A SURVEY OF THE CAREER ATTITUDES

THAT INFLUENCE CAREER MATURITY

IN GRADE NINE STUDENTS

BY SHIRLEY WHITAKER

A Thesis

Submitted to the Faculty of Graduate Studies of

The University of Manitoba in Partial Fulfillment

of the Requirements of the Degree of

Master of Education, 1992

Canada

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TABLE OF CONTENTS

Abstract

The main purpose of this study was to investigate the career attitudes
and career maturity of grade nine male and female students in a suburban
Junior High School. Additional objectives of the study were: (a) to
determine whether career programs such as CHOICES Junior Computer System
and work experience were associated with students' career attitudes;
(b) to determine whether the students in this sample had higher levels of
career maturity as compared to American students; (c) to determine who
influenced students' career decisions; (d) to determine which motivators
or values the students' felt were important.

The number of subjects in this study consisted of 73 females and 84 males
for a total of 157 grade nine students. Data was collected by using
Crites Attitude Scale and a questionnaire designed by the researcher.

The results were: (1) No difference between males and females career
maturity; (2) Students who were not on work experience had higher levels
of career maturity than those who were on work experience; (3) Those
students who said that CHOICES Junior Computer System helped them had
higher levels of career maturity; (4) Students in this sample had higher
levels of career maturity as compared to American students; (5) The
majority of students valued the family more than money or jobs; (6) The
majority of students felt that parents influenced their career decisions.

Future research pertaining to Career Maturity is suggested.

Acknowledgements

This study is dedicated to the special people who encouraged me to complete my thesis. A special thank you to my husband and parents for their continued support and encouragement.

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My appreciation is extended to my advisor, Dr. Bill Schulz, who has been a positive support and encouragement throughout my Master's program. A very special thank you to the other members of my committee who assisted me with the statistical analysis of the study, Dr. Graham Watson and Dr. Paul Madak. Thanks to the three people on my committee for their teamwork. It was great!

III

LIST OF TABLES

Appendix

CHAPTER 1

Introduction

The importance of career development, career education and career
maturity has been studied extensively. This wide spread interest has
developed as a result of changes in economy, increased unemployment, lack
of jobs and changing technology. Guidance counsellors and educators are
now faced with new challenges to understand where their students are
developmentally and then provide appropriate career developmental
activities for the students.

Developmentally, youth is a time of change, transition, growth and
choices. During this time, youth are faced with career decisions as they
move from adolescence to adulthood. The selection of an occupation is
viewed as a developmental process which begins in late childhood and
continues to early adulthood (Crites, 1978). Why are careers important?
The most important reason is that the career represents the person's
entire life in the work setting. And work, for the most part, is a
primary factor in determining the overall quality of life. The quality of
life is related to economic, psychological and social factors.

Are career developmental activities utilized by students? Phil Jarvis
(1988), pointed out that the median duration of first job holding is less
than a year. He further said the gallup poll of May, 1988 informed us
that 62% of all workers now in the labour force said that they had no

career plan at all when they began their first full time job (Jarvis, 1988). It appeared that students are improperly prepared to meet the real world of work. Another study was completed by the Department of Housing & Student Life (1991) on the changes in students perceptions of University before and during their first year at the University of Manitoba. They found that 7.6% of high school students did not have clear educational plans. The percentage of undergraduates reporting no clear educational plans was 14.8%. According to the Canadian Guidance and Counselling Foundation (1987), youth and young adults needs are not being met so that they may meet the changing labour market with confidence.

Do young people of today not want to plan their careers? In May, 1989, the American College Testing Program for student needs assessment was administered to 32,000 students in the United States and three items that ranked highest were related to career information and planning. In fact, twelve of the top twenty items were career related. It appeared that students want career guidance and information on how to plan their careers and lives (Jarvis, 1988). Counsellors are in the position to provide appropriate career activities for students that meet their needs to plan their entry into the real world of work.

Background of the Study

Before intervention techniques can be developed to assist students, it becomes imperative that counsellors understand the terms career development and career maturity. Career development has been described

by Super (1954) as an ongoing process which starts at infancy and continues into adulthood. Career development is an integrative interaction of personal and environmental aspects of the individual which is a life long process. Career maturity can be defined as a readiness to deal with age appropriate career tasks. It may involve forming interests, making consistent and competent choices and developing appropriate attitudes toward careers.

With the mounting evidence (Canadian Guidance and Counselling Foundation, 1987, McCambridge, 1985 and Fineman, 1983) that our students are not prepared for the real world of work, it becomes important to investigate the career attitudes of male and female students to observe a difference in career maturity. Understanding students' career attitudes and career maturity is important for guidance counsellors and educators. One way of finding out students' developmental status is through the Career Maturity Inventory Attitude Scale (Crites, 1978) which measures the feeling that an individual has towards making a career choice and entering the world of work. The inventory suggests whether the individual is ready to enter the world of work.

Screening for career immaturity as early as possible assists in identifying those who are career immature in the decision-making years. Breton (1972) conducted a study in Canada which showed high school students displayed vocational indecision. This means that students were coping ineffectively with the task of selecting a life's work and hence can be considered to be career immature. Especially when the youth unemployment rate (17%) was twice the adult unemployment rate (8.5%) in

1986 (Ross, 1989). It becomes important to identify the students who are career immature as early as possible in the decision-making years so that appropriate intervention may be provided. The Career Maturity Inventory (CMI) may provide early identification of problems in career development and assist counsellors to utilize time and resources more efficiently.

