" and "KJ", and showed a slight increase on the three subtests "CJ", "LA", and "PS". The variance of the scores appear similar, with the standard deviation being slightly higher on the posttests of the control group.
Table 3
Pretest and Posttest Means and Standard Deviations for Experimental and Control Groups on Five CMI Subtests

<table>
<thead>
<tr>
<th>Subtests</th>
<th>Experimental Group (51 subjects)</th>
<th>Control Group (44 subjects)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>KY</td>
<td>13.49</td>
<td>3.53</td>
</tr>
<tr>
<td>KJ</td>
<td>16.67</td>
<td>2.33</td>
</tr>
<tr>
<td>CJ</td>
<td>13.92</td>
<td>2.59</td>
</tr>
<tr>
<td>LA</td>
<td>13.60</td>
<td>3.43</td>
</tr>
<tr>
<td>PS</td>
<td>11.29</td>
<td>3.16</td>
</tr>
</tbody>
</table>

Comparing the mean scores observed with the standardized mean scores in the Career Maturity Inventory Manual, the posttest mean scores of the students tested in this school generally exceed the mean scores of the United States population used for standardization (Table 4).

Table 4
Grades 11 and 12 Mean Scores and Standard Deviations as Presented in the CMI Administration Manual (1973)

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>KY</td>
<td>13.63</td>
<td>3.99</td>
</tr>
<tr>
<td>KJ</td>
<td>13.79</td>
<td>4.86</td>
</tr>
<tr>
<td>CJ</td>
<td>12.74</td>
<td>5.00</td>
</tr>
<tr>
<td>LA</td>
<td>11.08</td>
<td>5.71</td>
</tr>
<tr>
<td>PS</td>
<td>8.96</td>
<td>4.25</td>
</tr>
</tbody>
</table>
When Crites first developed the Career Maturity Inventory tests, he attempted to provide a range of items that would be effective for testing career maturity from grades 6 to 12. He found that the items did not have a ceiling effect when testing adults. The fact that the sample in this study obtained mean scores on the subtests higher than those of the normative group could possibly suggest that there is less room for growth in maturity measurement at this point, therefore changes upward, however small, may be more meaningful.

Table 5 shows the posttest mean scores for the experimental and control groups when the pretest scores were treated as a covariate. In all subtests, the experimental group means exceed those of the control group means, except in "Choosing a Job" where the control group mean is slightly higher.

Table 5
Adjusted Cell Means on Five Posttests for Experimental and Control Groups

<table>
<thead>
<tr>
<th>Subtests</th>
<th>Experimental Group (n = 51)</th>
<th>Control Group (n = 44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>KY</td>
<td>13.99</td>
<td>12.49</td>
</tr>
<tr>
<td>KJ</td>
<td>17.25</td>
<td>15.93</td>
</tr>
<tr>
<td>CJ</td>
<td>14.03</td>
<td>14.07</td>
</tr>
<tr>
<td>LA</td>
<td>13.63</td>
<td>12.54</td>
</tr>
<tr>
<td>PS</td>
<td>11.13</td>
<td>10.26</td>
</tr>
</tbody>
</table>

Tables 6 to 10 show the results of the five one-way analyses of covariance. The hypothesis to be tested was: there is no statistically significant difference ($\alpha = .05$) on the posttest scores (on each of the five Competence subtests) between the experimental group and the control group, using pretest scores as a covariate. Acceptance or rejection of the null hypothesis is stated after each tabulated subtest.
Table 6
Analysis of Covariance, Subtest "Knowing Yourself"

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>52.91</td>
<td>52.91</td>
<td>5.1074</td>
<td>0.0262</td>
</tr>
<tr>
<td>Within Groups</td>
<td>92</td>
<td>953.11</td>
<td>10.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>1006.02</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The null hypothesis was rejected in favour of $H_1$ because $p(0.0262)$ is less than $\alpha = 0.05$.

Following the item stem situation, this subtest asked the students: "What do you think?" One of the five multiple choice answers is to be selected, the correct one implying the student is capable of accurate self-appraisal. The other selections reflect the student has a need to be dependent on others, or overestimates his/her abilities, and other less appropriate choices including the final choice, "I don't know", which Crites has found is used less often as the student's age increases (Crites, 1973c).

Career self-awareness was an underlying concept in the instituted career education program and if any of the subtests were to show gain it would be anticipated in "KY". It was felt that a short term career program would not provide the student with sufficient depth to obtain statistically significant gain scores. These results indicate mini-course career programs probably increase a student's ability for accurate self-appraisal.

Table 7
Analysis of Covariance, Subtest "Knowing About Jobs"

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1</td>
<td>40.91</td>
<td>40.91</td>
<td>7.375</td>
<td>0.0079</td>
</tr>
<tr>
<td>Within Groups</td>
<td>92</td>
<td>510.35</td>
<td>5.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>561.25</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The null hypothesis was rejected in favour of $H_1$ because $p(0.0079)$ is less than $\alpha = 0.05$.

From a brief description of activities a person is engaged in, the student is asked to identify the correct occupation. Crites (1973a) stated that students entered in a career education program would be expected to show "gains" on this subtest. The program content was not specifically directed to identifying job skills in different occupations, therefore a statistically significant gain was not anticipated. The increase in occupational knowledge observed in this subtest supports Crites' theory and is supportive also of the potential effectiveness on this variable of a short career program.

Table 8  
Analysis of Covariance Subtest 'Choosing a Job'

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>1</td>
<td>0.0310</td>
<td>0.0310</td>
<td>0.0061</td>
<td>0.9375</td>
</tr>
<tr>
<td>Within groups</td>
<td>92</td>
<td>467.67</td>
<td>5.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>467.70</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The null hypothesis was not rejected as $p(0.9375)$ is greater than $\alpha = 0.05$.

This subtest involved being able to assess skills, abilities, and interests of an individual, and being able to apply these to choosing the most appropriate job from a list of job titles. This subtest differs from the previous one in that the situational material is more abstract and the question is worded in the form of decision making, "Which one of the following occupations would be best for him?" The treatment given did not concentrate on the decision making process. It was not anticipated that there would be a statistically significant gain on this subtest, although it would be a desirable result.
Table 9
Analysis of Covariance, Subtest "Looking Ahead"

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>1</td>
<td>26.62</td>
<td>26.62</td>
<td>2.2819</td>
<td>0.1343</td>
</tr>
<tr>
<td>Within groups</td>
<td>92</td>
<td>1073.28</td>
<td>11.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>1099.90</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The null hypothesis was not rejected as \( p(0.1343) \) is greater than \( \alpha = 0.05 \).

The items in this section ask the student to be able to correctly order three given steps a person could complete to prepare for entering a specific occupation. The test questions seem pertinent and appropriate for assessing the effectiveness of a career program. This type of content was not included in the career education program. In a mini-course it was expected that time constraints would require the course to exclude some aspects of career education.

The ability to plan for a satisfying career choice is a major goal of career education and the fact that no statistically significant gains were obtained seems to reflect an aspect of inadequacy in the career program presented, but was an anticipated result.

Table 10
Analysis of Covariance, Subtest "Problem Solving"

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>1</td>
<td>16.40</td>
<td>16.40</td>
<td>2.4932</td>
<td>0.1178</td>
</tr>
<tr>
<td>Within groups</td>
<td>92</td>
<td>605.22</td>
<td>6.58</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>621.62</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The null hypothesis was not rejected as \( p(0.1178) \) is greater than \( \alpha = 0.05 \).

No statistical gain was expected on this subtest.
The items in this subtest deal with problem situations (e.g., "Betty wants to be a lawyer. But her guidance tests indicate that she does not have enough ability. What should she do?"). The student is asked to make a decision given a set of circumstances.

It is difficult to assess whether or not this subtest is appropriate for assessing the effectiveness of a career education program. The situations presented involve weighing alternatives. Crites (1973c) has suggested this subtest should be submitted to further testing. Results obtained could reflect an inadequacy of the testing instrument rather than a reflection of short comings of a career course.

