THE UNIVERSITY OF MANITOBA

CAREER MATURITY ATTITUDES OF BOYS AND GIRLS

IN GRADES 6, 9, AND 12

By

Patricia E. Berezowski

A Thesis

Submitted to the Faculty of Graduate Studies

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Abstract

The purpose of this study was to examine how rural boys and girls differ in their attitudes toward career choice. Specifically, the study examined how boys and girls, at three different educational levels (grades 6, 9, and 12), differed on total score and on each of five attitude components of career maturity.

Three hundred five students from two School Divisions, Mountain and Tiger Hills, in South-Central Manitoba participated in the study. These students were from all the K - 12 school complexes in both divisions. One hundred percent participation was achieved.

The instrument used in this study was Crites' Career Maturity Inventory, Attitude Scale, (CMI-Att.Sc.), Counseling Form B-1. This 75-item scale yields one total Attitude Scale score and five subscores for the following variables: Decisiveness, Involvement, Independence, Orientation, and Compromise. Mean scores by grade level and by gender were obtained for each of the six variables. Analysis of variance procedures were used to examine the size of differences in scores between grade levels and genders.

Results from the study confirmed that there is an increase in career maturity across the grade levels as predicted by Crites (1965). Gender differences, particularly on the independence component, in favour of the girls, were found at all three grade levels. This study established a baseline of scores for grades

6, 9, and 12 for total career maturity and each of the five components.

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Dedication

This thesis is dedicated to

Mary and Peter Berezowski,

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CHAPTER 1

INTRODUCTION

The concepts of career development and career maturity are relatively new. Prior to 1950, the prevailing views of career behaviour were almost non-developmental. Career decision making was viewed as

> a time-bound, largely static event, which occurred at the crossroads of life, usually upon high school graduation, when an adolescent took stock of himself and the world of work and then decided what he was going to do (Crites, 1973, p. 5).

The act of choosing a career was depicted in the 1930's and 1940's with a picture of a young man or woman standing at the junction of several career paths, reflecting upon which one to follow (Super, 1957; Crites, 1973). This notion dominated the scene for several decades (Crites, 1965) and was institutionalized and maintained by the construction of a variety of measures (aptitude, interest, and personality), designed to implement the process of matching people with jobs (Crites, 1968). This model still persists, albeit it is being supplanted by new conceptualizations.

The current ideas of conceptualizing the adolescent's relationship to school and work originated in the recognition of the developmental context within which the process of learning and decision making occur (Crites, 1978). Super (1942) and Pressey and Kuhlen (1939) were among the first to apply the concept of life stages to career choice and adjustment. A study

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by Ginzberg and Associates (1951), followed by the continuing work of Havighurst (1953), Super and Associates (1953, 1957, 1963), Tiedeman and O'Hara (1963), and Katz (1963), among others, directed the attention of counselling psychologists and career counsellors to many more possible contributions of developmental approaches (Super, 1974).

Ginzberg and Associates (1951) were among the first to emphasize that career selection was a dynamic process and not simply a one-time event. They suggested that the career selection process was particularly prominent among individuals between the ages of ten and twenty-one. Choosing was observed to progress through differentiable periods of deliberation, culminating in a more or less satisfactory and satisfying compromise between personal needs and occupational realities. Super (1953) characterized the career development process as ongoing, continuous, and generally irreversible. Herr and Cramer (1979) depicted career selection as a process of compromise and synthesis within which the primary construct, the development of the self-concept, operates. More specifically, they viewed the career selection process as developing from less complex and less effective behaviours to more complex and more effective behaviours with increasing age. From childhood well into adulthood, choices become increasingly reality-oriented and goal-directed.

Awareness of career development is essential to understanding the dilemma that youth face in today's world. To

the observer, it appears that many modern-day youth feel simply that the world is an oyster, waiting to be opened and ready to reveal immediate success. In reality, it is not. It is filled with many difficult and complicated decisions. Selecting a career is a hard task for youth to deal with, and it becomes even harder once they realize that the world is a different place than it was for the preceding generation, whom they tend to emulate.

Modern youth are growing up in the aftermath of the so-called "Baby-Boom Generation." This generation, the largest in history, experienced the most economic success ever. It grew up in the post-war era where industry, technology, academia, and the scientific world were advancing at a tremendously rapid rate. Opportunity for career advancement was everywhere. The common attitude was that as long as one was ready to work, one would succeed.

The present work-age generation is ready to work, but the situation is different for them. Entry-level jobs, such as work with computers, may require much more specialized training. While the number of total workers in the nation's workforce has gone up, a larger percentage of adult women occupy a place in this workforce. It is more difficult to enter the workforce because of these and many other new factors.

In order to make career decisions, one needs knowledge not only about what is available from which to choose, but also about the personal characteristics that might be emphasized in evaluating and acting on available choices. This latter goal

requires, in addition to knowledge, the clarification of personal values, interests, and attitudes as these relate to self-characteristics, environmental alternatives (occupational, educational, personal, and social options), and the decision-making process itself (Herr & Cramer, 1984).

The gathering of knowledge for career decision making begins at an early age, not just in the last few years of high school. Young children are open to and interact with a broad range of stimuli and modes of behaviour (Herr & Cramer, 1984). Their attitudes and perceptions about life and their place in it are formative and are readily influenced by environmental circumstances.

Environmental circumstances come in many forms. The writer is particularly interested in the environments in which farm children are raised. Rich (1979) demonstrated that children are most knowledgable about occupations in their own communities. Therefore, if children come from a farming community, where they are exposed to only a few occupations and these are mostly of low status, it is these occupations to which they will likely aspire.

Rich argues that such circumstances put rural students at a disadvantage vis a vis their urban counterparts. She further contends that acquiring knowledge

> about non-local occupations, or more specifically
> about middle-and high-status occupations, could
> provide rural students with an equal opportunity
> to make more varied and more optimal occupational
> choices (p.325).

Beyond geography, a powerful environmental circumstance is

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socio-economic status. Holland (1961) found, in a study of 300 randomly selected sixth-grade students in the Georgia Public School System, that socio-economic status was more useful in predicting the maturity of career attitudes than were self-concept, race, sex, place of residence, and age. Holland's data indicated that, the higher the student's socio-economic status, the higher the score obtained on the Attitude Scale of the Career Maturity Inventory (CMI).

Another environmental circumstance affecting career attitudes is the relationship children have with their parents and the attitudes of the latter towards work. Miller (1978) examined the childhood antecedents to career maturity attitudes in young adults. He found some support for the hypothesis that parental attitudes and behaviour displayed to the child while young are positively associated with later career maturity attitudes.

The roots of the behaviour that will manifest itself many years later, under the labels of career identity and commitment, or conversely juvenile delinquency, early school leaving, and underemployability, are found in the early years of the family and of schooling. If Luchins' (1960) primacy effect -- that the information obtained first carries the most weight in ultimate decisions -- is a valid premise, then the education system must focus considerable attention on attitude development, decision processing, and self-awareness as well as on knowledge of work itself (Herr & Cramer, 1984).

Overview of the Research

This is an investigation of the structure of attitudes toward the career choice process of boys and girls at important choice points in schools.

The education system is structured so that there are three entry levels: grade 1 (entry into formal education), grade 7 (entry into junior high school), and grade 10 (entry into senior high school). At grade 6, students are contemplating junior high school and all it brings (different courses, more than one teacher, dating, etc.). They are developing increasingly complex behaviours. They engage in activities located further from home and independent of the family. These require knowledge, skills, and attitudes important to exploration and planning. At grade 9, students are looking at alternative high school situations. Decisions have to be made about which educational route to take: university entrance, general, or occupational. They also have to make course selections within each route, rather than merely following programs prescribed for them. At grade 12, students are about to be confronted with the reality that they must leave the school system. Decisions on whether to enter the work force full-time, continue with post-secondary education, or perhaps travel have to be faced. These grade levels (6,9, and 12) represent years in which important decisions are made about important life changes.

All grade 6, 9, and 12 students in K-12 school complexes from two rural school divisions were sampled for this study.

These three grades were selected because they represent clearly separate educational and developmental levels.

The measurement instrument used in this study was carefully selected from a number of career developmental instruments, all of which were developed around the same time-frame. These instruments generally claimed that they served two purposes: to assess the person's basis for making career decisions and to evaluate the degree to which career development objectives have been achieved. Valid responses on all the measures required the respondents to display proficiency in reading and often involvement in deductive reasoning.

An extensive study by Jepsen and Prediger (1981) analyzed the most popular career development instruments (see Table 1) to examine the common and unique dimensions of career development as assessed by these popular instruments. They had two objectives: first, to identify the convergencies and divergencies among the measures with broadly similar purposes and to assess the extent to which reading and mathematics achievement test scores were related to the measures, and second, to identify the primary dimensions of career development that appear to underlie convergencies observed and to suggest heuristic labels for these dimensions. The subjects of the Jepsen and Prediger study were two hundred thirty-seven 11th graders in a suburban high school of a mid-western city. They were chosen because of their lack of involvement in any career guidance activities.

Table 1 lists the instruments examined in the study by

Jepsen and Prediger. The results of this investigation were

Table 1
Instruments Studied by Jepsen and Prediger

Abbreviation	Title
Assessment of Career Decision Making (ACDM)	
1. R-STYLE	Rational Decision-Making (DM) Style
2. I-Style	Intuitive DM Style
3. D-Style	Dependent Style
4. EXPLOR	Exploration, DM Task:Occupation
5. CRYSTL	Crystallization, DM Task: Occupation
6. CHOICE	Choice, DM Task: Occupation
7. CLARIF	Clarification, DM Task: Occupation
Career Maturity Inventory (CMI)	
8. ATTID	Attitude Scale, Screening Form
9. GOALSEL	Goal Selection
Career Skills Assessment Program (CSAP)	
Career Decision Scale	
10. CDMSKL	Career Decision-Making Skills
11. CDS	Career Decision Scale
Iowa Tests of Educational Development, Form Y-6 (ITED)	
12. ACH-Q	Quantitative Thinking
13. ACH-R	Reading Total
Career Development Inventory (CDI), Shortened Scales	
14. PLAN	Extent of Planning
15. CDM	Career Decision-Making
16. INFO	World of Work Information
Assessment of Career Development (ACD)	
17. CPKNOWL	Career Planning Knowledge
18. CPINVOL	Career Planning Involvement
19. CERTNTY	Certainty of Choice (Item 4, Unit 3)

interesting to this study.   The authors found three distinct

clusters among the nineteen scales. These, they labeled "certainty," "decision-making," and "activity." They concluded that, if the counsellor desires breadth in covering career development characteristics, then at least one instrument from each cluster might be selected. If precision in measuring a career development characteristic is desired, then two or more instruments from one cluster could be selected. However, if a single inventory giving the broadest coverage is desired, then the CMI Attitude Scale would be the best candidate (Jepsen & Prediger, 1981). The conclusions from their research findings provided direction for this present study.