With the Attitude Scale, there were conflicting reports related to sex differences. Crites (1978) suggested that the Attitude Scale was applicable to males and females because the items were phrased to be meaningful to both sexes. On the other hand, Rathburn's (1973) study showed that sex differences did emerge during high school years. He found that at each grade level, females had statistically reliable higher mean scores on the Attitude Scale than males. Alvi and Khan (1983) conducted a study on 439 Canadian students. They found that the CMI Attitude Scale by grade level was significant. Overall, they found that females scored significantly higher on the Career Maturity Inventory. Finally, Crites (1978) commented that the differences in male and female students needed further investigation.

Assessing the needs of grade nine students for career counselling may provide ways of meeting their needs. It would seem that the career attitude information may be helpful to develop appropriate career programs for assisting students in acquiring necessary knowledge and skills. Hoyt (1977) supports the concept of career programs as a means to assisting the less mature student so that they may acquire orientation and information necessary for career maturity. Thus, the

Attitude Scale is a valuable instrument in assessing the career maturity of the students.

Two career programs that help youth to gather career information and improve career attitudes of students are computerized career exploration programs as CHOICES Junior Computer program and Work Experience. The CHOICES Junior Computer program provides up-to-date information on occupations. There is a notion that many of the problems associated with entry into a world of work can be resolved if only our youth can be provided with factual information about self and the world of work. These programs may assist youth in making career decisions. Students who participate in Work Experience spend a period of time probing interest and attitudes, counselling and planning for the two weeks. The process takes a minimum of eight weeks to complete. Work Experience is based on awareness of the real world of work.

Do these two career programs help youth develop higher levels of career maturity? This question may be answered through further investigation. By investigating career attitudes and career programs effect upon career maturity, counsellors might be able to meet the changing person, technology and social aspects.

The information from this study may provide insight into students career attitudes and career maturity that assists career counsellors to provide appropriate career programming for our students to make wise career choices. As Jean Cheret, former Minister of State and Youth, said that "the students must have the knowledge, ability to communicate and mobility necessary for one or several useful, satisfying careers in

a dynamic, internationally oriented labour market" (Phelan, 1989, p. 6). The time has come to help students become a part of a global economy where technology is exploding and new social innovations are occurring and feel confident about being there.

The Objectives of the Study

The study was composed of 157 grade nine male and female students who attend a suburban Junior High School in the City of Winnipeg.

The main objective of the study was to survey the career attitudes and career maturity of grade nine male and female students in one suburban junior high school. Additional objectives of the study included:

1. To determine whether career programs such as CHOICES Junior Computer System and Work Experience are associated with student's career attitudes.

2. To determine whether the Grade 9 students have higher levels of career maturity as compared to American students.

3. To determine who influences students' career decisions.

4. To determine which motivators or values the students feel are important.

The results of this study should provide insight into grade nine students career attitudes and career maturity.

Definition of Terms

To ensure clarity, the following definitions are presented:

Career Attitudes:

This refers to "Attitudinal or Dispositional response tendencies in career maturity. . . which may mediate both choice behaviors and choice aptitudes (Competencies)" (Crites, 1965, p. 7).

Decisiveness in career decision-making:

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

Involvement in career decision-making:

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

Independence in career decision-making:

Is the extent to which an individual relies upon others in the choice of an occupation.

Orientation to career decision-making:

Is the extent to which an individual is task or pleasure oriented in his or her attitudes towards work and the values he or she places upon work.

Compromise in career decision-making:

Is the extent to which an individual is willing to compromise between needs and reality (Crites, 1978, p. 10).

Career Choice Process:

Refers to the variables involved in arriving at a declaration of career choice content (Crites, 1978).

Career Choice Content:

Encompasses the consistency of career choices and realism of career choice factors (Crites, 1978).

Career Development:

Is a concept which encompasses a variety of themes (self-concept theory, motivation, work and decision-making theory) which originate in the social sciences.

Career Maturity:

The place reached on the continuum of vocational development from exploration to decline (Super, 1969, p. 153).

Career Maturity Inventory:

Instrument designed to measure the career choice process variables.

Choices Junior Computer Program:

The computer program is based on the premise that self-knowledge is the cornerstone of the career exploration process. The system sorts career fields on the basis of user input and provides a list of alternatives to be explored.

Work Experience:

It is a short-term work experience of two weeks designed to make students aware of the importance of educational planning for the world of work, to expand their knowledge of work and to motivate the student.

CHAPTER II

A Review of the Literature

This chapter contains a discussion of research related to career development, career maturity, sex differences and career maturity, influences of career programs and career maturity, influencers of students career choices, adolescence and other factors. Finally, a summary of the literature review and results relating to the research hypotheses tested are presented.

Career Development

Understanding the concepts of career development as an essential component of career education and counselling programs is important for counsellors. Without having a firm understanding of career development, it becomes impossible to develop career education and career counselling programs in schools.

The research on career development has been investigated by many researchers and described in many different ways (Osipow, 1968; Hilton, 1962; Ginzberg, Ginzberg, Axelrod, and Herma, 1951; Super, 1953; Tiedeman and O'Hara, 1963; Havighurst, 1972, 1964; Crites, 1978; Tennyson, 1975; Herr and Cramer, 1979; Ornstein, Cron and Slocom, 1989; Super, 1984). Career development theories view vocational behavior as a continuing fluid process of growth and learning with influences from the self-concept,

experiences, personal history and psychosocial environment of the individual. Super (1954) described career development as an ongoing process which extends from infancy through adulthood.

Career development has been used in conceptualizing career education programs as related to the different stages of career development. Career development provides the structure for assessing the vocational tasks of career attitudes and maturity by understanding the developmental stages. It is helpful for developing objectives and strategies for career counselling and educational programs.