In summary, whereas the experimental group consistently displayed higher adjusted posttest mean scores, only "Knowing Yourself" and "Knowing About Jobs" scores were statistically significant at \( \alpha = .05 \). Crites (1973a) indicates that students in a career education program should make gains on the five Competence subtests. If the program content focuses primarily on the acquisition of skills, Crites states an increase in career competence should be reflected on these two subtests. He indicates a gain would be expected on the remaining subtests, "Choosing a Job", "Looking Ahead", and "Problem Solving" when course content focuses more directly on the world of work and how to progress in it. The results of this research appear to support this concept.

**T-tests of Significance for Differences Between Pretest Mean Scores and Posttest Mean Scores on Each of the Five CMI Subtests for the Experimental Group Only**

Presented in Table Eleven are the experimental group mean scores, standard deviations and t-test results. The null hypothesis to be tested stated: There is no statistically significant difference (\( \alpha = .05 \)) between
the pretest and posttest scores on each of the five Career Maturity Inventory subtests in the experimental group.

Table II
Experimental Group Pretest-Posttest Means, Standard Deviations and Dependent Measures T-Test Probabilities

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Pretest Mean</th>
<th>Pretest S.D.</th>
<th>Posttest Mean</th>
<th>Posttest S.D.</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>KY</td>
<td>13.49</td>
<td>3.02</td>
<td>13.90</td>
<td>3.53</td>
<td>0.390</td>
</tr>
<tr>
<td>KJ</td>
<td>16.67</td>
<td>2.47</td>
<td>17.37</td>
<td>2.33</td>
<td>0.026*</td>
</tr>
<tr>
<td>CJ</td>
<td>13.92</td>
<td>2.94</td>
<td>14.29</td>
<td>2.60</td>
<td>0.334</td>
</tr>
<tr>
<td>LA</td>
<td>13.61</td>
<td>3.61</td>
<td>14.04</td>
<td>3.43</td>
<td>0.405</td>
</tr>
<tr>
<td>PS</td>
<td>11.29</td>
<td>3.00</td>
<td>11.65</td>
<td>3.16</td>
<td>0.342</td>
</tr>
</tbody>
</table>

* p < .05
n = 51

The hypothesis, $H_0: \bar{X}_{Epre} = \bar{X}_{Epost}$ at $\alpha = .05$, failed to be rejected for the subtests "Knowing Yourself", "Choosing a Job", "Looking Ahead", and "Problem Solving".

For the subtest "Knowing About Jobs", the null hypothesis was rejected in favour of $H_1: \bar{X}_{Epre} \neq \bar{X}_{Epost}$ at $\alpha = .05$.

The four Competence subtests where there was not a statistically significant difference ($\alpha = .05$) do show movement in the desired direction.

When non-adjusted posttest means are used as a criterion of "gain" for the career education group, the only subtest indicating significant gain is "Knowing About Jobs". This result could suggest that the career education program was more effective in increasing the students' knowledge about jobs than it was in increasing the students' knowledge of self (which showed
statistically significant gain on analysis of covariance).

Considering the results of the item analysis, it was observed that gains were made on all subtests, although some items decreased in the number of "rights" from pretest to posttest. The control group, in "Problem Solving", item #18, scored only eight correct answers on the pretest, 23 correct answers on the posttest. Because in reliability studies, Crites found the lowest internal consistency coefficients in this subtest, he felt students solve problems in different ways, and the observed results could be attributed to a different problem solving approach toward the same question on the posttest, rather than to any specific information assimilated in the intervening time.

Significance of Relationship of Scores on the Five Competence Subtests to the Variables Sex, Streaming, GPA, and Attitude Scale Scores

As several studies have been done on the relationship of the variables sex, grade point average, and Attitude Scale scores to the construct of career maturity, it was decided to obtain similar information for the student population used in this study.

Table 12 depicts the correlation coefficients for these variables, and those that are significant are noted, at $\alpha = .05$ and $\alpha = .01$.

There are 20 individual null hypotheses to be tested, which basically state: there is no statistically significant relationship ($\alpha = .05$) between each of the independent variables (sex, streaming, grade point average and Attitude Scale scores) and pretest scores, obtained on each of the five Competence subtests. As this is an ancillary part of this research study, these hypotheses will be treated as a group.
Table 12
Correlation Coefficients for Independent Variables in Relation to Pretest Scores for Experimental and Control Groups

<table>
<thead>
<tr>
<th>Variables</th>
<th>KY</th>
<th>KJ</th>
<th>CJ</th>
<th>LA</th>
<th>PS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex ($r_{pb}$)</td>
<td>0.158</td>
<td>0.046</td>
<td>0.010</td>
<td>0.072</td>
<td>0.168</td>
</tr>
<tr>
<td>Stream ($r_{pb}$) (Curriculum)</td>
<td>0.034</td>
<td>0.216*</td>
<td>0.227*</td>
<td>0.148</td>
<td>0.234*</td>
</tr>
<tr>
<td>GPA (Srho)</td>
<td>0.253**</td>
<td>0.278**</td>
<td>0.320**</td>
<td>0.392**</td>
<td>0.120</td>
</tr>
<tr>
<td>Attitude (Srho)</td>
<td>0.287**</td>
<td>0.342**</td>
<td>0.234*</td>
<td>0.366**</td>
<td>0.270**</td>
</tr>
</tbody>
</table>

* $p < .05$

** $p < .01$

$r_{pb}$ = Pearson Product Moment point biserial

Srho = Spearman's rho

The correlations across all variables are positive and range between almost no relationship between the sex of the student and "Choosing a Job" subtest, to a correlation of 0.39 between "Looking Ahead" and grade point average.

**Sex**

The sex of the student seems to have no significant relationship to the scores on the five Competence subtests; the girls and boys obtained similar pretest mean scores averaged over each of the five Career Maturity Inventory subtests (girls 13.49; S.D. 2.98, and the boys 13.23; S.D. 3.05). The null hypotheses were supported for this variable. It is of interest to note that in the developmental concept of career maturity, girls would be expected to be more mature than boys and should produce higher scores on the Career Maturity Inventory tests as indicated in the literature review. Crites (1976)
has found this to be true for scores on the Attitude scales. However, Crites also indicates that the Competence test items were designed to eliminate sex bias, and it is this concept that is supported in this study.

Curriculum (Program)

As shown in Table 12, the null hypotheses were supported for subtests, "Knowing Yourself" and "Looking Ahead".

The null hypotheses were rejected, at $\alpha = .05$, for subtests "Knowing About Jobs", ($p = 0.035$), "Choosing a Job", ($p = 0.027$), and "Problem Solving", ($p = 0.023$). There is little documentation regarding academic and vocational students in relation to scores on career maturity tests, although a study by Herr and Enderlein (1975) using grade 9 students, demonstrated that academic students score significantly higher than do students in general vocational programs. The present study did not discriminate between various types of non-academic curricula. However, the academic group pretest mean score average over the five Career Maturity Inventory subtests was 13.74 (S.D. 2.91); for the five subtests, and for the vocational group 12.55 (S.D. 3.08).

A study by Echternacht (1976) showed that academic students achieved higher grades than did vocational students, which could be a relevant factor in these results when grade point average relationships are examined. The literature suggests students with higher grade point average and intelligence tend to select academic curricula.

Grade Point Average

The null hypotheses were rejected at a significant level ($\alpha = .01$) for four of the five subtests. "Problem Solving" correlation coefficient was statistically non-significant at $\alpha = .05$, thus accepting the null hypothesis. These results agree with research to date, that correlate results of
some measures of career maturity positively with intelligence and/or grade point average, although no correlational values specifically related to the five Competence subtests were available. It appears that the better a student achieves in high school, the higher he can expect to score on a measure of career maturity. This inference is supported by Crites (1976), Lawrence and Brown (1976) and others. It would seem that the brighter student would be more able to solve problems. This was not substantiated when the relationship between 'problem-solving' and Competence subtest scores was statistically non-significant.