The Career Maturity Inventory, Attitude Scale, Counseling Form B-1 (Crites, 1978) was selected as the instrument for this study. In addition to yielding the total career maturity score, it generates five sub-scale scores of interest. The five subscale components are decisiveness in career decision making, involvement in career decision making, independence in career decision making, orientation to career decision making, and compromise in career career decision making. The derivations of these five components are presented in Chapter 2.

Purpose of the Study

The focus of this study was to examine how rural boys and girls differ in their attitudes toward career choice. Specifically, the study examined how boys and girls, at three different educational levels (grades 6, 9, and 12), differed on

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each of five attitude components.

Definitions

For purposes of clarity and consistency, definitions of career maturity and of the five attitude components that are summed to form an overall attitude scale score on the CMI-ATT.Sc. (Crites, 1978) used in this study are presented at this point.

Career Maturity

Career maturity is the maturity of an individual's vocational behaviour as indicated by the similarity between the subject's behaviour and that of the oldest individuals in that vocational life stage.

Decisiveness

Decisiveness refers to the extent to which an individual is definite about making a career choice.

Involvement

Involvement indicates the extent to which an individual is actively participating in the process of making a choice.

Independence

Independence is characterized as the extent to which an individual relies upon others in the choice of an occupation.

Orientation

Orientation refers to the extent to which an individual is task-or-pleasure-oriented in his or her attitude towards work and the values that he or she places upon work.

Compromise

Compromise depicts the extent to which an individual is willing to compromise between needs and realities.

The next chapter contains the findings of previous research on attitudes and on gender differences in attitudes.

CHAPTER 2

REVIEW OF RELATED LITERATURE

The concept of career maturity in counselling literature has
evolved in the past 35 years where career maturity is now viewed
as the individual's degree of vocational development, readiness
for specific vocational tasks characteristic of age or vocational
life stage, and/or the degree to which s/he is coping
ideographically with occupational choice problems. Several
models of career maturity, including the instruments used to
measure them, are discussed in this chapter. As well, Crites'
(1978) Attitude Scale, the instrument used in this study, is
reviewed.

A Summary of Models and Research on Career Maturity

This section summarizes the models and research of the major
researchers in the area of career maturity: Super, Super and
Forrest, Gribbons and Lohnes, Westbrook, and Crites.

Super's Research

Some fundamental principles pertinent to Super's theory of
career maturity include the notions that the organism is
essentially active, not passive; that it constitutes what is
called an "open system" in contrast with the closed systems of
classical mechanics (Bertalanffy, 1961; Harris, 1971); that the
individual moves progressively from dependency to independence by

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acquiring skills and competencies necessary to perform adequately in ways valued by others; that, as the individual gains cognitive abilities which allow abstraction and generalization, he moves from a "now" to a "future" orientation; and finally, that, as the individual moves from immediate to delayed gratification in his affective and impulsive life, he can increasingly choose and commit himself to more refined social and personal goals (Harris, 1974).

Super (1974) initiated the Career Pattern Study of ninth grade boys in 1951. He focused on factors which constitute career maturity during adolescence. Guidelines for the further explanation of his model are based on Baldwin's (1967) model:

1. Development proceeds from random, undifferentiated activity to goal-directed, specific activity;

2. Development is in the direction of increasing awareness and orientation to reality (Baldwin's "The Mature Individual cognizes the situation");

3. Development is from dependence to increasing independence;

4. The mature individual selects a goal and

5. The mature individual's behaviour is goal-directed.

Super derived six dimensions of career maturity. These are: Orientation to Vocational Choice, Information and Planning, Consistency of Vocational Preferences, Crystallization of Traits, Vocational Independence, and Wisdom of Vocational Preferences. By analyzing the data in his Career Pattern Study, Super was able

to establish twenty indices of career maturity for each of the six dimensions (Table 2).

Table 2

The First Model

Dimension 1. Orientation to Vocational Choice
    1A.   Concern with Choice
    1B.   Use of Resources

Dimension 2. Information and Planning
    2A.   Specificity of Information
    2B.   Specificity of Planning
    2C.   Extent of Planning Activity

Dimension 3. Consistency of Vocational Preferences
    3A.   Consistency within Fields
    3B.   Consistency within Levels
    3C.   Consistency within Families

Dimension 4. Crystallization of Traits
    4A.   Patterning of Interests
    4B.   Interest Maturity
    4C.   Liking for Work
    4D.   Patterning of Work Values
    4E.   Discussion of Rewards of Work
    4F.   Acceptance of Responsibility

Dimension 5. Vocational Independence
    5A.   Independence of Work Experience

Dimension 6. Wisdom of Vocational Preferences
    6A.   Agreement: Ability and Preference
    6B.   Agreement: Interests and Preference
    6C.   Agreement: Interests and Fantasy Preference
    6D.   Agreement: Level of Interests and Preference
    6E.   Socioeconomic Accessibility

Through empirical testing Super revised his initial model.

The revised model (Table 3) was derived from a factor analysis of the initially proposed indices. Some of the indices of career maturity were not assessing characteristics or behaviours which had anything in common with other presumed measures of the same characteristics.

Table 3
A Factor Analytic Model of Vocational Maturity in 9th Grade
_____

Factor 1.   Planning Orientation
             A. Acceptance of Responsibility
             B. Specificity of Information (more immediate
                     types
             C. Specificity of Planning
             D. Steps Taken to Obtain Information
             E. Awareness of the Need for Choices
Factor 2.   The Long View Ahead
             A. Awareness of the Need for Ultimate Choices
             B. Specificity of Information (Remoter types)
             C. Entry Planning
             D. Awareness of Factors in Choice
             E. Awareness of Contingency Factors
             F. Acceptance of Responsibility
Factor 3.   The Short View Ahead
             A. Specificity of Planning
             B. Awareness of the Need for Immediate Choices
             C. Acceptance of Responsibility for Choice
             D. Steps Taken to Obtain Information for High
                     School
Factor 4.   The Intermediate View
             A. Awareness of Factors in Choice
             B. Awareness of Need for Intermediate Choices
             C. Specificity of Post-High School Plans
             D. Awareness of Contingency Factors
                                              (Super, 1974)
_____

Four factors were derived: Planning Orientation, the Long View Ahead, the Short View Ahead, and the Intermediate View. In this model, indices such as wisdom or realism of career preference do not appear due to the fact that they showed no intercorrelations with each other nor with other intercorrelated

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measures.

Since the construction of these models, research has revealed the need for several additional changes. First, a model must be both structural and developmental. The above two are structural models in that they address the question of what constitutes career maturity. The structure of career maturity may be expected to differ somewhat from life stage or from one substage to another, since it is viewed as a developing set of traits. Second, some of the measures of variables which had been viewed as cognitive have been shown to be attitudinal or conative (Super and Forrest, 1972). For example, planning is an attitude involving time perspective and the motivation to take time and its implications into account. It is also cognitive in that it considers the acts and data necessary in making plans.

Super (1974) designed two models of career maturity. One model was for use with 9th graders and the other for 12th graders. A theoretical developmental model of career maturity was designed to supplement the existing structural models.

This developmental model shows the differential rates of development of various factors and the significance in the 12th grade of factors which have not matured enough in the 9th grade to have validity there. It also shows the declining importance of parental socioeconomic status on adolescents as they become more independent. This raises the question of the need to examine the development of factors or components across the grades, particularly grades 6, 9, and 12, leading to the analysis

of components in grade 12 which have not matured enough in the earlier grades.

Super and Forrest's Research

The Career Pattern Study (Super, 1957) hypothesized and defined the concept of vocational maturity. Super developed questionnaires and other methods for studying vocational maturity and refined the items into scales with which to measure it. What was originally designed to be descriptive of a developmental process was also found useful as an outcome variable.

Work was continued on the Career Pattern Study scales to revamp them into a practical instrument for measuring the outcomes. A study of the effects of exposing high school students to a computerized guidance program, the Educational and Career Exploration System (Minor, Myers, and Super, 1969), led to the development of the Career Development Inventory (CDI). Super (1971, 1972), Forrest (1971), and others were responsible for its final development as a usable instrument.

The CDI is an objective, multifactor, self-administering, paper-and-pencil instrument for measuring the career maturity of male and female adolescents. The CDI has a School Form, designed for use in junior and senior high schools, and a College and University Form, for use in higher education. The forms are similar in rationale and structure. They differ in item content, which is adapted to the appropriate occupational options and levels of education.

The School Form was designed for use in grades 8 through 12 and has national norms for grades 9 through 12. The CDI consists of eight scales: five assess specific dimensions of career development, two measure group factors (conative and cognitive) that underlie these dimensions, and one scale combines the two factors that comprise a total score.

The CDI provides three scale scores, two of which are attitudinal in nature and one of which is cognitive. Scale A, Planning Orientation, contains 33 items related to concern with occupational choice, specificity of planning, and a self-estimated rating of occupational information. Scale B, Resources for Exploration, has 28 items involving a self-rated assessment of resources for use in vocational planning. It is designed to measure the quality of resources which are actually used as well as those which are potentially useful to the individual in career exploration. Scale C, Information and Decision Making, is composed of 30 items and assesses the student's possession of actual occupational information and his knowledge of how to integrate personal and occupational information into educational and vocational decisions. Thus, Scale A measures the student's attitudes toward planning and choosing an occupation, Scale B estimates the quality of individually used and potentially available resources, and Scale C assesses the quality of occupational information acquired by the student together with the awareness of its decision-making utility. The CDI therefore taps both attitudinal and cognitive aspects of vocational

maturity.

The questions on this inventory are not sex-differentiated. The reading level is set at grade six and the vocabulary and content make it applicable for both junior and senior high students. Administration is self-explanatory and total testing time is from thirty to forty minutes. A computer-based format is obtainable.

The content of the CDI makes it suitable for evaluating the impact of many types of educational and vocational guidance programmes, services, and activities intended to foster the career development of students in junior and senior high school or in the first year of college. In addition, the CDI may be used to assess the degree of career maturity attained by different groups of students classified by age, grade, sex, work experiences, etc., for the purpose of curriculum planning. Finally, the CDI is intended for use with individual students in determining their readiness for certain learning and exploratory experiences which are likely to remedy deficiencies or build on existing strengths.