Super's (1957) comprehensive theory of career development has received the most research attention. His approach is an integrative one, stressing the interaction of personal and environmental variables in career development. His work is built on the earlier work of Ginzberg, Ginsberg, Axelrod and Herma (1951) who attempted to develop principles on career stages and career patterns. Super characterized the career development process as ongoing, continuous and generally irreversible. The occupation that an individual chooses should be consistent with his/her self-concept. Thus, the self-concept is a primary part of the process to choosing a career.

Super (1963) gave importance to the individual's mastery of increasingly complex tasks at different stages of career development. Super (Herr and Cramer, 1979) has developed five stages of career development. The first stage is growth (birth-14 years). During this stage, the self-concept develops through identification with key figures in the family and school. Needs and fantasy are dominant in the early

stages with interest and capacity become more important with increasing social participation and reality testing (substages: fantasy 4-10, interest 10-12, capacity 13-14). The second stage, exploration (14-24 years) is a self-examination, role, try-out and occupational exploration that takes place in school, leisure activities and part-time work (substages: tentative 15-17, transition 18-21, trial 22-24). The third stage is establishment (24-44 years) where the person has found an appropriate field and makes an effort to establish a permanent place (substages: trial-commitment and stabilization 25-30 years, and advancement 31-44 years). The fourth stage is maintenance (44-64 years) where the person has made a place in the world of work; the concern is how to hold on to it. New ground is not broken and there is a continuation of an established pattern. The final stage is decline (64-?) where the physical and mental powers decline and work activities change and, in due course, cease. The person finds sources of satisfaction elsewhere (substages: deceleration 65-70 years, retirement 71-? years). As people approach each stage of career development, they are faced with various vocational tasks at each level to complete before moving to the next level with success. Super describes the tasks as crystallization, specification, implementation, stabilization and consolidation. Crystallization and specification tasks are important for the exploration stage while implementation, stabilization and consolidation are tasks related to the establishment and maintenance stages. These development tasks contribute to vocational maturity.

Sankey (1981) wrote about concepts of career development that are

important for professionals to understand when developing programs for students. The first concept is that career development is an ongoing process which extends from infancy through to adulthood (Super, 1957). This means that career development is an important component in any career education program which should not be treated merely as an event that occurs at high school but as a process that extends over the person's entire life. Career programs need to be evaluated to see if the programs are ongoing and build skills from one year to the next that are appropriate and each stage of development. If a student is to be successful, career programs must be started in the elementary school.

The second concept is that career development can be described in terms of learning tasks which are differentially important at different life periods (Super, 1957; Havighurst, 1964; Tennyson, 1975). Through ordering of learning tasks to different age levels, it becomes helpful in determining behavioral objectives and these objectives may be evaluated. Ordering learning tasks helps in selecting materials and techniques that might be employed to achieve these objectives. Listing the learning tasks for each age level will make it possible for the professional to make more discriminating decisions to insure a well-rounded career education program in schools. By measuring career attitudes and career maturity, it may reveal whether students are at the appropriate learning tasks for the particular stage of career development.

The third concept identified by Sankey (1981) was that career development is modifiable. Efforts to intervene in the process can

accelerate or strengthen the acquisition of knowledge, attitudes and skills (Super, 1957; Herr, 1976). The career programs need to change so that youth are acquiring skills and attitudes which are important in promoting career development. Measuring career attitudes and career maturity reveals if the career tasks that students engage in are appropriate. The counsellor may have to review the tasks for each student so that students progress from where they are to where they must go. Flexibility is important for the youth to acquire career skills and career attitudes. Thus, career development must not be stagnant, but constantly changing and adapting to the changing society and needs of students.

The fourth concept is that career development is influenced by many stimuli. Therefore, to isolate programmed experiences rather than to integrate would overlook all types of potential experiences which weave throughout a student's life (Herr, 1976). Career development would take into account the personal and social development of an individual, the total person. There are people and motivators which influence student's career development. For example, parental influence helps student's career development. The career programming delivered by counsellors can no longer be expected to be the sole deliverer of these programs (Mitchell, 1975). Much of the teaching of career programs would be taken over by classroom teachers who would integrate it into a language art, science, math or social studies class.

Finally, career development can be seen as a central theme of education at all levels since it's elements embrace the acquisition of

career identity, self-identity and purposefulness with which educational opportunity can be viewed (Herr, 1976). Career education learning tasks might be associated with general goals of education. For example, language arts could incorporate job finding skills into the curriculum which means that the already over burdened curriculum need not have another subject added. The central themes integrate into the curriculum may provide a holistic view of one's career which may increase career attitudes and career maturity. Thus, career education could be integrated into the already existing programs. It tends to help students see the connection between school and real life.

It becomes important that career development is holistic and encompasses the personal and social development of a student, as well as the environmental, social and economic status of the students.

Career Maturity

The term career maturity in adolescents has provided validity to the term career development (Herr and Cramer, 1984). Career maturity is a global term which is useless unless it is put into specific vocational tasks and behavioral description for the student. To understand this term, several researchers have developed their concepts for career maturity.

The earlier research by Ginzberg and colleagues (1951) proposed that vocational choice is a developmental process which spans the years from late childhood into early adulthood when the individual enters the world of work. The stages are fantasy, tentative and realistic periods.

Ginzberg did not go to the next step and formulate the concept of career maturity (Crites, 1972).