**Attitude**

The null hypotheses were rejected in all five subtests, four were significant at $\alpha = .01$; 'Choosing a Job' was significant at $\alpha = .05$. The relationship of Attitude Scale scores and career maturity is well documented and these results support other findings (Crites, 1974, Westbrook, 1975b).

In summary, it appears that the scholastic ability of the student and the score obtained on the Career Maturity Inventory Attitude Scale generally have a significant positive relationship to the five Career Maturity Inventory Competence subtests. It could be assumed that academic students tend to achieve higher grade point averages than do vocational students, which could be postulated to account for significant relationships in the curriculum subtests variable. In this study, it appears the sex of the student does not correlate significantly with scores obtained on the five subtests.
Chapter Five

SUMMARY AND CONCLUSIONS

This chapter is designed to present a summary of the results of the study, to draw implications from the findings of the research, and to offer considerations for future research.

Summary of Results

The major purpose of this study was to ascertain whether a mini-course career education program would increase the career maturity level of senior high school students.

The research was approached in two ways:

(a) by testing two groups of students, one group to be given treatment (career education), the other students to serve as a control group, (continuing their physical education classes). The pretest scores were used as a covariate to mathematically equate the two groups on the pretest, and the posttest adjusted mean scores were compared between the two groups on each of the five Career Maturity Inventory Competence subtests.

(b) by comparing the pretest and posttest mean scores, of the experimental group only, using non-adjusted mean scores on each of the five Competence subtests.

This study was also designed to investigate the relationship between sex, curriculum, grade point average, and scores on Crites Career Maturity Inventory Attitude Scale and scores obtained on each of the five Career Maturity Inventory Competence subtests.

Students in a medium-sized B.C. Interior city senior high school were invited to participate in this study. The students most available to participate were enrolled in a physical education and guidance program,
those students who received the treatment elected to do so, the remainder continued with their regular school program but served as a control group for testing purposes. Differences that may have existed initially between the two groups were examined and the results are in Chapter Three. Of the differences examined, the only one of note was that more students in the control group were on a vocational curriculum. Research suggests academic students are probably more intelligent and therefore probably more career mature (Herr and Enderlein, 1975). Also Egner and Jackson (1978) suggest vocational students think they have made a career choice. This could have been a contributing factor to the increased numbers of vocational students in the control group.

The measure selected as a testing instrument to assess career maturity levels was Crites Career Maturity Inventory Competence test (1973), using all five subtests:

(a) Knowing Yourself (KY),
(b) Knowing About Jobs (KJ),
(c) Choosing a Job (CJ),
(d) Planning (LA), and
(e) Problem Solving (PS).

The Career Maturity Inventory Attitude Scale was administered as a pretest only, and the scores were used in the study to investigate variables considered to affect career maturity.

The results of the first hypothesis (differences between experimental and control groups) were obtained by analysis of covariance and tabulated separately for each subtest, as each subtest is designed to measure a different variable related to career maturity (Crites, 1973a). The findings can be summarized as follows:
(a) Knowing Yourself: there was a statistically significant difference (£p < .05) between the experimental group and the control group. This result agrees with Crites (1973a) expectations and seems realistic in view of the career program content. However, this result should be treated cautiously as this subtest did not show a statistically significant gain when only the experimental group was tested for pretest/posttest gains (see Table eleven).

(b) Knowing About Jobs: there was also a statistically significant difference (£p < .05) between groups, which again concurs with Crites expectations of students enrolled in a career education program. There was less reason to expect the career education program to give rise to significant results on this subtest, but it could be assumed that students studying about careers would be more receptive to the world of work in general; for example, television programs and literature involving careers may trigger greater interest.

(c) Choosing a Job and

(d) Looking Ahead: there were no statistically significant differences (£p < .05) found between the experimental group and the control group on these subtests. There is no base with which to compare these findings for senior high school students, although Omvig, et al (1975) did obtain significant group difference on the 'Planning' subtest for grades 6 and 8 students, the career program lasting approximately one school year. Crites (1973a) does imply that 'gains' may not be as readily anticipated on the last three subtests as on the first two. Gains were not anticipated to be a result of the education program, primarily due to the brevity of the treatment.
(e) Problem Solving: again there was no statistically significant difference \( (p < .05) \) between the two groups. The null hypothesis was expected to be supported, as this subtest required the learner to make creative and integrative decisions. It would be reasonable to assume a career education program would need to involve the decision making process in some depth to effect change on this variable.

When comparing pretest mean scores and posttest mean scores of the students in the experimental group only, Knowing About Jobs was the only one of the five subtests to register a statistically significant gain. In the other subtests there was some statistically non-significant increase in posttest mean scores. It could be postulated that a longer, more in-depth career education program would effect a more significant gain in career maturity levels. Table 3 lists the pretest and posttest mean scores for the control group, and comparing these to the same information for the experimental group, it is of interest to note that all posttest mean scores are higher than pretest mean scores in the experimental group, but there is no consistent similar movement in the control group. Whereas non-significant gains can be attributed to change alone, the consistency of movement in the experimental group is encouraging.

The results of an item analysis were obtained to ascertain whether any individual items within the subtests contributed in any specific way to the results obtained on the tests. There appears to be no single item, or group of items, that would specifically affect the mean scores. This is to be expected as Crites' (1973a) research findings indicate an homogeneity of individual items of the subtests.

Investigation of the relationship between the four variables, sex, curriculum, grade point average, and Attitude Scale scores, yielded the following results:
(a) There was no statistically significant relationship (Pearson r point biserial) between sex and the pretest scores on each of the five subtests. Crites prepared the items for the subtests in such a way as to try to avoid sex bias and these results indicated he may have been successful. The literature indicated grade 8 girls scored significantly higher on Knowing Yourself, but not on the other subtests (Omvig, et al, 1975). The literature indicates that sex is not always significantly correlated with career maturity, but when it is, girls seem to be more career mature than boys.

(b) The type of program (curriculum) and career maturity scores showed statistically significant correlations (analyzed using Pearson r point biserial) for subtests Knowing Yourself (r = .22), and Choosing a Job (r = .23). It could be anticipated that these relationships may have been stronger, as literature indicates a positive correlation between intelligence (or grade point average) and career maturity and curriculum choice is sometimes related to grade point average and intelligence, as previously indicated.

(c) There was a positive relationship of grade point average to the scores on four of the five subtests as measured by Spearman r, the averaged correlation coefficient for the four subtests was .31. There was not a significant relationship between grade point average and Problem Solving which seems somewhat surprising as it could be assumed that students who achieve well in school subjects would be able to solve problems more easily. This may be another indication that the Problem Solving items need further investigation.

(d) There was a consistently positive relationship (Spearman r) between all Competence subtests and the scores obtained on the Attitude Scale
(averaged for the five subtests, \( r = .30 \)). There is no comparison base available for the Career Maturity Inventory Competence subtests, but in studies using other measures of career competence (e.g. Westbrook, 1976a), Attitude Scale scores correlate positively with career maturity.

Implications of the Study

As was revealed in Chapters Two and Three, there are many types of career programs but very few of them have been subjected to adequate assessment regarding the effect on career maturity. Educators within school systems are aware that career education should be part of the curriculum, and many school districts are making tangible strides to include career teaching, (e.g. The Vancouver School District in co-operation with C.A.Y.). Some schools, such as the one involved in this research, either do not have staff prepared to teach this subject or have school counsellors who recognize the need and would like to institute programs, but are overworked dealing with their present tasks. The reluctance of educators to become involved in extensive career education is understandable in light of the time, energies and expense required to build the framework for a successful program. Also, some schools are governed by policies that regulate against teaching any course content which has "personal" or "family" connotations. If career education and "education for life and living" (Hansen and Tennyson, 1975, p. 640) are to be equated, the curriculum would require careful design and research and would need to be implemented by a qualified and competent person.