Gribbons and Lohnes' Research

Super and Overstreet (1957) reported a factor analysis of 27 indices of vocational maturity derived from psychometric and interview data on ninth-grade boys in the Career Pattern Study. These indices were based on the dimensions of vocational maturity delineated by Super in 1955 and listed in Table 3 earlier. The

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results of the study by Super and Overstreet seem to support a hierarchical model of vocational maturity in early adolescence. Gribbons and Lohnes (1968) continued this work and verified this conclusion.

Gribbons and Lohnes' Readiness for Vocational Planning (RVP) scales were patterned after Super's Career Pattern Study's indices of vocational maturity. The RVP is in the form of a structured personal interview and it requires some short-term training to ensure maximum validity and reliability of administration. The interview protocal was selected over a questionnaire format to reduce the resistance encountered when students are asked to record their ideas on paper. It also allows for maximal opportunity for student self-expression and disclosure of thoughts and attitudes. Further, provided that rapport is established between the interviewer and interviewee, the RVP approach permits clarification of vocabulary too difficult for some students and probing for more specific answers and ideas. Many of the questions in the RVP interview schedule represent modifications of interview protocal used in Super's Career Pattern Study (Super and Overstreet, 1960).

The RVP is appropriate for students in grades eight through twelve. The interview schedule contains approximately 50 questions (it varies slightly with grade levels) and scoring is carried out by rating the quality of subjects' responses on a scale of 0 (indicating a lack of understanding or awareness) to 4 (applicable to accurate responses with qualifying explanations).

The RVP is intended to assess various elements pertaining to the career choice process: factors in curricula and occupational choice, verbalized strengths and weaknesses, accuracy of self-appraisal, vocational interests, values, and levels of independence in decision making.

Westbrook's Research

Until the late 1960's, test development focused on designing scales to measure growth in the affective domain of vocational maturity (Crites, 1965: Sheppard, 1971) and on essentially leaving out the cognitive domain. Westbrook set out to change that. Also, the attitudinal dimensions of career maturity provided an incomplete picture; the cognitive and behavioural dimensions needed to be considered as well.

Westbrook directed a series of tests at North Carolina State University to test the model of vocational maturity. The thrust of this research was directed toward constructing a Cognitive Vocational Maturity Test (CVMT) to operationally define variables in the Vocational Choice Competencies group of the model.

Westbrook and his colleagues employed Roe's classification of occupations as well as the Dictionary of Occupational Titles and the Occupational Outlook Handbook in devising their test for the measurement of career knowledge. Six areas which appeared to match closely with the objectives of career education programmes were chosen for inclusion in the CVMT. They are:

1. Fields of Work (knowledge of the occupations

available in various fields of work);

2. Job Selection (the ability to choose the most realistic occupation for a hypothetical student who is described in terms of his abilities, interests, values, etc.);

3. Work Conditions (knowledge of work schedules, income levels, physical conditions, job locations, etc.);

4. Education Required (knowledge of the amount of education generally required for a wide range of occupations);

5. Attributes Required (knowledge of the abilities, interests, and values generally needed for various occupations);

6. Duties (knowledge of the principal duties performed in a variety of jobs).

Within each of these areas, items are arranged in order of increasing difficulty (Herr & Cramer, 1974).

The CVMT was administered to samples of students in grades six through nine. The results indicated that the mean scores on each subtest increase with grade level. This finding supports the claim that cognitive vocational maturity behaviours are developmental ones. Since vocational behaviours mature with increasing age and grade during adolescence, measures of vocational maturity should yield scores which increase with grade (Crites, 1965).

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The CVMT is recommended for use in three areas: first, as a screening device to assess overall group readiness for various educational-vocational decisions: second, as a diagnostic tool, to identify specific individual weaknesses in the six areas that require remediation; and third, as an instrument for evaluating the effectiveness of career education and development programmes.

Crites' Research

Crites (1965) designed a structural model of career maturity in an attempt to organize Super's dimensions of career maturity into a conceptual framework with heuristic value for measurement and theory as well as usefulness in understanding research findings. Through research at the University of Iowa and later at the University of Maryland, Crites refined Super's model and developed instruments to measure career maturity attitudes and career maturity competencies.

In contrast to Super's (1960) Career Pattern Study, in which the vocational coping behaviours of an individual were compared with those of his age group, Crites viewed the appropriate comparison to be with the oldest individuals in the same vocational life stage. Thus, ninth graders were compared on an age scale with twelfth graders.

The formal characteristics of Crites' model were patterned after Vernon's (1950) schema for the structure of intelligence, in which the lowest level incorporates the operationally defined variables of interest; the intermediate level symbolizes group

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factors derived from the interrelationships among the variables; and the highest level is delimited by the common variance among the group factors. Crites' model is thus a hierarchical one, based on the assumption that the variables and group factors are interrelated rather than discrete, in contrast to hypotheses suggesting that, developmentally, the trend should be toward greater differentiation of specific behaviours (Crites, 1965).

Crites re-classified Super's indices of career maturity under four major headings: consistency of career choices, realism of career choices, career choice competencies, and career choice attitudes. He accepted the Career Pattern Study method of assessing the first two categories and devoted his attention to the latter two areas dealing with the attitudinal and intellective aspects of choice making. The career choice competencies and career choice attitudes groups were specifically derived from Super's Orientation to Vocational Choice, Information and Planning, and certain components of the Crystallization of Traits dimensions, as well as from concepts advanced by other theorists (Crites, 1964).

The Career Maturity Inventory (CMI), Attitude Scale,
Counseling Form B-1

The Career Maturity Inventory (CMI), originally entitled Vocational Development Inventory, was conceived and constructed to measure the maturity of attitudes and competencies that are critical to career decision making (Crites, 1978). Crites

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altered the title to signify that the CMI measures career behaviours which mature over time. Two types of measures were designed to assess the maturity of these behaviours: the Attitude Scale and the Competence Test. Only the Attitude Scale was used in this study. Evidence from research suggests that the Career Maturity Inventory--Attitude Scale could be used as a single inventory giving the broadest coverage of adolescent career development (Jepsen & Prediger, 1981). This was more fully discussed at an earlier point in this study.

Rationale for the Career Maturity Inventory was based on several assumptions concerning the developmental nature of vocational behaviours. It was assumed that vocational behaviours mature over time in a systematic fashion and that career development is typically a unidirectional process terminating in the achievement of an objective. Further, while vocational behaviours may not necessarily develop uniformly during any given life stage, they generally should not reverse themselves. Only those items which demonstrated a monotonic relationship (i.e., either increased or decreased with no statistically significant reversals) with age and which differentiated among the various levels in the educational structure during late childhood and adolescence were chosen for use in the CMI. Cross-sectional and longitudinal methods of data collection were employed to ensure that CMI items could be initially standardized cross-sectionally and then restandardized longitudinally as core samples were retested from one school year to the next. The standardization

population was drawn from 2822 students grades five through twelve during the 1961-62 academic year in Cedar Rapids, Iowa, as well as from college students.

The Competence Test was developed to quantify "comprehensive and problem-solving abilities as they pertain to the (career) choice process" (Crites, 1965, p.7). This portion of the CMI is composed of five subtests, each of which measures a sequential element in career decision making: self-appraisal, occupational information, goal selection, planning, and problem-solving. Administration time is approximately two and one-half hours (one half-hour per subtest) and scoring may be done by hand or computer. The purpose of the Competence Test lies in the diagnosis of specific problems in the career decision making process, but the test may also be used as a "needs" assessment to determine effective curricular and guidance activities for students. It is a relevant basis in determining the extent to which career education objectives have been met.

Two forms of the Attitude Scale are currently available: Screening Form A-2 and Counseling Form B-1. Both are paper-and-pencil inventories consisting of True-False statements of attitudes toward work. The first was constructed to "elicit the attitudinal or dispositional response tendencies in (career) maturity which are non-intellective in nature, but which may mediate both choice behaviours and choice aptitudes (competencies)" (Crites, 1965, p.7). Items for the test were chosen primarily from verbalizations made by clients in career

counselling as well as from career autobiographies and case summaries.

Screening Form A-2 contains 50 items, takes about 30 minutes to administer and yields one total Career Maturity Inventory Attitude Scale score. Counseling Form B-1, used in this study, was designed to provide one total Career Maturity Attitude score, as well as five separate scores for the five attitudinal variables which define it: decisiveness, involvement, independence, orientation, and compromise in career decision making. Appendix B identifies those clusters of items from Counseling Form B-1 that are designed to yield the separate scores.

Reliability and Validity

The Attitude Scale, Counseling Form B-1, should be considered a research instrument in terms of the data available for interpretation of the five separate variables (Crites, 1978). The 1975 study from which the frequency distributions were derived was considered as a truly nationally-representative sample. A total of 7082 students participated in the study. These students were from school districts with enrolments larger than 4000 students and representing six states.

Because 50 items from the Counseling Form are those from the Screening Form, there is some applicability of the reliability and validity statistics for the Screening Form to the Counseling Form of the Attitude Scale (Crites, 1978). Test-retest

reliability for the Attitude Scale, Screening Form A-2 has been demonstrated in a number of large sample studies ($\underline{N}$'s ranging from 255 to 1349) with students in grades six through twelve. The correlation coefficients over these studies ranged from a low ($\underline{r}$=.65) to a high ($\underline{r}$=.84) with the mean correlation being ($\underline{r}$=.74). This latter coefficient is comparable to coefficients of other instruments similar to the Attitude Scale (Crites,1978).

Recent Kuder-Richardson (KR-20) internal consistency estimates have been calculated for the five attitude subscales of the Counseling Form B-1 (Crites, 1978). These coefficients range from ($\underline{r}$=.50) for Compromise in career decision making to ($\underline{r}$=.72) for Orientation to career decision making. These values are generally lower than would be expected for aptitude for achievement tests, in which homogenous sets of items are constructed to measure unidimensional objectives of learning, such as subtraction skills or spelling ability. For "non-intellective" scales, however, such as those for career choice attitude variables, these internal consistencies are more acceptable (Crites, 1978).

Crites (1974) noted that the content validity of the Attitude Scale was established by selecting the attitudes that it was designed to measure from contemporary theories of career development. A study by Hall (1962) described how expert judges agreed with the empirically-derived scoring key for the Attitude Scale three times out of four (Crites, 1978). Criterion-related validity for the Attitude Scale was shown by correlating it with

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other measures of similar variables such as realism in vocational aspiration and consistency, decision, and realism in career choice. Significant correlations have been found to exist with Miller and Haller's Occupational Scale (Bathory, 1967) and with Gribbons and Lohnes' Readiness for Vocational Planning Scale (Cooter, 1966). The accumulated research on the Attitude Scale supports its construct validity. In general, it appears to be related to variables to which, theoretically, it should be related, and unrelated to variables to which it should not be related (Crites, 1978).

Research on the CMI-ATT Scale

Various aspects of the CMI-ATT Scale have been studied over the years by many noted researchers. Research on selected areas is described at this point.