The person who was credited with introducing the concept of career maturity was Donald Super. He defined vocational maturity as "the place reached on the continuum of vocational development from exploration to decline" (Super, 1955, p. 153). In other words, it is the readiness of an individual to deal with vocational tasks that are appropriate to his/her chronological age. He also makes mention that a vocational maturity quotient might be developed to indicate vocational maturity. It could be derived much the same as the intelligence quotient. Super and associates (1955) devised the career patterns study to produce a model of vocational maturity. The model was tested and refined by Super (1974). The five dimensions in the model are planfulness, exploration, decision-making, information and reality orientation. In 1981, Super concluded the 20 year study of career patterns by developing a measuring instrument called the Career Development Inventory. The attempts to measure vocational maturity have shown that it is a complex, multi-dimensional construct.

Another researcher by the name of Crites (1978) developed a career maturity model which is based on career choices content and career choices process. Career choices content encompasses consistency of career choices (variables: field, time and level) and realism of career choice (variables: interest, ability and personality). The variables may dictate the career choice content. Career choice process refers to the variables involved in arriving at a declaration of career choice

content. This encompasses career choice competencies which are influenced by the following variables: occupational information, planning, self-appraisal, goal selection and problem solving and career choice attitudes which are influenced by the following variables: involvement, orientation, decisiveness, independence and compromise. The test was designed to measure the career choice process variables. The attitude scale and career maturity model identifies students who are career immature and helps professionals to provide appropriate programs to help students increase career maturity levels. The model and attitude scale may be used to evaluate the effectiveness of career programs.

Super's and Crites' models of career maturity will help counsellors and other professionals develop career programs. It provides a basis for assessing dimensions of career attitudes and career maturity. These models are useful in developing objectives and strategies for assessing guidance needs, both individual and group. These models may be useful in evaluating career education programs. The Career Maturity Inventory developed by Crites (1978) will be used in this study to measure the students career attitude maturity.

Career maturity develops as the individual matures over time. Career maturity is not stagnant, but always dynamic and moving as the person is involved with new learning experiences. Thus, career maturity increases with each grade level (Alvi and Khan, 1983; Moracco, 1976; Tilden, 1978) and with transitional points in the educational system such as elementary versus junior high school versus senior high school (Crites, 1965, p. 1).

Differences Between Males/Females and Career Maturity

Do males and females score differently on the career maturity inventory attitude sale? Crites (1969, 1965) suggested that there were no sex differences in career maturity. The CMI Attitude Scale was phrased to have meaning for both male and female subjects. He sampled 2,882 boys and girls in 1961-62 and found no glaring sex bias. In 1971, Crites suggested that the evidence to date supported the applicability of the attitude scale to both male and female subjects.

Fouad (1988) found evidence to support Crites theory that the attitude scale is applicable to both male and female students. She investigated the career maturity in grade 9 and 12 students from the United States and from Israel by assessing attitudes about career decision-making. Eight hundred and eighty-five students from a midwestern city public suburban high school in USA and five hundred and thirty-seven students from Israeli in a mid-sized city public high school were involved in the study. The 9th and 12th grade high school students from both countries were given the CMI. A 2 x 2 x 2 analysis was computed for each separate CMI score. Analysis was performed with two grade levels (9 and 12), sex (males and females) and culture (United States and Israel). Females scored significantly higher on the involvement and orientation subscales, and males scored significantly higher on the compromise subscales. The results of the research supported that males and females do not differ in the CMI scale. No significant sex differences were found on the total attitude scale. This study does not replicate previous findings in which females scored

higher on the attitude scale.

There was only one study that showed males had higher career maturity than females. A study by Achebe (1982), showed that the vocational maturity of Nigerian students using the CMI as related to sex, grade and urban versus rural differences reveals interesting results on vocational maturity. She found that sex differences were evident with males scoring higher than females. This study contradicts both Crites' and Fouad's findings. Other studies strongly support that females have far more career maturity than males.

Other researchers who supported that females have higher career maturity levels than males include Alexander, 1976; Rathburn, 1973; Omvig and Thomas, 1977; Herr and Enderlein, 1976; Smith and Herr, 1972). Omvig and Thomas (1975) concluded that sex differences were observed on nearly all subscores of the career maturity inventory. The females consistently displayed higher means on career maturity inventory measures, with most of the differences being significant. In 1977, Omvig and Thomas did another study on the relationship between career maturity and sex of sixth and eighth grade students. The study was conducted in Kentucky's Education Region XII. He used 120 students at each grade level. The sample groups of career education and non-career education students from the sixth and eighth grades completed the Career Choices Attitudes and Career Choices Competencies of the CMI. They utilized a 2 x 2 factorial analysis of various techniques to determine the career maturity levels of the groups. The results showed that significant F ratios for sixth grades were computed for all CMI subtests

on the six comparisons. The females revealed significantly higher means in all six comparisons (self-appraisal, occupational information, goal selection, planning, problem solving and attitude scale) while grade eight female students showed significant differences on four of the six CMI items measuring self-appraisal, occupational information, planning and attitude. Thus, the study revealed that females had consistently higher means on CMI with most of the differences being significant.

Sex differences relative to vocational attitude, as measured by the CMI Attitude Scale, were shown by Smith and Herr (1972) in a study of eighth and tenth grade students. Females were found to be more mature at both grade levels. Another study done by Herr with Enderlein (1976) examined the differences in career maturity in relation to sex. The results showed that career maturity does increase for sex groups from ninth to twelfth grade and the females displayed a higher career maturity inventory mean score than did the males at all grade level assessed.

Rathburn (1973) completed a six year longitudinal study that indicated sex differences do emerge during the high school years. He suggested that at each succeeding grade levels females had higher mean scores on the attitude scale than males. This would indicate that females tend to mature faster than males in the process of career choice (Crites, 1978, p. 5).

With mounting evidence that there are sex differences related to career maturity, Crites (1978) revised his theoretical stance on the applicability of the CMI for males and females, and suggested further

study should occur. This has occurred since 1978 with studies by Neely (1980), Chodzenski (1983), and Alvi and Khan (1983).