Pietrofesa (1975) outlines a model for career education needs, commencing with kindergarten (p. 7). Obviously qualified career educators cannot be in every classroom. In point of fact, career educators tend to be clustered at the college level, there to pick up the pieces and deal with
the confusion of the career immature adult. It would be possible to include
career education as part of teacher training, making present curriculum
relevant to the world of work.

There is a widespread difference between the methods used to implement
career education in schools, from short term methods described in Chapter
Two, to the Minnesota Career Development Project, which took over two years
to research and more to prepare and implement in schools, from kindergarten
to grade 12 (Hansen and Tennyson, 1975). Benson and Blocher (1975) in a
review of this program, indicated minimal change in terms of measured
student outcome the first year which necessitated more change, and this
was only the pilot project. Leonard and Vriend (1975) participated in the
above career guidance project and stress that programs must be "soundly
conceived and organized before implementation can begin" (p. 671).

The results of this research give encouragement to educators planning
career programs based on similar content. It appears that the career
maturity of the students did increase, but not enough, with only two of
the five measures showing statistically significant difference. The career
curriculum content should be re-examined, enriched, perhaps by inclusion of
some decision making career theory, as described by Egner and Jackson (1978),
and lengthened.

The instrument used to measure the career maturity level of the students
(Career Maturity Inventory Competence test) was sensitive to the change in
career maturity levels, pretest and posttest. Crites (1973c), asserts that
the Career Maturity Inventory is a reliable and valid test. One could assume
then that the differences noted are realistic. However, if the "gains" were
minimal and if the treatment in this study is representative of the only
career education available to students, it would fall under the category of
"too little, too late".

Investigations into the relationship of the four variables to the five Career Maturity Inventory subtests indicated that sex is not significantly related to scores on the subtests. The literature indicates that girls are sometimes found to be more career mature than boys (Egner and Jackson, 1978; Smith and Herr, 1972) but this was not supported in this study. This may be reflective of the changing role of women within the work force. Girls may be approaching the world of work and future education with similar attitudes to boys, they may be looking at career selection as a life long process, instead of as a stop-gap between school and marriage, thus adding increased importance to the process of career choice. A study by Tesla (1978) had similar results on a population of grade 9 girls. It will be interesting to observe if this is a developing trend, and whether it relates equally across differing socio-economic stratas. Although the attitude of girls to careers may be changing, Osipow (1976) stresses that stereotyping of careers continues and "sex continues to play an important role in the occupational realm" (p. 130). Career education planners should be cognizant of this fact.

Correlation between type of curriculum and career maturity tends to vary in different studies. In this study it was not particularly significant. There is sometimes a tendency to think vocational students do not need career education because they seem to have already made a choice, and this may affect their responses on a career maturity inventory. Longitudinal studies to determine the appropriateness of their choice would be of interest. Osipow (1976) reported on a study involving 1400 male students, where boys who expected to leave school before graduation displayed more career realism, but less vocational maturity than the boys who planned to remain in school.
Possibly the best approach is to develop career education suitable for students, regardless of their apparent curriculum orientation.

One of the underlying purposes of investigating the relationship of Attitude Scale scores to Competence test scores was to determine whether students could be "sorted" into career education groups on the basis of scores from administration of the Attitude Scale. Upon examination of the results, and comparing them to grade point average correlational values in this study, a more simplistic measure may be to group using grade point average as a guideline as there was a similarity between the correlational values for grade point average and Career Maturity Inventory Attitude Scale scores in relation to scores achieved on the Career Maturity Inventory Competence subtests. If it were desirable to separate students into similar groups, another approach could be to test students, using the Career Maturity Inventory Competence subtests. Those students scoring at low maturity levels on occupational information, for example, could then be grouped together. A similar grouping process could be applied, according to the student's scores on the other four subtests.

Suggestions for Future Research

As has been stated throughout this study, career programs need to be developed, implemented, and tested for effectiveness. If, in the interests of time and public costs, mini-courses are to continue to be a bandaid treatment, then different forms of short courses should be devised and taught. Several approaches could be considered. The career program as developed for this study could be implemented by regular school teachers in a classroom setting, and student performance be evaluated for usual reward purposes, such as attaining units toward graduation needs. Students seem geared to learn what they have to learn. Varying the approach could
help to determine if there would be a difference in career maturity gains under different circumstances.

Another research project could be to expand on all aspects covered in the career program outlined in this study; allow time for more individual participation and feedback, and include a decision making component, much as proposed by Egner and Jackson (1978). The program could be implemented by school counsellors, delivered to small groups (15 - 20 students) over the school year. Crites Career Maturity Inventory Competence tests could be used as a pretest and posttest measure, or another measure of career maturity could be used if deemed more appropriate.

Short courses emphasizing decision making skills, and departing from the more traditional format for career education, could be implemented and measured for effectiveness.

Career courses could be developed that are designed to enhance career maturity levels in different grades. These courses could be implemented and tested to observe whether one grade responds more to career teaching than another, in an attempt to determine when career education seems most relevant in a student's life.

CHOICES, Canada Manpower's computerized career education program, has been used by counsellors and students in B.C., New Brunswick, and Ontario. Its program content is currently being altered as a result of revision suggested following pilot testing in 1977, but The Career Action for Youth centre in Vancouver is looking forward to its return. Apparently it serves as an excellent motivating force for students to look at their career life, and it focuses quickly, both for the student and for the counsellor, the congruence that exists between the current education program and future studies planning of the student and his/her career goals. The C.A.Y.
counsellors say the computer program does not replace counsellors, but rather emphasizes career counsellor need. An interesting research project would be to develop a career intervention program around CHOICES and test for effectiveness.

Longitudinal research is needed to determine whether students who participated in career education programs were able to make career choices that were more satisfying to themselves, and more productive for society.

Apart from experimenting with different career courses, another suggestion for research arising from this study, would be to devise methods to test the Problem Solving subtest, to ascertain if it has a place in measurement of career maturity for high school students.

The future research possibilities in terms of developing effective career education programs are unlimited. Career development has investment potential for everyone.
REFERENCES


Breton, R. Social and academic factors in the career decisions of Canadian youth. Ottawa: Canada Manpower and Immigration, 1972.


Gilrain, J. B. A study of the facilitation of 7th grade students' vocational maturity through the integration of vocational development material into existing curricula, utilizing regular teachers and required subjects in lieu of special courses, special programs, and special personnel (Doctoral dissertation, St. John's University, 1974). *Dissertation Abstracts International, 1974, 35*, 5812A-5813A. (University Microfilm No. 75-3247)


Westbrook, B. W. Interrelationship of career choice competencies and career choice attitudes of ninth grade pupils: Testing hypotheses derived from Crites model of career maturity. Journal of Vocational Behavior, 1976, 8(1), 1-12. (a)
Westbrook, B. W. Maturity and appropriateness of vocational choices of ninth grade pupils. Measurement and Evaluation in Guidance, 1976, 9(2), 75-80. (b)


Appendix A(i)

Career Education Course Outline

Objective

To increase the career maturity level of senior high school students.

Contributory Objectives

1. To stimulate students to plan ahead for careers and the world of work.
2. To provide students with practical information and skills with which to approach the job market.
3. To increase the students' general knowledge about the range of occupations.
4. To encourage students to be self-aware and to discover ways to implement self-knowledge to job selection.
5. To give the students an opportunity to role play and group study actual job behaviours and situations.

Career Education

(Time - 10 hours)

Implementation of Objectives of Outline

I

Introduction to objectives of the program
Information related to research aspect of program
Presentation of Crites Maturity Inventory
Completion of Attitude Scale
  Competence Tests I & II

II

Completion of Competence Test Sections III, IV and V
Brief discussion on students' expectations of a career education program
Appendix A(ii)

III  Practical aspects of Seeking Employment -

a) Resume
b) Covering Letter
c) Arranging an interview

Task: Prepare a personal resume by end of program.