Gender Differences. While the items of the Attitude Scale are phrased to be meaningful to both sexes, longitudinal research (Rathburn, 1973) indicates that gender differences do emerge during the high school years. In his study, based upon six-year longitudinal data, it was found that, although males and females did not differ significantly in their career choice attitudes in the seventh grade, they did during the later years of adolescence. At each succeeding grade level, females had higher mean scores on the Attitude Scale than had males. Using longitudinal data collected over three points in time, Herr and Enderlein (1976) reported that the career maturity of girls and

boys differed, with the former maturing earlier and advancing further than boys during the adolescent period. These findings do not imply that the Attitude Scale cannot be used with both sexes, but it might be expected that females would score higher than males as they progress with their secondary school education (Crites, 1978).

The Relation Between Intellective Factors and Career Attitudes. Studies of intellective variables related to the Attitude Scale have dealt almost exclusively with relationships between intelligence or scholastic aptitude and career attitudes. Several studies have established that the correlation (r=.35 approximately) of grade point average with the Attitude Scale is comparable to the relationship of the CMI-ATT.Sc. with measures of intelligence and scholastic aptitude (Cover, 1968; Harris, 1966; Williams, 1967). In a group of 257 ninth grade boys, Dutt (1968) reported a correlation (r=.42) between scores on the Otis Quick-Scoring Mental Ability Tests and the Attitude Scale. Cover (1968) found a correlation (r=.45) between scores on the Attitude Scale and the Cooperative School and College Ability Tests (SCAT) for 162 high school senior males. In another sample of 1116 twelfth graders, Tamminen and Miller (1968) found that scores on the Minnesota Scholastic Aptitude Test (MSAT) and the Attitude Scale were correlated (r=.40), and Hoyt (1962) reported correlations ranging from (r=.25 to r=.53), with a mean (r=.37), for the Attitude Scale and the Dailey Vocational Guidance Tests in fifteen vocational training schools. Crites (1973) noted that

the average r's for college students have been lower due to the greater group homogeneity in ability, such as in the study conducted by Carek (1965) in which a correlation (r=.17) was found to exist between the American college Testing Program (ACT) composite scores and scores on the Attitude Scale for 346 male freshmen and sophomores. Further, Williams (1967) indicated a correlation (r=.20) between the Scholastic Aptitude Test-Verbal and the Attitude Scale in a sample of 215 male sophomores in college. And finally, Forest (1971) found a significant relationship (r=.42) to exist between the Attitude Scale and the cognitive scale C of Super's Career Development Inventory. He also reported moderate correlations between the Attitude Scale and verbal aptitude as well as between the Attitude Scale and grade-point average. He concluded from these findings that the Attitude Scale appears to be in fact, although not in design or theory, largely a cognitive scale.

These results of research on the Attitude Scale are also consistent with findings reported by Super and Overstreet (1960) on the indices of Vocational Maturity and by Gribbons and Lohnes (1968) on the Readiness for Vocational Planning scales, in which verbally expressed career attitudes have been shown to relate to verbal intelligence or aptitude. Crites (1973) suggested that these results are to be expected, if it is to be assumed that attitudes mediate decision making.

Components of the CMI

Career decision making is a developmental process that involves self-assessment, finding out about the world of work, and discussing feelings and thoughts about the decision-making process (Cooper, 1986).

Numerous studies have related the Attitude Scale of the CMI to various aspects of personality (Bernadelli, De Stefano, Dumont, 1983). There is some evidence correlating maturity of vocational attitudes to dimensions of adjustment, confidence, and self-esteem (Bartlett, 1968; Hollender & Schalon, 1965). Specifically, it has been found that individuals with vocationally mature attitudes are more independent, goal-directed, and task-oriented (Crites, 1971). Bearing this in mind, each of the components of the CMI will be examined here in light of the recent literature.

Decisiveness

Career indecision is an important dimension of the career decision-making process, especially for adolescents and young adults (Hartman, Fuqua & Hartman, 1983a, 1983b; Hartman & Fuqua, 1982, 1983; Hartman & Hartman, 1982). It has been estimated that 25% of all students entering colleges and universities do so without having decided on a career (Lunneborg, 1975; Rogers & Westbrook, 1983). Part of this group will continue to experience career decision-making difficulty throughout their years at university and beyond.

Initially, career indecision was regarded as a routine

developmental delay in career decision making among young adults (Grites, 1981). However, this has been challenged by contentions that different subgroups within the undecided population exist and need to be identified (Barak & Friedkos, 1982) and differentially diagnosed (Fuqua & Hartman, 1983). A basic distinction has been made between students regarded as situationally undecided, because of informational deficits, and students who are undecided because of character deficits. The former group is identified as undecided, whereas the latter group is considered to be indecisive (Salomone, 1982).

Many clients who experience career indecisiveness also exhibit personal indecisiveness in other aspects of their lives (Salomone, 1982). Other investigators have found a relationship between personal indecisiveness and greater passivity, lowered self-esteem, an external focus on interpersonal relationships (Cooper, Fuqua & Hartman, 1984), poor identity formation, an external locus of control, and anxiety (Hartman & Fuqua, 1983; Holland, Gottfredson, & Power, 1980; Holland & Holland, 1977; Kimes & Troth, 1974; Taylor, 1982). Van Matre and Cooper (1984) combined these concepts to develop a four-quadrant schema (see figure 1) that describes different kinds of vocationally uncertain clients with each combination of high or low personal decisiveness and high or low career indecision.

Figure 1.   The Orthogonal Axes Representing the Decided-Undecided

State and Decisive-Indecisive Trait of Career Decision-Making

                              Decided

                    (-,+) | (+,+)

Indecisive ————————————————————————————————— Decisive

                    (-,-) | (+,-)

                               |

                             Undecided
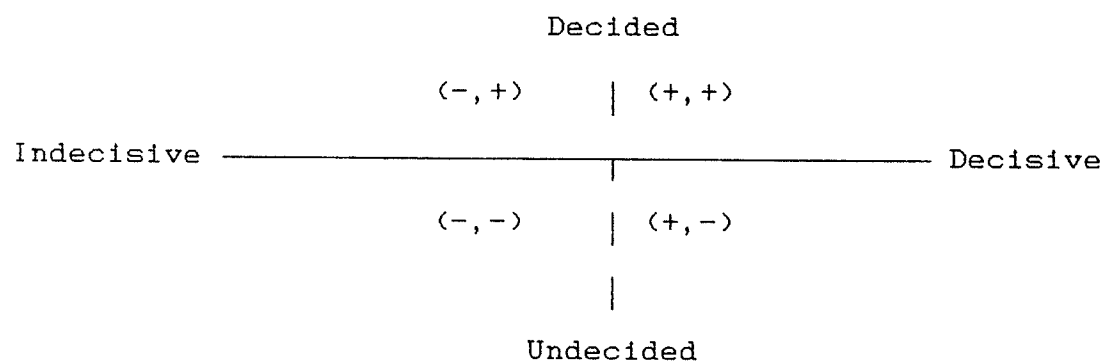
        Table 4, on the next page, summarizes the quadrants and
suggests intervention strategies for each.   It is   assumed that
these represent classes of   individuals who participate in career
decision-making activities or who are seeking help.

Table 4

Characteristics of the Decided-Undecided State and Decisive-Indecisive Trait
Quadrants

Quadrant	Characteristics	Treatment Approach
1. Decided-Decisive(+,+)	Functional, needs confirmation, limited symptomatology	Review and evaluate the decision-making process employed
2. Undecided-Decisive (+,-)	Needs information about self and/or vocational opportunities	Interest testing, resource linkage, and self-exploration
3. Decided-Indecisive, (-,+)	Chronic anxiety, externally controlled, flow satisfaction with decision	Discuss the career development history with a focus on decision-making skills improvement
4. Undecided-Indecisive (-,-)	Chronic anxiety, confused, reactive, high perceived need for resolution	Longer-term intervention focusing on personal emotional issues and decision-making skills, vocational testing, and information gathering.

The need for theory expansion is reflected by the problems
of indecisive college students and the failure of existing models
to account for the emergence of phenomena (Lopez & Andrews,
1987). The recent introduction of a family systems perspective
to career development (Brachter, 1982; Zingaro, 1983) is
representative of one effort in this direction.

Proponents of a family systems perspective emphasize the
importance of considering family members' interactional patterns
and emotional interdependencies in understanding individual

maladjustment (Zingaro, 1983). Olsen, Sprenkle, and Russell, (1979) extracted two underlying dimensions from the variety of family dynamics that have been useful discriminators of functional and dysfunctional family interactions. These dimensions were labelled cohesion and adaptability. Family cohesion was defined as the emotional bonding that family members have with each other. The cohesion dimension measures the degree to which individuals are separated from or connected to their family system. Family adaptability was defined as the ability of a family system to change its power structure and relationship roles and rules in response to stress. The adaptability dimension measures the family's capacity for change. Both dimensions were described as continua, such that balanced areas were toward the midpoint and extreme areas were toward either end. Well functioning families are represented by balanced levels of cohesion and adaptability. Mid-range families are represented by being balanced on one dimension but extreme on the other while dysfunctional families are extreme on both dimensions.

More research is necessary to determine whether career indecision is related to family interaction patterns. However, research by Eigen, Hartman, and Hartman (1987) suggests that adolescents may develop an ability to make career decisions in two different types of family systems. Family interaction patterns that foster early, stable decision making may be characterized by a more flexible structure accompanied by strong

emotional attachments, or else by a more authoritarian structure accompanied by an emotional-bonding pattern that permits more individual freedom. The family interactional patterns that may be associated with developmentally delayed decision making are unrelated to cohesion and adaptability. Family systems that hamper an individual's ability to resolve career decision making may be those that are either too tight or too loose.

Strict rules accompanied by high levels of attachment may tend to prevent individuation. Too few rules accompanied by a lack of emotional attachment may lead to premature separation without enough guidance to enable effective decision making.

Involvement

Included in involvement are information-seeking behaviours related to career decision making. These include talking to significant others such as parents, teachers, relatives and/or friends who have knowledge pertinent to an occupation being considered; seeking out and using relevant audio-visual and/or printed materials; and the planning or making of a visit to a work place offering career or occupational opportunities.

Research has shown gender differences in this area. The males who exhibited more favourable attitudes toward making career choices had more actively sought out occupational information than had the females. This suggests different socialization patterns, sex-role definition, and/or differential perceptions of the value of occupational information. There are

differences which exist between the sexes in terms of their approach to vocationally-oriented activities (Bernardelli, De Stefano, Dumont, 1983).