The final study by Neely (1980) had 72 males and 55 females in grade nine. The subjects lived in a midwest town of the United States. All participants took the CMI. The scores were compared by sex, by class, and by program (civic classes or traditional career classes). Sex differences (significant at the .05 level) were observed on the Attitude Scale with girls means higher than the males. The girls were higher on self-appraisal, goal selection and problem solving than were the males. This indicates that females overall have higher levels of career maturity as related to the Attitude Scale.

Chodzinski (1983) investigated career maturity in 279 grade ten and 256 grade twelve students from nine school regions in the Province of Saskatchewan. He used factor analysis of the ten subtests of the Career Maturity Inventory and the regression of the CMI variables on intelligence scores, sex and grade. Sex emerged as a significant factor in career maturity. The females tended to score higher than males with regard to career maturity.

Alvi and Khan (1983) conducted a study in Ontario, Canada, to determine the appropriateness of Crites' model of career maturity and to assess the validity of the CMI for a Canadian population. The study consisted of 439 rural pupils from grades 9-12. They were administered the CMI Attitude Scale and the Competence Test. The data was analyzed by using descriptive statistics and analysis of variance. The results showed that the F ratios for the five parts of the Competence Test were

significant for sex while the F ratio for the attitude scale was not significant. The F ratio for the Attitude Scale by grade level was significant. Overall, they found that females scored significantly higher on the CMI than males.

Crites (1978) stated that further study needs to occur to see if there is any difference between male and female subjects on the Competency test and the Attitude Scale. Further studies occurred during the 1980's. There seems to be substantial evidence that Crites' statement to support the fact that females tend to have higher levels of career maturity than do males. Thus, Crites may no longer claim that the CMI is applicable to both the male and female subjects, but further research needs to be done to develop norms for males and females.

The researcher was unable to find normative data on career maturity for Canadian students. Thus, this study sought to find out if the Grade 9 students differ from American students. The demonstration of differences between males and females and what are the specific weaknesses will allow educators to develop appropriate remedial measures. The information from this study will help to evaluate existing programs and other programs may be added to increase the career maturity of both males and females.

Career Programs and Career Maturity

Do career programs affect the career maturity of students? Osipow (1968) suggested that vocational development may be influenced by educational factors when he says that "students seem to make decisions

at times that are imposed on them by the structure of the educations system" (Osipow, 1968, p. 163). Crites (1978) suggested that "experimental-intervention manipulation" where the individual tries to manipulate the external environment so as to increase career maturity. Types of manipulation that might increase career maturity would be individual counselling, group counselling, computer programs and work experience.

Career educators have assessed the effectiveness of career education programs. Roberts (1974) showed a relationship between participation in a career education program with improved attitudes towards school. Other researchers (Omvig and Thomas, 1975, 1977; Trebilco, 1984) have studied aspects of career education programs on career maturity. Omvig and Thomas (1975, 1977) concluded that the career education programs had a positive effect in increasing students' levels of career maturity. Career education students consistently displayed higher career maturity levels than did non-career education students. Trebilco (1984) studied grade nine and grade eleven students career maturity and the career curriculum practices and policies of thirty-eight Melbourne Metropolitan secondary schools. The results of the study support the view that schools with career education programs achieve higher gains in the career maturity of their students between grades nine and eleven than schools with no career programs.

Work Experience

Career education is often equated with work experience or

experiential education. This experience provides a preparation for entry into the world of work. It is valuable for youth to integrate school and actual work experience. Toffler (1974) suggested that work experience is necessary because our society isolates youth from direct involvement in adult activities of the real world. He says that we may be doing a disservice to our young people by delaying these experiences that promote their social and vocational maturity.

Research completed on the Appalachia Educational Laboratory (AEL) model was completed by Shively (1977). With this model the students choose a trade group and select a person with whom to work at a community work site. Prior to this the students take aptitude and interest tests. After a period of three-thirteen weeks, the students go through a second aptitude and interest test to see whether their interests and values have changed. The students were asked about their career plans in the final student interview of the 1972-73 study. Of the 44 students, 61% reported firm career choices and in every case they reported that the program had influenced their career decisions. The 1974-75 students exhibited significantly more career maturity than did the control students as measured by the Career Maturity Inventory. The results showed significantly more positive attitudes than control students toward education, school counselling and the total learning environment. The 1975-76 students revealed positive gains or significant differences in career maturity favouring the AEL student.

There is a problem with work experience when this program is confined to high school which ignores Super's contention that career

development is not an event, but an ongoing process continuing from the cradle to the grave. Work experience is a valuable experience as long as it is combined with other activities to make it a total experience. The work experience programs represented only one strategy among many which will be needed in a comprehensive model of career education.

Computer Programs

The effects of computerized guidance programs on career decision-making process has been investigated by many researchers. Supporting evidence by Cairo (1983) on the impact of computer-assisted career guidance systems suggests that little is known about the impact on the career development of these users. The research seems to indicate limited amount of research on the value of these systems. This would help to establish credibility for the computerized systems.

The computer program used in this study was CHOICES, one of the newest additions to the family of computerized guidance systems. The system was designed originally by the Canadian Department of Manpower and Immigration and since has been taken over by Canadian Systems Group.