Handout: Resume format (Appendix A-1)
Booklet "Guide for the Job Hunter" Canada Manpower
Resume practice

IV  Values Clarification and Goal Setting -

a) Lecturette on definitions and how it is applied to career search.
b) Opportunity to look at some occupational factors in terms of the students' values.

In class, "What do you want in a job?" (Appendix A-2)

To take home and review individually, "Checklist of personal job traits." (Appendix A-2)

Note: Classes were too large to handle the check list in class sessions on an individual basis. Some were not completed. The students were asked to keep them to use as personal review information when actually seeking a job or field of study. This applies also to "Self Assessment" below.

V  Importance of Recognizing Skills when Job Seeking -

Lecturette - adaptive, functional and specific skills, (Sidney A. Fine, Handout. (Appendix A-3)

Group Activity - Triads - share a successful experience and have group identify skills used.


Total Class - share some skills identified.

VI  Occupational self-appraisal -

Lecturette - Theoretical approach

i) Factors in occupational self-appraisal
ii) Maslow/Super Needs (Appendix A-4)

Open Discussion.
Appendix A(iii)

VII Researching an occupational interest -
   a) Introduction to library facilities
      - Careers Canada
      - Careers Province
      - Other Canada Manpower material on specific job titles
      - Tapes, and how to use
   b) How to use CCDQ effectively.
   c) Occupational cluster charts identifying jobs related to school curriculum subjects.

Assignments
   i) Interview a person in the work force (Appendix A-5)
   ii) Do a brief outline of an occupational study (Appendix A-5(iii))

VIII Role-Play - a mock business - appoint a Board of Directors (4 students) - Hire a President

Practice Interview situations - involve class teacher, divide into two groups. Lecturette: Importance of the interview - arrange a demonstration interview. Have group assess behaviour of both interviewer and interviewee (Appendix A-6)

   i) Evaluating interview performances
   ii) Role-playing job interviews and sample questions
   iii) Role-play situations #1 - #5 inclusive

Role-play 5 situations using guides. Handout, "Handling difficult interview questions".

IX a) Role-play a mock business.
   Appoint a Board of Directors (5 students)
   Assign the "Board" the task of hiring
      a) A president
      b) A secretary (students free "to apply" on own initiative)

Discus as related to information gained in practice interviews.

b) Job situation - "What would you do?"
   Divide into three groups and discuss the situations, make suggestions, appoint a spokesperson.
   Report briefly to class (Appendix A-7)

X Posttest - CMI Competence Tests (5)
Resume Outline

NAME:  
ADDRESS:  
TELEPHONE NUMBER:  
(Any other information of this nature that is specified in the job ad)

AGE:  
MARITAL STATUS:  

JOB: The exact title of the job for which you are applying

EDUCATION: Give dates, name colleges and last high school attended, 
degrees and/or diplomas obtained and state major subject(s). 
Put in most recent order. (Eg. 1979 - Cariboo College, 
1978 - Kamloops High School)

WORK EXPERIENCE: a) Full time paid work  
b) Part time work  
c) Volunteer work

List the above under distinctly separate headings. State 
most recent experiences first, working backwards to last 
relevant experience

ACTIVITIES OR HOBBIES: This area is particularly valuable if work 
experience limited.

SPECIAL SKILLS: These may refer to skills obtained in work experience 
or in activities and hobbies. Be certain these are 
relevant to the job for which you are applying.

REFERENCES: Name three people, their occupations, addresses, and telephone 
numbers.  
Select those that know you well enough to recommend you.  
Include both business and character references.  
Obtain each individual's permission before submitting 
his/her name.

YOUR COMPLETED RESUME SHOULD MEET THE FOLLOWING STANDARDS:

1. It should be oriented to the requirements of the job for which 
you are applying.
2. It should be very clearly spaced on the paper.
3. It should be brief and concise.
4. It MUST be free of spelling, grammatical, and typographical 
errors.

Covering Letter

You always accompany a resume with a covering letter. (And a photograph, 
if appropriate.)

The letter should contain an interesting-to-the-employer opening, which 
clearly identifies the job for which you are applying.

It should contain a SUMMARY of the qualifications you have described in 
your resume.
Covering Letter (Continued)

It should REQUEST AN INTERVIEW!

It MUST be set up in a recognized business letter form.

To give you some practice in tailoring applications before you write one of your own, a case study is presented below, and questions for discussion follow.

For the past two years, Gary has been working as a desk order clerk for Kamloops Stationery Supplies Ltd. He has had to perform the following duties:

1. Write and total invoices
2. Keep records of supplies sold
3. Maintain inventory counts
4. Some typing and filing
5. Prepare bank deposits
6. Operate the cash register and adding machine
7. Speak with customers on the telephone and at the counter
8. Answer mail inquiries
9. Recommend purchases to customers
10. Prepare supplies for delivery
11. Count and record cash receipts

Gary now wants to change jobs, and has found the following two openings which offer more salary and greater opportunities for advancement:

JOB #1
Bookkeeper trainee for a manufacturing company. The duties will include:

1. Making and checking journal entries from items such as sales slips, invoices, and cheque stubs
2. Totalling and balancing ledgers at regular intervals
3. Preparing receipts and statements of accounts
4. Calculating and preparing payroll cheques
5. Preparing financial statements at quarterly intervals

JOB #2
Salesperson in a large department store. The duties will include:

1. Selling merchandise to customers
2. Receiving orders for merchandise by telephone or mail
3. Advising customers on the use and care of merchandise
4. Suggesting purchases to customers by determining their wants or needs
5. Demonstrating merchandise
6. Arranging displays
7. Writing sales slips
8. Obtaining payment or credit authorization
9. Operating cash registers
Questions For Discussion

1. In preparing a resume for the bookkeeper trainee's position, what duties should Gary emphasize when he describes the job he held at the stationery store? Why?

2. When preparing a resume for the position of salesperson in the department store, what duties should Gary highlight? Why?
Appendix A - 2(i)

WHAT DO YOU WANT IN A JOB?

Directions:

Surveys have been conducted from time to time to find out what people really want from the work they do. The following items appeared in a recent survey. Employees were asked to rank them from 1 to 10 in order of importance. How would you rank the items?

When you decide which one is the most important to you, mark a "1" in the column on the right. Then, decide on the second most important thing for you to have in a job. Mark it with a "2". Continue until you have ranked all the items form 1 to 10. When you have finished, compare your answers to the results of the survey.

<table>
<thead>
<tr>
<th>EXPECTATIONS FROM WORK</th>
<th>IMPORTANCE TO ME</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Good wages</td>
<td></td>
</tr>
<tr>
<td>b) Job security</td>
<td></td>
</tr>
<tr>
<td>c) Promotion</td>
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<tr>
<td>d) Good working conditions</td>
<td></td>
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<td>e) Work that keeps you interested</td>
<td></td>
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<tr>
<td>f) Personal loyalty to workers</td>
<td></td>
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<tr>
<td>g) Tactful discipline</td>
<td></td>
</tr>
<tr>
<td>h) Full appreciation of work done</td>
<td></td>
</tr>
<tr>
<td>i) Sympathetic help on personal problems</td>
<td></td>
</tr>
<tr>
<td>j) Feeling &quot;in&quot; on things</td>
<td></td>
</tr>
</tbody>
</table>

The following is not distributed with the above but is given on completion.