Independence

Independence, more so than the other characteristics, bears a strong resemblance to the personality construct: internal-external control of reinforcement, or simply locus of control. This describes the extent to which an individual feels in control of the sources or reinforcement in life (Rotter, 1954). Those who feel they have relatively little control and that luck and fate or powerful "others" are the principal determinants of their rewards are designated "externals." Those who feel they have considerable control of the locus of reinforcement in their life are designated "internals." A great amount of evidence supports the fact that internals have greater success in dealing with their environments. They are higher academic achievers, use information more productively, are less manipulated or coerced, and are better prepared to improve their situation through active striving (Lefcourt, 1966; Hjille, 1970; Feather, 1967; Doctor, 1971). Another line of research indicates that internals demonstrate better personality and emotional adjustment (Phares, 1976).

The presence of an overall statistically significant correlation between locus of control and career maturity indicates that an individual's belief in the ability to control

the course of events in life is reflected in the nature of attitudes towards the world of work and career choice. Internals are more vocationally mature than externals as well as demonstrating better personal adjustment (Bernardelli, De Stefano, Dumont, 1983).

Orientation

Career orientation is the extent to which one feels oriented or directed towards a career. A person is oriented if evaluation of alternatives results in an unambiguous direction (Cochran, 1983). The person feels that evaluation of alternatives is clear, stable, knowledgeable, harmonious, and simplified. There is harmony rather than conflict internally. Externally, judgments of occupations are based on evidence.

A person is oriented if one's future outlook is positive (Cochran, 1983). One feels optimistic, confident, secure, prepared, and in control about the career future. One lacks a strong orientation if one is pessimistic, lacking in confidence, insecure, unprepared, and lacking in control over the future.

One is oriented if one is self-invested in, rather than alienated from, career plans. This is similar to the notion of career salience (Greenhaus & Simon, 1976). One is self-invested when career planning seems urgent rather than remote, important rather than unimportant, and relevant or vital to self-definition rather than irrelevant (Cochran, 1983).

A strong personal basis for direction is necessary to be

strongly oriented. This is a positive self-concept or self-esteem. It is composed minimally of a strong sense of self-definition, of self-worth, and of self-competence.

A person aspiring to a high-level occupation is expected to manifest a strong career orientation while a person aspiring to a lower level occupation is expected to manifest a weaker career orientation.   The logic for this is that a higher level occupation supports or encourages a stronger career orientation. People organize occupations partially on the basis of a hierarchy which has definite meaning (Blau & Duncan, 1967; Hall, 1969; Reiss 1961; Gottfredson, 1981; Reeb, 1974). High-level jobs have prestige, power, status, and ample income while lower level jobs are the opposite.

Compromise

The process of compromise has long been recognized as fundamental to career decision making (Super, 1953).   With increasing unemployment, increasing bankruptcies (in particular of farms), and a decline in the availability of jobs, more people have to make more compromises in their career choices.

Gottfredson (1981) has outlined a theory of occupational aspirations and choice where the process of compromise is explicitly linked to the developmental experience of the individual. Central to this theory is the notion that people share a common view of the world of work based on the social meaning of occupations even though they are largely ignorant of

the activities performed in many occupations. This common view relies on three interrelated dimensions: a) the perceived suitability of each occupation for males and females, b) prestige level, and c) psychological characteristics (like vocational interests). Jobs categorized into different interest groups, on average, tend to have different sex types and prestige levels (Gottfredson & Brown, 1978; Shinar, 1975). Following Holland's framework, Investigative jobs are typically high prestige and slightly male in sex type. Realistic jobs are very masculine and low prestige, while Conventional jobs are very female and moderate to low in prestige. Enterprising, Artistic, and Social occupations are moderate prestige with Enterprising being male and Social and Artistic tending to be female.

People successively reject occupations they see as unsuitable as they progress through Gottfredson's developmental changes. They jettison occupations seen as innappropriate for their sex. For example, women tend to reject Realistic jobs which are viewed as being suitable for men. Some jobs are rejected on prestige grounds, while others are excluded because they are seen as requiring too much effort to attain. From this restricted range of acceptable occupations, a choice of one specific option is made. Gottfredson states that it is only at this stage that psychological characteristics of occupations are considered.

Some people have difficulty finding acceptable and accessible occupations. These individuals typically sacrifice

their psychological demand for compatible psychological characteristics, followed by desired prestige levels, and finally, if acceptable and accessible occupational alternatives still cannot be found, gender appropriateness will reluctantly be forfeited.

Gottfredson (1981) had two further considerations in her account of compromise. Firstly, people do not necessarily choose their most preferred occupational option; rather, they have a range of acceptable alternatives. A person is likely to take a less preferred alternative that is available rather than "wait around" for a more preferred one to become available. Secondly, people "adjust" to the compromises they have to make by changing their psychological characteristics.

Uses of the Career Maturity Inventory

The CMI has been used for individual career counselling in many ways. The authors revealed that, in the development and construction of the CMI, much of its content came from the comments and concerns expressed by clients in career counselling. These center on two principal problems: indecision and unrealism (Crites, 1981). The CMI can be used not only for diagnosis of these two problems, but also for finer pinpointing of the factors producing the problems. Once the client's problems have been assessed with the CMI, a collaborative "feedback" (test interpretation) interview, orientating the client to the career

choice process, precedes consideration of career choice content. If career choice content is introduced before problems in career choice process have been solved, the career counselling is likely to be less effective (Crites, 1984).

Discussion of the CMI results can follow several formats. One is presenting the scores graphically on the Career Maturity Profile sheet and discussing their implications with the client. Another is the integrative test interpretation (Crites, 1981). The counselor interprets the test results verbally, rather than graphically, into the ongoing dialogue with the client, integrating them with the total context of the client's career choice and planning mentation and articulation. Third, an effective technique with high school students is teaching the test (Crites, 1971; Kapes and Mastie, 1982). This technique involves going over each item in the CMI that the client answered immaturely and explaining why a different response is more mature.

Group career counselling often presents a problem in the interpretation of test results. With each group member having a different profile, the counselor may end up doing individual counselling in a group context (Crites, 1981). This is far less likely to happen with instruments such as the CMI which assess career choice process, since the components and stages of the decision process are common to all students. In group career counselling the basic principle in interpreting the CMI is to focus on the process of how career choices are made rather than

on the content of what career choices to make. For example, all group members can participate in a discussion on one of the components of the Attitude Scale, such as independence, and compare their maturity in the career choice process with others. They can suggest ways to increase their independence. The group in career guidance with the CMI can become a potent support system for learning how to make realistic career choices -- a capability that is lifelong across the total span of career development (Super, 1980).

The CMI has been used at both the high school and college levels in comprehensive career development programs (Crites, 1978, 1981). The students, tested in large groups, obtain Attitude Scale (Counseling Form B-1) total scores, which screen those who are less career-mature. All students who are below the median are invited to engage in individual career counselling or small-group career guidance while those who are above the median can benefit from classroom and/or workshop career development experiences. Savickas and Crites (1983) have prepared and field-tested a career maturity curriculum for grades nine through twelve, which teachers can present with a minumum of training. Additional testing with the Competence Test and scoring of the Attitude Scale, Counseling Form B-1, for the "attitude clusters" (involvement, independence, etc.) can provide diagnostic information for planning and implementing either individual career counselling or group career guidance. Programmatic testing with the CMI in stages builds a foundation for

differential career development experiences for all students (Crites, 1984). As seen in this review, the CMI is a versatile tool which can be used with confidence in assisting students in the process of career counselling.

In summary, this chapter presented a thorough review of the principle measures of career development. This concept has generated a great deal of research over four decades, not only that leading toward the development of suitable measures, but of worthwhile curricula and counselling uses of data.

The next chapter will outline the method used in conducting this study.

CHAPTER 3

METHOD

This chapter contains a presentation of the methods followed in this study. The sample, the instrument selected for use in this study, the data collection, and the data analyses are explained.

Population

The cross-grade research sample consisted of independent samples of all of the students in grades 6, 9, and 12 who attended K-12 school complexes in the Mountain and Tiger Hills School Divisions in the Fall of 1989.

These School Divisions, located in South-Central Manitoba, are centred around farming communities. The students are primarily of Flemish, Icelandic, French, and Native Indian backgrounds; thus of a wide cultural background. The schools in these two Divisions were selected because of the ease of data collection. The researcher works in the Mountain School Division as an Elementary School Principal.

The Superintendents of Schools in both Mountain School Division and Tiger Hills School Division were approached by letter and in person. The purpose of the study was given and permission was sought to sample grades 6, 9, and 12 students for

this study.   After permission was granted by each of the school boards, contact was made with the principals of the schools.

The students at each school were approached a week prior to the administration of the inventory.   They were enlightened   on the study and given a letter to take home to their parents that requested parents' permission for the child to participate (see Appendix D).   All the students were allowed to participate.   All completed the inventory.

The fact that 100 percent participation was achieved is significant because it is thought that the 100 percent sample covers the full range of variation of students.   It would   seem that   the   full   participation   would   contribute   to   the generalization of findings to students in other schools.

Grades 6, 9, and 12 are represented by 74, 130, and 101 students, respectively.   Table   5 illustrates   the   sample distribution by grade level and gender.

Table 5

Study Sample by Grade and Gender

Grade	Male	Female	Total
6	37	37	74
9	71	59	130
12	44	57	101
Total	152	153	305

These three grades were selected for the study because of

their correspondence with current entry levels in the school system. Grade 6 represents the end of elementary school and the beginning of junior high school. Grade 9 represents the end of junior high school and the beginning of senior high school. Grade 12 represents the end of the prescribed educational program for students and the beginning of post-secondary experience in work, training, or education.

Instrument

The instrument selected for this study was Crites' Career Maturity Inventory, Attitude Scale. (CMI-Att.Sc.), Counseling Form B-1. After considering several possible instruments which measure attitudes, as described in Chapter 2, it was decided to operate on the basis of Jepsen and Prediger's (1981) recommendation that the CMI-Att.Sc. could be considered as the best single inventory for the measurement of adolescent career development.

This 75-item scale (see Appendix A) yields one total Attitude Scale score and five subscores for the following variables: Decisiveness, Involvement, Independence, Orientation, and Compromise. Appendix B contains a listing of items that comprise the measures of the variables.

Data Collection

The CMI-Att.Sc., a 40-minute inventory, was administered to entire classes of students in the Fall of 1989. All

administration was done by the researcher herself to ensure that similar testing conditions and procedures prevailed. Instructions as stipulated in the <u>Administration and Use Manual</u> for the CMI-Att.Sc. (Crites, 1978) were followed.

Analyses of Data

The basic task in the analysis was to present the total scores and subscores of boys and girls on the CMI-Att.Sc. This created baseline scores on CMI-Att.Sc. total scores and subscale scores by gender and by grades 6, 9, and 12.