Pinder and Fitzgerald (1984) evaluated the effectiveness of CHOICES on improving the career decision-making of university students. The study was comprised of 136 undergraduate and graduate students who voluntarily requested to be involved in the CHOICES program at the University of Central Florida. The sample of students were divided into an experimental group (72 students) and a control group (64 students). The experimental group completed the CHOICES guidebook prior to

utilization of the CHOICES computer program. The control group completed the pre-test and the post-test as part of the experimental procedures. They were not allowed to use the CHOICES guidebook or the CHOICES computer program until the research procedures were completed. Career decision-making was measured using the Career Decision-Making Scale (CDS) and Assessment of Decision-Making (ACDM). The results indicated a significant difference in the experimental group and the control group. The experimental group that utilized the CHOICES as a treatment showed an increase in career decision-making commitment as measured by the ACDM and CDS. The higher scores on the Occupational Decision-Making Scale of the assessment of career decision-making following the use of the CHOICES Program revealed an increase in career decision-making commitment relative to occupational choice. The CHOICES Program was helpful to both males and females. This study demonstrated that computerized guidance systems such as CHOICES were viable counselling interventions that help students meet their career development needs.

Two studies completed in Canada that deal with the issue of computerized guidance systems effect on career maturity were researched by Cassie. Cassie (1975) assessed the effects of the System of Interactive Guidance and Information, a computer-assisted career guidance instrument, on the career maturity of Ontario students in grades nine, ten and eleven. From a random selection of six Ontario schools, sixty students were selected from grades nine, ten and eleven in each school. They were assigned on the basis of sex and grade to

experimental and control groups. The experimental group received SGIS services and the control group received the traditional guidance program. Subjects in the four schools were pre-post-tested with the Crites Maturity Inventory (CMI) (Crites, 1973). In addition, subjects in two schools were post-tested only with the CMI. The results revealed that the user of the SGIS significantly increased students' career maturity attitudes as measured by the CMI in the areas of choice process, orientation towards work, and independence in decision-making. However, it was found that use of SGIS did not significantly increase CMI measuring knowledge of self, goal selection, occupational information and occupational planning. In 1979, Cassie completed another study for the Minister of Education of Ontario on the effectiveness of CHOICES. He concluded that the CHOICES program may result in higher levels of career maturity attitudes.

The second study, by Starr (1980), investigated the effects of CHOICES on career maturity of grade twelve students in one high school in Ottawa, Ontario. Students were randomly assigned to experimental (CHOICES) and control (no treatment) groups. The study revealed that the career maturity attitude of students receiving the CHOICES treatment was significantly improved. No differences between males and females were found. The academic students scored significantly higher on the CMI than general students. The study has one weakness of no control for potential interaction between pre-testing with the CMI and the use of CHOICES.

The research strongly indicated that computerized programs have a
positive effect on students' career maturity levels. Further research
needs to be completed in the area for the CHOICES Junior Program as no
research has been found by the researcher on this particular program.

Who Influences Students in Career Planning?

Students are influenced by individuals when making career decisions.
Students seek certain individuals to help with their career decisions.
Who are the key people that influence students' career decisions? One
study conducted by Prediger, Roth and Noeth (1974) on 32,000 grade 8, 9,
and 11th graders in 200 schools studied the perceptions of students
about career development and about their current guidance needs. The
students were given the Assessment of Career Development (ACD), a 267
item paper-and-pencil inventory test. The test was developed from
detailed content specification drawn from career development theory and
guidance practice. The study revealed that three-fourths of the
nation's grade 7 and 8 students would like help in career planning.
While the 11th grader's highest need was help with career planning.
There was a sharp contrast with students' expressed need for help with
career planning and the amount of career planning help a student
received from the school. The study showed that half of the 11th
graders and slightly more 8th graders stated that they received little
or no help with career planning. Eighty-five percent of the 11th
graders indicated that they recognized that career planning must begin
before the final year of high school. Then who is helping our children
to make career decisions and plans for the future?

Since studies have appeared documenting that students were not using counselling services to help plan their careers. Some of these studies asked students who they were seeing for career planning. Studies (Shapiro, 1980; Morgan and Sawyer, 1979) have appeared documenting the sources of help that students utilize to assist them in various tasks. Another study (Ames and Lau, 1982) analyzes students' help-seeking behaviors. The answer to the question "Who are students seeking help from with their career planning concerns"? The answer was always the same: parents, friends or relatives. In the school setting friends were the number one source for help while outside the school, family and relatives were the main source of help.

Two studies have explained why friends are an important source of help (Shapiro, 1980; and Morgan and Sawyer, 1979). Morgan and Sawyer (1979) studied the relationship between friends and strangers norm preferences and their responses to perceived inequality. The experiment was conducted on 80 male first-year undergraduates. Half of the participants were assigned randomly to the friends group and played their roommate while the other half played a dormitory resident from anther floor. The results showed that friends were twice as likely as strangers to report that their primary goal was joint gain rather than individual gain.

Shapiro (1980) studied eighty female undergraduates who were enrolled in Introductory Sociology classes and were randomly assigned to experimental conditions: relationship to potential helper (friend or stranger), helper's cost of providing help (high or low), reported task

difficulty (difficult or easy). The subjects were paired with a task that could not be solved alone and each female was given an opportunity to seek help from the other. The results showed that a person was more likely to seek help from a friend that a stranger. Also, subjects were less likely to seek help from a stranger when the cost of providing help was higher than when the cost was low. This difference did not occur in help seeking between friends. The results suggested that factors which deter help seeking among strangers may have less effect on help seeking among friends. Seeking help from a stranger could contribute to feelings of indebtedness, loss of esteem or inequality, whereas the cost of seeking help from a friend was low. Students were asked "What are the characteristics of a friend which enables them to talk to friends"? They replied with such words as "understanding", "acceptance", "trustworthy", "respects your views", "listens", "shares", and "will do things with you" and "for you".