There are no right or wrong answers to this short survey. For your information, here is the way that the majority of workers who were originally surveyed ranked the items:

1. h       6. e
2. j       7. c
3. i       8. f
4. b       9. d
5. a       10. g

Are there other things that you want from work? List them.
## Personal Job Traits

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Always</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Is your personal appearance neat?</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>Are you conscious of appropriate dress?</td>
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<td>3.</td>
<td>Are you neat and orderly in your work?</td>
<td></td>
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<td>4.</td>
<td>Do you get to work on time?</td>
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<tr>
<td>5.</td>
<td>Do you feel responsible for jobs assigned to you?</td>
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<tr>
<td>6.</td>
<td>Do you seek to perform jobs assigned to you to the best of your ability?</td>
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<td></td>
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<tr>
<td>7.</td>
<td>Do you follow directions willingly?</td>
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<tr>
<td>8.</td>
<td>Can you work without constant supervision?</td>
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<tr>
<td>9.</td>
<td>Are you friendly to other members of the staff and employer?</td>
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<tr>
<td>10.</td>
<td>Do you complete jobs which you start?</td>
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<tr>
<td>11.</td>
<td>Are you willing to learn new skills?</td>
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<td>12.</td>
<td>Can you continue to work without becoming bored or discontented?</td>
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<tr>
<td>13.</td>
<td>Can you stand pressure?</td>
<td></td>
<td></td>
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<tr>
<td>14.</td>
<td>Are you usually calm and relaxed?</td>
<td></td>
<td></td>
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<tr>
<td>15.</td>
<td>Do you respect fellow workers and their jobs?</td>
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<td></td>
<td></td>
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<tr>
<td>16.</td>
<td>Can you cooperate with fellow workers?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>17.</td>
<td>If you don't understand instructions, are you willing to ask for more details?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Do you respect your supervisor and the job he has to do?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Can you accept criticism?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Can you accept praise?</td>
<td></td>
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</table>
SELF ASSESSMENT QUESTIONNAIRE

1. What are the things that I really like to do?

2. What are some of the things that I do not like to do?

3. What things have I done successfully? (List as many things as you can.)

4. What things have I done for which other people have praised me?

5. What things have I done that others have suggested I do differently?

6. List qualities, abilities, skills that you consider to be your STRENGTHS.

7. List things about yourself that you would like to improve.

8. What do I want to be doing:
   a) One year from now?
   b) Three years from now?
   c) Five years from now?

9. Beside each of the following personal characteristics write "yes" or "no" if you feel it applies, or does not apply, to you:
Self Assessment Questionnaire (Continued)

My appearance is neat
I am careful to use suitable language
I am confident of myself in most situations
I have fairly good self-control
I usually appear alert
I am usually reliable
I usually complete assigned tasks
I am ambitious
I am trustworthy
I am loyal
I am courteous
I am usually cheerful and pleasant
I am usually co-operative
I like being with people
I prefer to be alone most of the time
I am punctual
I am honest
I usually do what I have said I will do
I never try to deliberately embarrass others
SIDNEY A. FINE'S DEFINITION OF SKILLS*

*As adapted by the National Career Development Project, particularly in the definition of Work-Content skills.

ADAPTIVE

Self-Management Skills

Rooted in temperament

Acquired in early years, among family, peers, school; or, later in life, by intensive education.

Related to environments, and particularly to the requirements or demands for conformity and continuity vs. risk and discretion and change.

Examples:

Management of oneself, in relation to:

authority  self-routing
space & time direction punctuality
moving towards, dress
  away from, or care of property
  against others impulse control
  self-pacing

In Everyday Speech:

Regularity Resourcefulness
Dependability Etc.
Initiative

FUNCTIONAL

Instrumental or Transferable Skills

Rooted in aptitudes

Acquired either as natural-born talent, refined by experience and education; or by specific educational, vocational or avocational special training.

Related to People, Data and Things, in generalizable or transferable fashion (from one field, profession, occupation or job, to another).

Examples:

Tending and operating machines
Comparing, compiling or analyzing data
Exchanging information with, or consulting, supervising people.
Functional (Continued)

In Everyday Speech:

Artistic talent
A born problem solver
A natural salesman or saleswoman
A gifted writer
Effective in dealing with many kinds of people
Bringing new life to traditional art forms
Etc.

SPECIFIC CONTENT OR WORK-CONTENT

Particular Job Conditions, Vocabulary & Artifacts

Rooted in personal experience and preference

Acquired by private reading, apprenticeship, technical training institute, school, or (often) on the job.

Related to performing a job in a particular field, profession, or occupation, according to the specifications and conditions of a particular employer.

Examples:

Detailed knowledge of the various parts of a car
Knowing the names of all the muscles in the human body
Understanding the psychology of human motivation.

In Everyday Speech:

Financial planning and management
A skilled engineer
Theatrical production planning and management
Market research and analysis
Making radio and TV presentations
Personnel administration
Etc.
Factors in Occupational Self Appraisal

- Achievement Tests
- School Records
- Subjects preferred or best at

- Work Experience
- School Records
- Trade Tests

- Education & Training

- Acquired Skills

- Social & Economic Factors

- Money Required
- Kind of life desired
- Material Ambitions
- Social & Economic situation with which familiar

- School Records
- Personality
- Temperament Estimates
- Motivation, determination, etc.

- Interests

- Potential Skills

- Leisure Time Activities

- Physical Capacities

- Personal Traits

- Hobbies
- Extra-Curricular activities
- Part-time pursuits
- Avocations

- Aptitude Tests
- Implicit or manifest capabilities or abilities

- Check List
- Inventory Test
- Stated Preferences
- Manifest Preferences

- Doctors Reports
- Observed or known physical capabilities
- Energy Level
"The average, normal, well-adjusted person often has not the slightest idea of what he is, of what he wants, of what his own opinions are" (Fromm)

Maslow's Hierarchy of needs

Super's Theory of self concept

Congruence between:

Man is a wanting animal - as soon as one of his needs is satisfied, another appears in its place.

A satisfied need is not a motivator of behavior.

People are not by nature passive or resistant to organizational needs. They have become so as a result of experience in organizations.
CHECKLIST FOR THE STUDY OF AN OCCUPATION

1. Name of occupation: ____________________________________________

2. Employment Prospects:

   Are workers in demand today? Is employment in this occupation expected to increase or decrease?

3. Nature of the Work:

   What is the work of a typical day, week, month, year? What are all the things a worker may have to do in this occupation, the pleasant things, the unpleasant things, the big and little tasks, the important responsibilities, and less glamorous details? With what kinds of tools, machines, and materials does he work? Must he walk, jump, run, balance, climb, crawl, kneel, stand, turn, stoop, crouch, sit, reach, lift, carry, throw, push, handle, finger, feel, talk, hear or see? Where and when?

4. Work Environment:

   In what kind of surroundings is the work done? Hot, cold, humid, dry, wet, dirty, noisy? Indoor or outdoor? Is the worker exposed to sudden changes of temperature, offensive odors, vibration, mechanical hazards, moving objects, burns, electric shock, explosives, radiant energy, toxic conditions, or other hazards? Does he work in cramped quarters, in high places, or in any other unusual location? Are lighting, ventilation, and sanitation adequate? Does he work with others, near others, or alone? If with others, what is his relationship to them, and does it place him in a position of superiority, inferiority, equality, conflict, or stress?
5. Qualifications:

a) Age: What are the upper and lower age limits for entrance and retirement?

b) Sex: Is this a predominately male or female occupation? Are there reasonable opportunities for both? Is there any more active demand for one than the other?

c) Height and Weight: Are there any minimum or maximum requirements.

d) Other Physical Requirements: Are there any other measurable requirements, e.g., 20/20 vision, freedom from colour blindness, average or superior hearing, physical strength, etc.?

e) Aptitudes: Has there been any research on aptitudes required, e.g., minimum or maximum intelligence quotient, percentile rank on specific tests of mechanical aptitude, clerical aptitude, finger dexterity, pitch discrimination, reaction time, etc.?

f) Interests: Have any vocational interest tests been validated against workers in this occupation?

g) Tools and Equipment: Must these be supplied by the worker at his own expense? What is the average cost? Can they be rented or bought on credit?

6. Preparation:

a) Distinguish clearly between what is desirable and what is indispensable.

b) How much and what kind of preparation is required to meet legal requirements and employer's standards?

c) How long does it take? What does it cost? What does it include?

d) Where can one get a list of approved schools?

e) What kind of high school or college program should precede entrance into the professional school? What subjects must or should be taken?

f) What provisions, if any, are made for apprenticeship or other training on the job?

g) Is experience of some kind prerequisite to entrance?
7. Entrance:

How does one get his first job? By taking an examination? By applying to employers? By joining a union? By registering with employment agencies? By saving to acquire capital and opening his own business? How much capital is required?