Total scores across grades 6, 9, and 12 were compared. Total gender scores across grades 6, 9, and 12 were compared. As well, gender scores on each of the sub-scores within grades 6, 9, and 12 were compared. The total scores were compared to larger international samples as a verification check on underlying theory and on the quality of data in the current study.

The basic statistical method utilized was analysis of variance (Ferguson, 1976). Because other researchers had used raw scores, raw scores were used in this study as well.

CHAPTER 4

RESULTS

In this chapter, the results are presented and examined
under three categories: Total CMI-Att.Sc. scores, component
scores, and a summary of the results.

Total Career Maturity Attitude Scores

The CMI-Att.Sc. scores increased across grades as predicted
by Crites (1978). Grade 12 students ($\underline{N}$=101, $\underline{M}$=34.98, $\underline{Sd}$=4.63)
scored higher than grade 9 students ($\underline{N}$=130, $\underline{M}$=31.50, $\underline{Sd}$=5.13),
who in turn score higher than grade 6 students ($\underline{N}$=74, $\underline{M}$=27.28,
$\underline{Sd}$=5.03). This finding verifies the theory that the measurement
of career choice is developmental across grades (Crites, 1965,
Westbrook, 1967, Super, 1960). Table 6 contains the essential
statistics.

Table 6
Analysis of Variance for CMI-Att.Sc. Total Scores
by Grade Level

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	2533.37	2	1266.68
Within	7405.49	302	24.52
Total	9938.86	304	F=51.65*

*p<.01

50

Gender Differences in Total Scores Across Grades

At the grade 6 level, girls (N=37, M=28.35, Sd=5.00) differed in career maturity from boys (N=37, M=26.21, Sd=4.89), (t=1.85, df=72, p<.06). Crites (1978) had predicted that no differences would be found at the elementary school level, but differences would appear at the high school level. Rathburn (1973) supported Crites' original suggestion, in that he found that males and females did not differ at the grade 7 level, but did differ at the high school level.

No difference in total score between girls and boys at the grade 9 level was found. Differences were found at the grade 12 level in total score. Girls (N=57, M=35.68, Sd=4.26) exceeded boys (N=44, M=34.06, Sd=4.98) (t=1.72, df=84, p<.08). However, this is probably not much larger than a chance finding.

In summary, both male and female total scores increased with grade level. This finding indicates that the process is developmental for both boys and girls, as predicted by Crites (1978). The results varied from Crites' observations, however, in that differences between boys and girls on total score were found at the grade 6 level.

Component Scores by Grade and by Gender

In this section, a presentation is made of the increase in scores of each component by gender across grades 6, 9, and 12.

Decisiveness

Students' scores on decisiveness significantly increased

across grade 6 (N=74, M=3.59, Sd=2.01), grade 9 (N=130, M=4.53, Sd=2.34), and grade 12 (N=101, M=4.69, Sd=2.65). The essential statistics are presented in Table 7. The increase in scores

Table 7
Analysis of Variance for Decisiveness Across Grades

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	58.69	2	29.34
Within	1709.63	302	5.66
Total	1768.32	304	F=5.18*

*p<.05

across grades followed Crites' (1978) prediction.

Boys' and girls' scores on decisiveness did not differ significantly at any of the three grade levels.

Involvement

Students' scores on involvement also increased significantly across grade 6 (N=74, M=7.71, Sd=2.03), grade 9 (N=130, M=8.55, Sd=1.68), and grade 12 (N=101, M=8.90, Sd=1.29). The essential statistics are presented in Table 8.

Table 8
Analysis of Variance for Involvement Across Grades

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	61.71	2	30.85
Within	834.17	302	2.76
Total	895.88	304	F=11.17*

*p<.01

While boys and girls did not differ at grade 6 and 12, in grade 9, girls (N=59, M=8.93, Sd=1.36) exceeded boys (N=71, M=8.23, Sd=1.85) in scores on involvement in the career choice process (t=2.45, df=126, p<.01). This seems to contradict Crites' (1978) general prediction of no gender differences in career choice attitude, but confirms research (mentioned in Chapter 2), that there are gender differences in the approach to career choices (Bernardelli, De Stefano, Dumont, 1983).

Independence

Independence scores increased significantly across grade 6 (N=74, M=6.89, Sd=2.27), grade 9 (N=130, M=8.47, Sd=1.49), and grade 12 (N=101, M=9.29, Sd=1.17). The statistics are presented in Table 9.

Table 9
Analysis of Variance for Independence Across Grades

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	229.84	2	114.92
Within	804.50	302	2.66
Total	1034.34	304	F=43.13*

*p<.001

In grades 6, girls (N=37, M=7.45, Sd=2.44) exceeded boys (N=37, M=6.51, Sd=2.00) (t=1.82, df=69.39, p<.07); in grade 9, girls (N=59, M=8.91, Sd=1.38) exceeded boys (N=71, M=8.11, Sd=1.49) (t=3.17, df=126.60, p<.002); and in grade 12, girls (N=57, M=9.49, Sd=1.05) exceeded boys (N=44, M=9.04, Sd=1.29) (t=1.86, df=81.89, p<.06). So, a clear gender difference was

found on the independence component in attitude toward the career choice process.

Orientation

Students' scores on orientation progressed significantly across grades. Grade 6 students ($\underline{N}$=74, $\underline{M}$=4.70, $\underline{Sd}$=2.43) were exceeded by grade 9 students ($\underline{N}$=130, $\underline{M}$=6.74, $\underline{Sd}$=2.49), who in turn were exceeded by grade 12 students ($\underline{N}$=101, $\underline{M}$=7.97, $\underline{Sd}$=2.16). The summary statistics on the orientation component across grades are presented in Table 10. Upon further analysis, it was found

Table 10
Analysis of Variance for Orientation Across Grades

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	457.85	2	228.92
Within	1704.99	302	5.64
Total	2162.84	304	F=40.54*

*p<.001

that boys and girls did not differ in scores at grades 6, 9, or 12, respectively.

Compromise

Scores on compromise also increased significantly across grade 6 ($\underline{N}$=74, $\underline{M}$=4.54, $\underline{Sd}$=1.32), grade 9 ($\underline{N}$=130, $\underline{M}$=5.08, $\underline{Sd}$=1.41), and grade 12 ($\underline{N}$=101, $\underline{M}$=5.49, $\underline{Sd}$=1.20). The statistics relevant for this comparison are presented in Table 11. No

Table 11

Analysis of Variance for Compromise Across Grades

Source of Variation	Sum of Squares	Degrees of Freedom	Variance Estimate
Between	38.91	2	19.45
Within	531.69	302	1.76
Total	570.60	304	F=11.05*

*p<.05

gender differences were found. Gottfredson (1981) had suggested that students narrow, or compromise, their choices as they age. She suggested that this may be due to what jobs appear to be available, to the rankings of careers by prestige levels, and to perceived gender roles. The current results seem to support the underlying theory.

Summary of Results

In general, it was found that boys' and girls' combined total scores on the CMI-Att.Sc. increased across grades 6, 9, and 12. Also, in total score, girls exceeded boys at grade 6, but not in grade 9 or 12. Then, boys' and girls' combined total scores on each of the components increased from grades 6, to grade 9, to grade 12.

Some gender differences were found within the specific components. At grade 6, girls exceeded boys in independence. At grade 9, girls exceeded boys in involvement and independence. And, at grade 12, girls exceeded boys in independence.

The last chapter that follows contains a summary of the study, the conclusions that were drawn, and some implications for both education and further research.

CHAPTER 5

SUMMARY AND IMPLICATIONS

This chapter contains a summary of the study, a presentation
of some conclusions, and some suggestions for education and
further research.

Summary

The purpose of this study was to examine the career maturity
levels of rural students.   The focus was on how boys and girls in
grades 6, 9, and 12 differed in personal attitudes toward the
career choice process.

The instrument used for this study was The Career Maturity
Inventory, Attitude Scale, Counseling Form B-1, (Crites, 1978).
This scale generated scores for the total maturity level of the
participants as well as separate scores for each of five
components: Decisiveness, Independence, Involvement, Orientation,
and Compromise, that combine to make up the total maturity score.

Gender differences were compared by grade for total career
maturity score and for scores on each of the five components.

The study was conducted in two rural school divisions.   All
grade 6, 9, and 12 students in each of the division schools that
housed the full range of students from K-12 were used.   One
hundred percent of the students participated.

The sample consisted of 74 grade 6 students (37 male, 37
female), 130 grade 9 students (71 male, 59 female), and 101 grade
12 students (44 male, 57 female).   The total sample consisted of

152 male subjects and 153 female subjects. Because 100% of the students participated, it is thought that the full range of student variation would closely parallel the variation in student bodies in other schools. It is presumed that results from this study can be generalized to students in other areas. The conclusions, therefore, are far-reaching in applicability.

Conclusions

The following conclusions seem warranted from the results of this study.

First, this study confirms what Crites (1965) predicted: that measured career maturity increases across grade levels.

Girls tend to score higher than boys across grades 6, 9, and 12 on CMI-Att.Sc. total scores, even at the lower grade levels. While Crites had predicted that, at the lower levels, there would be fewer gender differences, it must be assumed now that gender differences in attitude toward career choice are present early in school. This might indicate that differences in teaching methods and content should be provided for boys and girls. Developmental differences should indicate different provision of opportunity to learn. Teachers must be "developmentally appropriate" in choice of both content and methods if children are to gain maximally from education. Further analysis of attitudinal variables as they might affect educational practice should be done.

Upon further analysis of component scores and gender, it must be concluded that girls are more independent than boys in career choice attitudes. Upon examination of the items that

comprised the independence scale, it seems as if girls are much more willing to assume freedom and independence from parents, from peers, and from other authority figures as they contemplate choices that affect them personally. Boys were less willing to display such outward independence. This conclusion would seem to have a number of implications for education. These will be presented below.

Recommendations

Career maturity is an important component of any career education program. Career maturity and career adaptability are two goals that have the most face validity and appear most often in the literature (Herr & Cramer, 1988). However, career maturity is too global to be useful for intermediate purposes unless it can be broken into specific elements. Therefore, it is necessary to look at the five components of career maturity as described by Crites (1965) and examined in this study and place these along a developmental line leading to career maturity at some point in life. These points may be graduation from one level of education to another such as elementary school to junior high, junior high school to high school, high school graduation, graduation from college, university or any other post secondary training, or at specific career transition points, such as when an employee is ready to be promoted to a new role.

Individuals will differ in their readiness for various elements or aspects of career development and in the ways they develop this readiness (Herr & Cramer, 1988). This was shown

here in this study where girls show significant differences in involvement, independence, and total career maturity. Therefore, the speed of movement through the elements of career development and the readiness for career development are different for girls and for boys as well as for individuals within each grade level and gender.