Ames and Lau (1982) analyzed students help-seeking behaviors in 198 undergraduate students from an introductory psychology course at a large midwestern university. They found that people's willingness to seek outside help was based on past experiences, their view as to who is responsible for creating the problem and their perceptions of the usefulness of the help. This study reflects the influence that parents, friends or counsellors may have if the student has had a positive and productive experience with counsellors, parents, friends or adults. Then the student may believe that the person has an impact on resolving their problems with career decisions. The study showed the counsellors

as not a valued assistance for career counselling. On the other hand, a student with high grades, confident in themselves and responsible for their destiny, have had success with counselling programs and services. With high unemployment rate among youth and a view that getting a job is more a matter of luck or who you know with a combination of self-doubts and adolescent insecurity, why would a student seek out a professional counsellor?

The student seeks out parents and friends to "help" make career decisions rather than seeking out a total stranger who they may not trust (Ames and Lau, 1982). The parent and friends may be able to recognize quickly when a friend is experiencing a problem and provide feedback to the person in an atmosphere that the adolescent feels comfortable. The closeness of the parent and friends may provide support and intimacy on a spontaneous basis rather than having to go through unknown channels to seek out a counsellor. It becomes important for the counsellor to seek out those people, such as parents and friends who assist their children in making career decisions and supply the parents with the information to properly guide their children towards careers. This information may help parents and professionals to increase the students' career attitudes and career maturity.

Adolescence

Junior high school is a period of change and exploration. Students are ready to acquire skills to help them plan their career (Campbell & Parsons, 1972). The students are ready to plunge into their vocational

planning. Professionals are in a position to help students' career plan during adolescence.

Junior high school is a transition period, from childhood to adolescence. Coleman (1974) perceived adolescence as the gap between "youth and adulthood". Marland (1974) sees adolescence as the gap between "education and work". Do the factors of relationship, values, responsibility, attitudes, knowledge and skills influence the success of the student into adulthood?

Adults generally view adolescence as a period of change, friction and problems. The early adolescence phase is unique (early adolescence between the ages of 12-15 years, late adolescence continues between 15-20 years). During early adolescence the youth experiences rapid physical, social and emotional growth than at any other time of life except for infancy (Riker and Riker, 1982).

Adolescence is a time of concern about weight problems, peer pressure, school pressures, parent hassles. It is a time of confused feelings, particularly in relationships with parents. Teenagers are struggling with independence yet fear too much freedom. They resent overprotection, but need and want guidance from adults (parents, teachers, grandparents).

Junior high school students have changed from their elementary school grades. During adolescence the student is experiencing physical, mental and social changes at a fast rate (Riker and Riker, 1982). With puberty changes happening, their perception of life will change. They begin to comprehend relationships and to use abstract terms. They want

to belong and conform which is influenced by their peers. They are making steps towards independence and sorting themselves from the mass of students with whom they interact.

Junior high school students are immersed in the continued development, refinement and strengthening of basic skills started in elementary school. They are going towards specialization in the high school. They start to focus from the present to the future. Because grade nine students will be in high school or vocational school in the following year they become sensitive to work and its relevance to them. They have reached the point when they are prepared to examine the implication of high school and the world of work upon their futures.

The changes and advancements in our society have made decision-making in the areas of education and work rather difficult and complex. Choosing courses for high school becomes important to the grade nine student and his/her parents. Choosing high school courses, if not approached carefully, will result in reducing the alternatives available. When the student elects to take a course, this permits her/him maximum freedom to quality for educational opportunities beyond secondary school while the student is reality testing whether or not further education is necessary for goal achievement. Students must explore through experiences, practicing, and analyzing present and future alternatives so that a developmental decision plan happens for the student. It is important that students are prepared to meet the future in a manner which brings personal satisfaction while contributing to the total society.

the individual to understand and act on the career environment" (p. 154). He feels that the development continues and changes because of the interaction between the person and environment. Law (1981) developed a model in which the elements of the network for adolescents were identified: extended family, neighbourhood contacts, peer groups, teachers at school and ethnic groups. To form a matrix with these elements, he identified the functions that these elements might provide; expectations, feedback, support, modelling and information. This model approaches the crucial issues of functions of the various networks.

Does socioeconomic status influence the career maturity of males and females? It seemed reasonable to expect that if a student had high socioeconomic status, intelligence, and education, then the student would know the importance of having good information in making decisions. Career maturity enables the student to assess information quickly, ability to judge it's quality and ability to act upon the decision.

Chodzenski (1983) investigated grade ten and grade twelve students for the validity of the career maturity inventory. The study showed that social economic status was not a significant predictor of the career maturity inventory variables. He indicated that intelligence is the best indicator of career maturity. Crites (1978) supported that socioeconomic status was not related to career maturity.

On the other hand, other researchers found a definite indication that socioeconomic status was related to career maturity. In 1960, Project Talent (Flanatan and Cooley, 1966) reported that ability and

family socioeconomic levels were a major determinant of post-secondary education. Bogie (1976) worked with high school seniors, concluded that socioeconomic status was a strong predictor of the discrepancy between an individual's career aspirations and career selection. The higher an individual's socioeconomic status was, the less discrepancy one foresaw between career aspiration and attainment. Ansell and Hansen (1971) investigated the vocational maturity of lower and middle class adolescent boys. The mean scores showed that the lower class students were slower in developing vocational maturity. There was a difference in grade 10, 11 and 12 students between lower-class and middle-class students with regard to race. Lower-class black and white students did not differ significantly in their vocational maturity throughout the grades.