8. Advancement:

a) What proportion of workers advance? To what? After how long and what additional preparation or experience is required?

b) What are the related occupations to which this may lead, if any?

9. Earnings:

a) What are the most dependable average figures on earnings by week, month, or year?

b) What is the range of the middle 50 percent?

c) Are earnings higher or lower in certain parts of Canada or in certain branches of the occupation:

10. Advantages and Disadvantages:

a) What do workers say they like and dislike the most about their jobs?

b) Are hours regular or irregular, long or short? Is there frequent overtime or night work? Sunday and holiday work?

c) What about vacations? Maternity leave?

d) Is employment steady, seasonal, or irregular? Does one earn more or less with advancing age?

e) Is the working life-time shorter than average, e.g., as for professional athletes?

f) Are the skills acquired transferable to other occupations?

g) Is the work hazardous? What about accidents, occupational diseases?

h) In comparison with other occupations requiring about the same level of ability and training, in what ways is this one more or less attractive?
A Career Interview Guide

The purpose of the interview is to get information about work, the worker, the work setting, and the general affect of the work on the individual's life-style. Both "likes and dislikes" should be brought out. Use this guide, but try to be somewhat informal.

When you begin your interview, inform the person being interviewed of the real purpose of the interview. Encourage the person to talk freely about his or her job and listen carefully. Ask questions that encourage the person to think about the important things that are involved in the job or career which they have.

Use these questions but don't limit your inquiry to these questions; you might not want to use all of them with every person.

1. What is the official title of your job?
2. How long have you been on this job?
3. How did you first get involved in this kind of work?
4. What are some of the major tasks that you do in your work?
5. What other jobs have you had? How are they related, if at all, to the job you now have?
6. What training or education is required for this job?
7. What do you like most about your job? What do you like least?
8. How does your job affect what you do or don't do off the job?
9. If you could do it all over again, would you still select this kind of work? Why or why not?
10. What gives you the most satisfaction in the work you are now doing?
11. What future work or career goals do you have? What job or work do you hope to be involved with ten years from now?
12. What do you think are some important things that a person who is considering going into this kind of work should know?
13. Do you feel that you have a career? If so, are you happy with it? What causes you to feel the way you do about it?
14. What other comments would you like to make?
Role-Playing Job Interviews

Directions: You have listened to the ways in which other job applicants conducted themselves during personal interviews. You have also examined some of the common pitfalls of applicants in job interviews. Now, you will practice an interview of your own.

Working in groups of three, one of you should take the interviewer's role, one of you should be the job-seeker, and one of you should assume the role of observer and evaluator. Everyone should have at least one turn in each of these roles.

Five role-play situations are described below. Each one builds on the previous one until you have completed an entire job interview. Complete instructions are given below.

Instructions to the Job-Seeker

1. Before any of the role-plays begin, you should show the other two group members the description of the job you are applying for. You should also give the person who is interviewing you a copy of your resume.

2. You should read the evaluation checklist carefully before you begin a role-play. It is presented at the end of this project. Then give your copy of this checklist to the person who will be evaluating you.

3. When a role-play begins, wait until you are invited to enter the interviewer's office.

Instructions to the Interviewer

Role-Play #1

This role-play is about greeting an interviewer. Your secretary has just told you that an applicant is waiting outside. Ask the job-seeker to come in. Offer your hand. Sit down, but DON'T ask the job-seeker to sit right away. Start a conversation as if you were beginning the interview.

Role-Play #2

In this role-play, the job-seeker is evaluated on how well s/he carries on a conversation during the interview. Ask the applicant to come in and offer your hand. Direct this person to a chair in your office. Then ask the following questions. Make sure that the job-seeker answers each question before you proceed to the next one.
Role-Play #3

This role-play is about selling yourself in an interview. Offer the applicant a chair. Then ask the following questions, making sure that the job-seeker answers each one before you proceed to the next one.

1. Did you know there's a lot of competition for this job?
2. You saw the salary listed? What do you think of the pay?
3. We had to fire the last person who held this job. S/he just wasn't competent. (Pause)
4. If I asked you to work evenings and weekends, would you do it?
5. Well, I guess we have all the information we need on you, don't we?

Role-Play #4

This role-play is about handling job offers in the interview. Ask the job-seeker to come in, offer your hand, and ask him/her to sit down. Describe your company, as well as the job (the one named by the job-seeker). Then ask the following questions, making sure that the applicant answers each one before you proceed to the next one.

1. Do you have the educational requirements for this job?
2. Why do you think you qualify for the position?
3. Do you think you'd be happy here?
4. I'm willing to take a chance on you. You seem well qualified. We would like you to begin next Monday morning.
Role-Play #5

This role-play is about leaving the interview. Have the job applicant come in and sit down. Then ask the following questions, making sure that each one is answered before you proceed to the next one.

1. What makes you think that this is the type of work you'd like to do?
2. Would you be willing to start at the bottom and work your way up?
3. How do you spend your spare time?
4. When could you start?
5. Do you have any questions?
6. Well, that seems to be all the information we need. Thank you for coming to see us.
Evaluating Interview Performances

Directions: Most interviews follow a regular pattern. There is an opening stage when you and the interviewer greet one another. Then the interviewer begins asking you questions about your qualifications and interest in the job. This is called the information-gathering stage. When the interviewer is through questioning you, the information-giving stage begins. Here you have a chance to provide further useful information on yourself, and to ask some questions about the company and the job. During the closing stage, you find out when a decision is going to be made on the job opening, thank the interviewer, and say good-bye.

Your success in getting a job depends highly on how well you prepare yourself for the job interview, and the way in which you conduct yourself during it.

You will now have a chance to listen to the way in which three applicants conducted themselves during their job interviews. Pay careful attention to each interview. Then answer the following questions about each applicant and discuss your evaluation of their performance with the rest of your classmates.

Interview #1: Applicant Charlie Read

1. Did Charlie introduce himself properly to the interviewer?
2. Did he identify the job he was applying for?
3. Did he use the interviewer's name?
4. Was Charlie prepared for the interview?
5. Did he answer the questions directly without avoiding the topic?
6. Did he ask questions to find out about the job?
7. Did he appear to be serious about wanting the job?
8. Did he thank the interviewer for taking the time to see him?
9. Would you hire Charlie Read if you were the employer? Why or why not?
Group Interview Guide Questions

Did the job-seeker:

a) Answer questions in a positive way?  
   [Blank]

b) Speak clearly?  
   [Blank]

c) Speak in complete sentences where appropriate?  
   [Blank]

d) Use good attending behaviours?  
   [Blank]

e) Listen carefully?  
   [Blank]

f) Not interrupt the interviewer?  
   [Blank]

g) Seem prepared for the questions that were asked?  
   [Blank]

Did the job-seeker:

a) Describe at least one selling point?  
   [Blank]

b) Look interested?  
   [Blank]

If a job was offered, did the job-seeker:

a) Accept, sound positive and thank the interviewer?  OR  
   [Blank]

b) Ask for time to think it over, state when s/he would decide, and thank the interviewer?  
   [Blank]
Handling Difficult Interview Questions

Key questions are often asked to test your alertness and self
awareness. Below are some key question examples. KNOW HOW YOU
WILL ANSWER THESE BEFORE YOUR INTERVIEW -

1. What is the minimum salary you would accept?
2. Why do you want this job?
3. Will you work wherever a position is available?
4. What skills and abilities do you have that are directly related
to the job for which you are applying?
5. What position do you hope to obtain with this company?
6. Where did you learn about this position?
7. What kind of boss do you prefer?
8. What did you like and dislike about your past employment?
9. What kind of a person are you?
10. Why did you leave your last job?
George worked as a salesperson in the furniture department of a large store. Saturday is the busiest day in this department. When George began working, his supervisor told him that his regular day off would be Monday, unless something exceptional came up, and he and the other salespersons would always be expected to work on Saturday.