Recommendations for career development based on this study rest on statements of expectations for specific target groups. It should also be realized that for optimal effect, career development should be personalized. This may be too much to expect, considering the limitations and restrictions imposed on the education system, but any systematic approach to career development requires both diagnosis and learning experiences. One has to understand what career maturity is, how one acquires career maturity, and what opportunities are available to improve career maturity.

Before looking at recommendations based on the conclusions of this study, a synopsis of career maturity as given in Chapter 2 will be presented. Ginsberg, Ginsburg, Axelrod, and Herma (1951) discussed career maturity as:

> To some degree, the way in which a young person deals with his occupational choice is indicative of his general maturity, and conversely, in assessing the latter, consideration must be given to the way in which he is handling his occupational choice problem (p.60).

Super (1957) reported that career maturity is "the place reached on the continuum of vocational development from exploration to decline" (p.186). Crites (1961) described career maturity as

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"the maturity of an individual's vocational behavior as indicated by the similarity between his behavior and that of the oldest individuals in his vocational life stage" (p.259).

Super (1957) further clarified definitions of career maturity by providing Vocational Maturity I (VMI) and Vocational Maturity II (VMII). VMI is defined as

> the life stage in which the individual actually is, as evidenced by the developmental tasks with which he is dealing in relation to the life stage in which he is expected to be, in terms of his age (p.132).

VMII is defined as
> the maturity of behavior in the actual life stage (regardless of whether it is the expected life stage) as evidenced by the behavior shown in dealing with developmental tasks of the actual life stage compared with the behavior of other individuals who are dealing with the same developmental tasks (pp.57,132).

VMI is telling us that career maturity differs at different points in life. What career maturity is at grade 6 will not be at grade 9 or grade 12 or further yet at the age of 20 or 40. VMII is looking at how a particular individual is coping with career development. Where is that person now and what attitudes does the person have to allow progress to higher levels of career development?

Again, looking at the conclusions of this study, there is evidence to show that girls and boys should be treated differently, as their attitudes vary toward career maturity. Grade levels should be approached differently. Career maturity is developmental across the grades.

The recommendations that follow will be divided into three sections: elementary school years, junior high school years, and

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high school years.

Elementary School Years

Children begin to formulate career decisions at an early age
(Staley and Mangiesi, 1984). They acquire impressions of the
work people do, the kinds of people employed, the compensation
offered and the abilities required for acceptable performance.
Based on these impressions they embrace some occupations as
possible careers for themselves and absolutely remove others from
either present or future consideration.

Elementary school career education is important and has been
developed because of the increasing awareness that behaviour and
attitudes in adolescence and adulthood are presaged by the
developmental experiences and the attitudes the children are
exposed to in childhood (Herr 1974, Miller, 1978).

Emphasis at the elementary school level should be on
building positive attitudes toward self and opportunities,
feelings of competence and opportunity, and ways in which school
experiences can be used to explore and prepare for the future
(Herr & Cramer, 1988).

Elementary years are the most important years to prepare
youth to make appropriate career decisions. It is during these
years that curiosity is at its peak, learning is through trial
and error, exploration is encouraged, and there is generally
freedom from prejudice. These are the natural years for laying
the foundation of positive career attitudes and behaviours.

The basic shape of self-concept is formed during early

childhood. It is tested out in the safety of family and in the safety of a comfortable, positive classroom climate. One eventually chooses a career that is consistent with one's self-concept. This is an outgrowth of all one's developmental experiences.

Gender differences appeared in this study. Girls were ahead of boys in total career maturity. This seems to verify other researchers' findings. Perceptions of occupations varied by gender in a study done by Hageman and Gladding (1983). They found that grade six girls were very willing to accept both men and women in traditional male occupations while the boys thought that only males should be employed as auto mechanics, architects, electricians, carpenters, doctors, school principals, astronauts, pilots, pharmacists, professional athletes, lawyers, dentists, truck drivers, police officers, radio announcers, and reporters. Boys also thought that dental assistants and cleaner/servants should be women only. As mentioned previously, elementary years are years of creative exploration and trial and error. Role models should be available for the children as well as the freedom of action to explore nontraditional career roles.

Bearing in mind all of the above, some techniques will now be suggested for use in the elementary school classroom. These were selected with the idea of improving the attitudes involved in career maturity as selected by Crites (1965): Decisiveness, Involvement, Independence, Orientation, and Compromise.

Provide reading material in the way of fiction, reference

books, biographies, etc., that portray decision making.

Read poems such as Robert Frost's "The Road Not Taken" and have students make comparisons to areas of decision making in their own lives.

Have students create and then discuss "I wish" poems.

Have students create a book "This is Me" and describe at least three ways in which their life is influenced by family, school, and peers.

Build interest centers around different career clusters or ways to assess self-characteristics.

Provide listening centers dealing with worker interviews, study skills, and topics related to self-understanding.

Play games like "Let's Pretend" using occupations or careers as the topic.

Have students complete unfinished stories that relate to decision-making situations both in careers and non-career situations.

Have students design a poster that illustrate the steps the class determined from a previous group discussion which are important in career decision making.

Use puppets to create plays portraying problem-solving situations connected with occupations.

Have students compose questions about the world of work and then participate in a class "quiz show" using these questions.

Have students compose a help-wanted ad for a particular job.

Have students write about a fantasy about doing a certain

job. Have them draw pictures of themselves doing that job, and

identify the necessary tools for that job. Use this as the basis

for a class discussion.

Have students participate in everyday classroom decisions,

such as what to do with free time, which homework to do first,

which book to choose for group reading, etc.

Using magazines as a source, have students design a poster

of occupations and have one picture that breaks the traditional

male-female stereotyping (male nurse, female school principal,

male secretary, etc.). Use this as a basis for group discussion.

Take field trips to different work sites, such as a

hospital, bank, dairy plant, etc. Talk about the various roles

there, skills required, problems which may arise, and how to

solve them.

Interview a worker. Have the student do a class

presentation of the interview. Include why the worker chose the

career he/she is in, problems that may have arisen to get there,

decisions that had to be made, and whether that person is

satisfied with the decision made.

Invite the director of an adult education program to the

school to discuss why adults take courses.

Junior High Years

If career education is going to be a developmental process,

the program must be continuous and cumulative. The outcomes

achieved by the children at the elementary level must serve as

the basis for the junior high level and the outcomes achieved at

the junior high level must be used as the basis for the senior high level.

Junior high students are different from the individuals they were a year or two previous. Their attitudes are different. Because of growth and experience, their horizons have widened. They are more able to comprehend relationships and to use abstract terms. They want to belong and be the same as their peers. They are highly influenced by their peers of the same gender and less influenced by the opposite gender. They are starting to be more independent from their families.

Emphasis on the career education program during the junior high years is to help students understand the consequences of the curricular and course choices made now. These students need to plan for the senior high years in such a way that they may not be unwittingly closing options. Students need to explore options. To do this they need information. Complete, accurate, timely information is required during these years. Gender differences in information, models available, and bias toward or away from particular career choices are important when planning a career program (Herr & Cramer, 1988).

This study found that girls were more independent and more involved in the career process at the grade nine level. Brough (1969) found that there are gender differences related to the voluntary seeking of help at the junior high level. Girls exceeded boys in mean number of interviews as well as in educational-vocational planning and personal-social development.

Brough interpreted his results to mean that boys are already expected to reflect independence and "manliness". This means that they would not seek assistance with problems, career or otherwise, where girls would. The obvious outcome of Brough's finding and the finding of this study is that boys should be involved in discussions where problems can be worked out. This may be group discussions initially, so that boys would not be seen by their peers as being dependent, and individual discussions in a classroom or watching a football game, etc. Boys need to feel comfortable with the notion of talking to others about their future careers.

Some specific recommendations will be given for these grade levels again keeping in mind the five components of career maturity used in this study. Consideration is given to the fact that girls are more independent and more involved in the career process than are the boys.

Develop a bulletin board display illustrating the variety of tools and materials used by various occupations relating to subject areas taught in school.

Have the students role-play various situations. One could be a situation of poor relations between a subordinate and the supervisor. Have the students role-play some possible solutions to improve the situation.

Have students read a biography of a famous person. Have them discuss the risks the person took in implementing a career goal.

Teach good study habits and relate these to good work habits.

Present students with the situation that an individual's job was done away with because of improved technology. Have students work in groups to decide what that person might do to capitalize on existing skills, abilities, and knowledge.

Examine current events in the news media with regard to career, economic, social, political climate and changes that will confront students as they plan for and enter the work world.

Develop bulletin board displays illustrating the educational pathways to various careers (four year university programs, graduate school, two-year college programs, trade school, on-the-job training, apprenticeship programs, etc.

Have students write a paper describing a decision they made in the past that involved compromise.

Record (video) a simulated interview between a counselor and a student and between students engaged in the decision-making process or some aspect of it. Have students watch the video and discuss their view of what went on.

Use a variety of simulated decision-making games and compare the steps they portray (e.g., The game of Life, Careers).

Given a curriculm decision that students will confront in the future, have them list the alternatives, advantages, and disadvantages of each, and make a tentative decision. Consider the consequences likely to occur in terms of future educational and occupational possibilities.

High School Years

    The imminence of reality, defined as the separation from high school and the passage into the independence of adulthood, is the major factor that high school students must deal with. This study has shown that, at the grade 9 and grade 12 levels, girls exceed boys in independence. This probably means that they are already more able than boys to consider careers without the influence of family and peers. This attitude of independence is probably greater in areas other than career planning as well.

    The need to improve on the component of decisiveness is as evident at the high school level as it was at the other two levels. Crites (1969) reviewed several studies and found that about 30 percent of students are undecided during the high school years. Hollender (1974) found that decisiveness among senior high students varied with the intellectual characteristics of the students. Males increased in decidedness from the lowest intellectual quartile to the highest. A similar trend was noted with the girls, although the percentage dropped in the top intellectual quartile perhaps because of the conflicts bright girls experience between nurturant roles and further educational achievement. These results show that being undecided is common with senior high students and the career education programs must address this need.

    Goals of career education for senior high students include specific planning of steps in education and work, values clarification of life roles as a consumer and a family member,

and as mentioned previously assuming responsibility for decision making and its consequences.

Using the five components of career maturity as well as total career maturity attitude as examined in this study, some specific techniques will now be suggested.

Have students read a vocational biography, then describe how a career decision made by the subject influenced areas of his or her life such as choice of friends, family life, location of residence, etc.

Have students go through the process of application. Have them complete a sample job and/or university application, write a resume and role-play a job or university interview.