A cousin of George's was getting married on a Saturday. He meant to ask his supervisor for time off to attend the wedding, but he kept forgetting to make his request. Finally, the day before the wedding and just as the store was closing, George asked for permission to be away the following day.

"I'm sorry", his supervisor said, "but I've already told Lynda she could take tomorrow off. She asked me about two weeks ago. We just can't afford to be short two salespersons on a Saturday."

George became very angry. As he walked out, he said that he would not be back.

The Questions:

1. Was the supervisor unfair with George? Give reasons for your answer.

2. Was George justified in being angry? Should he have quit the job over this matter? Why or why not?

3. What behaviours will George have to change if he wants to get and keep future jobs?
Chris is offered a job he really wants in a field that has always interested him. There is a chance for advancement and he likes the people with whom he would be working. But the salary is very small and is not likely to increase for some time. His uncle has also offered him a fairly important, though boring, job at a high salary. He does not like his uncle.

Chris has a wife and two children to support. If he takes the first job, there will be enough money for essentials, but not for any luxuries for quite a while. The second job would support them very well.

**The Questions**

1. In deciding which job to take, what factors related to job satisfaction is Chris having to consider?

2. Do you think that job satisfaction is less or more important than responsibility to your family? Give reasons for your answer.
Directions: When an employer receives a written two-part application, s/he first reads the cover letter. If it is interesting, s/he will read the applicant's resume.

You are to place yourself in the position of the employer, who has advertised this opening in the Job Information Centre at Canada Manpower:

**PRODUCTION TRAINEE - FULL TIME**

Young person, 18 or over, to learn production techniques in food products plant. This opportunity will lead to production supervisory position. Must be in good health, have driver's licence. Grade 12 preferred. $3.50 per hour to start, will increase with proven ability. Send resume with complete details to Good Products Ltd., Box 1435, Calgary.

You must read each of the following cover letters and decide whose resume(s) you would be interested in examining. Also answer the questions following these letters, and be prepared to discuss your responses with the rest of your classmates.

**Letter #1**

Gentlemen:

You advertised a job as production trainee. I would like to apply for it.

I am 20 years old and finished high school in 1973. My jobs have been: (1) dairy farm worker, (2) hardware store clerk, and (3) truck driver. As you requested, my resume is enclosed.

I hope you will consider me for the job. I can be reached at any time for an interview.

Sincerely yours,
Appendix A - 7(iv)

Letter #2

Gentlemen:

The position of Production Trainee which you are advertising at Canada Manpower's Job Information Centre sounds most interesting. I believe that my background and experience in the food industry would enable me to do this job for you.

As the enclosed resume indicates, I completed Grade 12 at the Alberta Vocational Centre in 1974. Since then, I have been working for Murphy's Food Mart Ltd. I started as a stock clerk but because I enjoy the food business and learn quickly, I recently have been promoted to the position of Produce Manager. My eagerness to learn about the industry would, I believe, help me to meet the requirements you have of a production trainee.

I would appreciate an opportunity to discuss my qualifications with you personally. Would you please contact me at either 253-9314 (home) or 258-2191 (business) regarding a time when I might come for an interview?

Sincerely yours,

Letter #3

Gentlemen:

Would you please consider me as an applicant for the position of Production Trainee? Following is a summary of my qualifications for this job.

I am 24 years old, married, and have two children. I completed Grade 11 and some Grade 12 subjects at Fort McLeod High School. For the past two years, I have been employed as a labourer for Quality Building Supplies. I have also done other labouring jobs and worked as a taxi driver. My complete resume is enclosed.

I would appreciate an opportunity to discuss the job with you at your convenience. I can be contacted at

Sincerely yours.
Questions For Discussion

1. As a result of reading the three cover letters, whose resume(s) would you be MOST interested in examining. Why?

2. What is missing from the letter(s) that were not interesting to you?

3. Letter #3 contains five sentences beginning with the word, "I". What changes in phrasing would you suggest for making this letter less "I-oriented"?

4. The applicant who wrote Letter #1 has worked as a truck driver, and the one who wrote Letter #3 has worked as a taxi driver. Therefore, you could assume that they both have the valid driver's licence you have listed as a job requirement. The person who wrote Letter #2 has said nothing to indicate that s/he holds a licence. Should s/he have done so? Why or why not?
WHAT IS CAY? . . .

The CAREER ACTION FOR YOUTH CENTRE provides an intensified career counselling service for in-school youth, potential drop-outs, and very recent drop-outs, (90 days or less), of the Vancouver Secondary schools. The objectives of the Centre are:

1. To bridge the gap between the protective school environment and the realities of the world of work by; assisting students in the development of realistic career goals and attitudes, a positive self-image, and by teaching the skills necessary to find and keep a job.

2. To act as a career information resource for Canada Manpower Centres, secondary schools, parents, business and industry, and social and community agencies.

The Centre is a joint venture of the Department of Manpower and Immigration and the Vancouver School Board. Its aim is to concentrate expertise and resources to provide effective career guidance to the youth of the Vancouver School District.

THE CAY CENTRE IN ACTION. . .

Services Offered Through The CAY Centre:

A) The Development of Career Education Programs

(i) Career education "mini-courses" have been designed for grades nine through twelve. The CAY Centre has a sample curriculum which may be tailored to suit the needs of specific schools. School teachers and counsellors are currently teaching the courses while the CAY Centre staff arranges for speakers from industry, provides resource materials, audio-visual aids, and acts as resource personnel.

(ii) Where formal career education programs currently exist, the services of the Centre are available on demand.

(iii) For those schools who do not run formal career education programs, but may wish individual presentations on such topics as Creative Job Search Techniques, or the operation of a Canada Manpower Centre, a School Liaison Counsellor has been identified in each Canada Manpower Centre to assist the CAY Centre in providing this service.
Appendix B(ii)

B) Testing Services for Aptitude and Interest Assessment

C) Individual Vocational Counselling

Through a series of counselling sessions, students explore their interests and aptitudes and examine occupational groups and current labour market conditions. Alternatives in education and employment are studied in relation to occupational requirements in the world of work. Job hunting skills may be discussed to aid the student in preparing for satisfying and successful employment.

In order to facilitate individual referrals to the CAY Centre, we have designed a client information sheet which has been forwarded to all schools. We request that, in all cases, the referring counsellor call the Centre to briefly discuss the client and to confirm an appointment date.

D) Workshops, Seminars and Group Discussions

A series of skill development workshops and information sessions are held at the CAY Centre during the school year. The purpose of these sessions is to heighten the career education and vocational counselling expertise of school personnel. Many resource people from the community are invited to participate in these sessions, and it is hoped that these workshops provide an opportunity to exchange ideas and establish effective lines of communication.

E) Resource Library

The resource library in the Centre includes information on; career planning, community resources, Canadian employers, Canadian Community Colleges, Institutes of Technology, and Universities, educational planning, employer recruiting practices, Federal and Provincial government, financial aid, industrial training, job hunting techniques, current labour market conditions, occupations, private educational institutions, resume writing, vocational training institutions, and apprenticeships. The library also includes a section for teacher and counsellor reference, including sample curricula for career education programs, audio-visual resource materials, career games, reference texts, etc.

F) Community Liaison

The CAY Centre initiates and co-ordinates activities to promote communication and interaction between schools and the community. The Centre is publishing a Business Resource Guide for Schools, which will identify employers for; speaking engagements in schools, plant and office tours, observational job study, work experience, films, etc.
Appendix C(i)
Table A
Item Analysis - Knowing Yourself

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### Appendix C(ii)

Table B

Item Analysis - Knowing About Jobs

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### Appendix C(iii)

#### Table C

**Item Analysis - Choosing A Job**

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**Item Analysis - Problem Solving**

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Figure 1. A model of career maturity in adolescence.