Have students define in writing the specific steps they must go through to obtain some future educational or vocational goal. The steps should be in chronological order.

Have students construct an occupational family tree in which they research the occupations held by each of their grandparents, parents, and siblings. Have them examine gender-specific reasons for choices as appropriate. Apply specific questions to the tree: Which family member am I most like? Why? What do my family members want me to choose? Why? What do I want to choose?

Present a selection of case studies illustrating examples of people making career decisions. Have the students identify those examples that represent poor planning, and indicate what steps could have been taken that were not.

Have students write a long-range career plan identifying the specific steps necessary to attain their goals.

At the grade 9 level, have each student develop a long-range career plan. This should be kept on file. It should include short-term as well as long-term goals and the steps needed to attain each. This plan should be reviewed periodically and evaluated in individual counselling sessions.

Have students list at least six factors they want in a career (chance to travel, meet new people, responsibility, etc). Have group discussions to examine expectations.

Present students with a series of hypothetical situations describing an individual with a decision-making dilemma (a person who wants to be a professional athlete, but lacks enough ability). Discuss and consider what compromises exist.

Draw on past experiences in decision making, and have students discuss how a decision that was made was influenced by some external factor (family, friends, geography).

Have students take specific steps to implement a career-based decision before leaving high school (such as apply to a job or post-high school training program, engage in job or university interview).

Have students contrast and compare a recent interest inventory with one taken in junior high school.

Suggestions for Further Research

This study has shown that there are gender differences in the five components of Crites' Career Maturity Inventory. Further research should be done to confirm these findings with varied samples in both urban and rural settings. Some thought could be given to the reasons why gender differences occur. Much more study of how the educational system both creates and reacts to gender differences is needed.

The importance of parental attitudes and socioeconomic status were not examined in this study. Socioeconomic status has been connected to career maturity by other researchers. Perhaps a study could be done examining low income families with a view to how students from those families might be provided opportunities to improve their career maturity.

It is strongly recommended that counsellors who work at all levels of education become fully cognizant of the readiness, the maturity, and the career development of both the large groups of students and the individual students with whom they work.

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APPENDICES

APPENDIX A

Career Maturity Inventory Counseling Form B-1 Attitude Scale

1. I often daydream about what I want to be, but I really haven't chosen a line of work yet.

2. If I can just help others in my work, I'll be happy.

3. Everyone seems to tell me something different; as a result I don't know which kind of work to choose.

4. It's probably just as easy to be successful in one occupation as it is in another.

5. In order to choose a job, you need to know what kind of person you are.

6. It doesn't matter which job you choose as long as it pays well.

7. I plan to follow the line of work my parents suggest.

8. As long as I can remember, I've known what kind of work I want to do.

9. You should decide for yourself what kind of work to do.

10. I don't know how to go about getting into the kind of work I want to do.

11. Work is worthwhile mainly because it lets you buy the things you want.

12. I know very little about the requirements of jobs.

13. When choosing an occupation, you should consider several different jobs.

14. If you have some doubts about what you want to do, ask you parents or friends for advice and suggestions.

15. I often feel that there is a real difference between what I am and what I want to be in my occupation.

16. There are so many things to consider in choosing an occupation, it is hard to make a decision.

17. You should choose an occupation which gives you a chance to help others.

18. The best thing to do is to try out several jobs, and then choose the one you like best.

19. There is no point deciding on a job when the future is so uncertain.

20. Working is much like going to school.

21. There is only one occupation for each person.

22. Your parents probably know better than anybody else which occupation you should enter.

23. I want to really accomplish something in my work -- to make a great discovery or earn a lot of money or help a great number of people.

24. When it comes to choosing a job, I'll make up my own mind.

25. I don't know what courses I should take in school.

26. The greatest appeal of a job to me is the opportunity it provides for getting ahead.

27. I can't understand how some people can be so certain about what they want to do.

28. I spend a lot of time wishing I could do work I know I can never do.

29. Work is dull and unpleasant.

30. Sometimes you have to take a job that is not your first choice.

31. I keep changing my occupational choice.

32. Once you choose a job, you can't choose another one.

33. As far as choosing an occupation is concerned, something will come along sooner or later.

34. I'm not going to worry about choosing an occupation until I'm out of school.

35. You can do any kind of work you want to do as long as you try hard.

36. You get into an occupation mostly by chance.

37. You can't go very far wrong by following your parents' advice about which job to choose.

38. Whether you are interested in a particular kind of work is not as important as whether you can do it.

39. Choosing an occupation is something you have to do on your own.

40. I seldom thing about the job I want to enter.

41. By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.

42. I have little or no idea of what working will be like.

43. I keep wondering how I can reconcile the kind of person I am with the kind of person I want to be in my future occupation.

44. I would like to rely on someone else to choose an occupation for me.

45. I'd rather not work than take a job I don't like.

46. I'd rather work than play.

47. I guess everybody has to go to work sooner or later, but I don't look forward to it.

48. I don't know whether my future occupation will allow me to be the kind of person I want to be.

49. It's who you know, not what you know, that's important in a job.

50. Your job is important because it determines how much you can earn.

51. You shouldn't worry about choosing a job since you don't have anything to say about it anyway.

52. I don't want my parents to tell me which occupation I should choose.

53. You almost always have to settle for a job that's less than you had hoped for.

54. If someone would tell me which occupation to enter, I would feel much better.

55. I am having difficulty in preparing myself for the work I want to do.

56. I can't seem to become very concerned about my future occupation.

57. I really can't find any work that has much appeal to me.

58. I'm not going to give up anything to get the job I want.

59. Knowing what jobs are open is mroe important than knowing what you are good at when you choose an occupation.

60. The job I choose has to give me plenty of freedom to do what I want.

61. I don't know whether my occupational plans are realistic.

62. When trying to make an occupational choice, I wish that someone would tell me what to do.

63. I have so many interests it's hard to choose any one occupation.

64. You should choose a job in which you can someday become famous.

65. You should choose a job that allows you do to do exactly what you want to do.

66. Entering one job is about the same as entering another.

67. Parents usually can choose the most appropriate jobs for their children.

68. You should choose an occupation, then plan how to enter.

69. I feel that I should do what my parents want me to do.

70. Making an occupational decision confuses me because I don't feel that I know enough about myself or the world of work.

71. When I am trying to study, I often find myself daydreaming about what it will be like when I start working.

72. It's hard to imagine myself in any occupation.

73. I feel that my occupational goals are so high that I'll never be able to attain them.

74. The most important part of work is the pleasure which comes from doing it.

75. There may not be any openings for the job I want most.

APPENDIX B

Classification of Items in the Attitude Scale,

Counseling Form B-1

Decisiveness	Involvement	Independence	Orientation	Compromise
1	4	7	10	13
3	6	9	12	15
16	19	22	25	28
18	21	24	27	30
31	34	37	40	43
33	36	39	42	58
46	49	52	55	73
48	51	54	57	
61	64	67	70	
63	66	69	72	

Total No. of Items

10	10	10	10	7

Screening Form A-2

1   2   3   4   5   6   7   8   10   11   12 14

16   17   18   19   20   21   22   23   24   25   26   27

28 29   31   32   33   34   35   36   37   38   40   41 42

47   49   50   51   55   57   59   60   64   65   68   71

74

Total No. of Items 50

93

APPENDIX C

Letter of request to Divisional Superintendent

Dear

I am conducting research in partial fulfillment of my work toward
a Master's Degree of Education at the University of Manitoba. I
am requesting permission to access the schools in
_____ School Division and to use the students of
grades 6, 9, and 12 as the sample for my research study.

The purpose of the study is to compare the career maturity
attitudes of boys and girls in the grades specified. The
attitudes will be compared to:
    - the U.S. National Averages
    - the other gender
    - the other grade levels
by total score and by sub-group scores.

The sub-groups which will be studied are:
    -decisiveness in career decision making.
    -involvement in career decision making.
    -independence in career decision making.
    -orientation in career decision making.
    -compromise in career decision making.

The task required of the students, is to complete an inventory
scale, administered by myself, involving a maximum time period of
40 minutes. The inventory to be used is the <u>Career Maturity
Inventory, Attitude Scale (CMI-ATT), Counseling Form B-1</u>. It is a
75-item scale consisting of true-false responses.

Privacy and confidentiality of individual scores is guaranteed.
Involvement by the students is of a voluntary nature. The overall
results of the study will be available to the participants and
the school administration. Participants may obtain their
individual results if desired, from myself directly.

Further information on the proposed research may be obtained by
contacting myself. Thank you for your consideration of this
matter.

Yours truly,

APPENDIX D

Letter of Permission to the Parents

May 30, 1989

Dear parents:

I am conducting research in partial fulfillment of my work toward
a Masters Degree of Education at the University of Manitoba. The
purpose of the study is to compare the career maturity attitudes
of boys and girls in grades 6, 9, and 12. The attitudes will be
compared to:
    -the U.S. National Averages
    -the other gender
    -the other grade levels
by total score and by sub-group scores.

The sub-groups which will be studied are:
    -decisiveness in career decision making.
    -involvement in career decision making.
    -independence in career decision making.
    -orientation in career decision making.
    -compromise in career decision making.

The task required of the students, is to complete an inventory
scale, administered by myself, involving a maximum time period of
40 minutes. The inventory to be used is the Career Maturity
Inventory, Attitude Scale (CMI-ATT), Counseling Form B-1. It is
a 75-item scale consisting of true-false responses.

Privacy and confidentiality of individual scores is guaranteed.
Involvement by the students is of a voluntary nature and all
participants will be offered the opportunity to obtain
information about the overall results of the study.

At this point, I am requesting your permission to allow your
child to participate in this study. If you wish any further
information on this study please phone or write to me at the
address below.

Thank you.

Yours truy,

APPENDIX E

Letter to the students.

May 30, 1989

To all students concerned:

I am conducting research in partial fulfillment of my work toward
a Masters Degree of Education at the University of Manitoba. The
purpose of the study is to compare the career maturity attitudes
of boys and girls in grades 6, 9, and 12. The attitudes will be
compared to:
        -the U.S. National Averages
        -the other gender
        -the other grade levels
by total score and by sub-group scores.

The sub-groups which will be studied are:
        -decisiveness in career decision making.
        -involvement in career decision making.
        -independence in career decision making.
        -orientation in career decision making.
        -compromise in career decision making.

I am asking for your participation in completing an inventory
scale. The inventory consists of 75 true or false questions. It
will take you no more than 40 minutes to complete the inventory.
Confidentiality is assured and you will have the opportunity to
obtain information about the overall results of the study.

I will be returning _____ to administer
the inventory. If you wish any further information about the
study, please phone or write to me.

Thank you.

Yours truly,