Do cultural aspects influence the career maturity of students? Krau (1987) investigated the nature of work values and adolescence by comparing 9th and 12th grade high school students from Jewish, Arab and Catholic schools in Israel. The work values were also related to socioeconomic differences, with more advantaged groups exhibiting greater intensity of work values across all cultural groups. He concluded that differences in work values are transmitted to a significant extent through a cultural context.

Super and Bohn (1977) stated that racial minorities have only recently been the subject of studies by psychologies and sociologists. Minority status has been operating differently on different ethnic and religious groups. Orientals in North American tend to perform better in

education and in work than their socially imposed handicap might lead one to expect. As a group, Jews similarly tend to achieve at higher levels than might be expected of them. Blacks, on the other hand, have until recently been depressed by discrimination rather than stimulated to overcome the social handicap. Two issues are clearly central in the effects of race or minority status on careers: The extent of the barrier to be overcome (discriminatory practices) and the motivation of the group to overcome it.

The other factors of environmental, socioeconomic status, and cultural background are found to play a role in the ability of the student to develop career maturity. The reader should not overlook the importance of these factors that might impact upon the results of this study.

Summary

A review of the literature in the areas of career development, career maturity, sex differences and career maturity, career maturity differences between males and females, career programs and career maturity, who influences students in career planning, a discussion on adolescents and other factors influencing career maturity were discussed in this chapter.

The literature review suggests that career maturity and career development have been studied extensively. The career development and career maturity research implies that it is important to understand these concepts in order to develop appropriate career programs for students.

Assessing career maturity of males and females has been done
extensively by researchers (Crites, 1978; Super, 1981). There are
confusing results from no differences between males and females, to
females being maturer than males and to males being maturer than
females. Therefore, this study is designed to examine career maturity
of both males and females with Crites Attitude Scale.

The review of the literature suggests that career programs affect
the career maturity of students. Formalized career programs, work
experience and computer assisted programs have been proven to increase
the career maturity levels in students. Therefore, this study is
designed to examine career attitudes with involvement in career
education programs.

The one reason for conducting this study was to provide insight as
to who influences students with their career decisions. The literature
suggested that parents, friends and relatives are key people who
influence students with their career decisions. This information from
this study will help professionals design programs for students and
individuals who influence the students.

Although other factors such as environment, socioeconomic status,
and cultural background were not being investigated in this study it was
important to not overlook the importance of these factors that might
impact on the study.

Adolescence is a time of transition and change. Adolescents are
ready to do career planning. The adolescent's career maturity must be
seen in a holistic way which means the person's psychological, social

and environmental interact to produce the career mature person. The vocational counsellor must develop clear understanding of career development and career maturity so that programs may be designed and implemented to facilitate career maturity for the adolescent. These programs should begin no later than elementary school (Hansen, 1977; Hoyt, 1977; Herr, 1974). It is imperative for career programs that extensive research be conducted on career attitudes and career maturity which facilitates proper planning of career programs.

Statement of the Hypotheses

Based on the literature reviewed, the following hypotheses are posed:

1. There are significant differences in career attitudes and career maturity among female and male grade nine students. The researcher predicts that females will have higher levels of career maturity.

2. There are significant differences in carer attitudes and career maturity among subjects that have been or not been involved with work experience. The research predicts that the students who have been on work experience will have higher levels of career maturity.

3. There are significant differences in career attitudes and career maturity among subjects who say that CHOICES Junior Computer Program helped them and those who said that it did not help them (see definitions on page 8). The subjects who say that the program was helpful will have higher levels of career maturity.

4. There are significant differences in the normative data of career attitudes and career maturity between American students in grade nine and the students in this study. The researcher predicts that the students in this study will have a higher career maturity as measured by the Career Maturity Inventory Attitude Scale.

5. There are significant differences in the motivators or values chosen by career mature students and less career mature students. The research hypothesizes that the career mature student will choose words like money, family, jobs/careers while the less mature students will choose freedom, happiness and friends.

6. There are significant differences between the less mature student and the mature student as to who influences their career decisions. The mature students will choose their parents whom they think have accurate information while the less mature student will choose peers who may or may not have accurate information.

CHAPTER III

Methods

The purpose of this study was to survey the career attitudes and
career maturity of grade 9 male and female students in a suburban
school. The chapter contains a description of the subjects, description
of the school and community, the instrument used to gather the data,
limitations, and collection of data and organization and treatment of
the data.

Description of the School and Community

The comparative study between males and females career attitudes and
career maturity was carried out on a suburban Junior High School in
Winnipeg, Manitoba. Junior High School students who were willing to be
involved were included in this study. This school has one hundred and
sixty-one grade 9 students (males 86 and females 75). The school
employs 30 full time teachers for 513 students. It offers French
Immersion, regular programs, gifted programs and special needs programs
to a wide ability level of students. The school is located in a
community where the home and official language spoken is English. The
ethnic origin of the community is predominately English, but with a fair
number of people of German and Ukrainian background. The average income
for a family is $49,206 with 6.7% incidence of low income. The

community is probably seen as a middle class community where people have a social position between wage earners and the leisure class (Statistics Canada Census, 1986).

Subjects

The study sample survey consisted of 84 boys and 73 girls for a total of 157 students from a suburban Junior High School in Winnipeg, Manitoba.

Instruments

The Career Maturity Inventory (CMI) was developed by Crites (1978) to measure maturity of attitudes and competencies that are critical in making career decisions. It may be employed in schools, colleges, business and industry and other institutions.

CMI is a revised edition of a popular standardized instrument used by many American Schools and Career Counsellors to evaluate specific career related attitudes and competencies theorized to be important in career decision-making (Crites, 1965). The instrument is based on a hierarchial factor structure model of career choice content and career choice programs (Crites, 1978). The content dimension refers to consistency and realism of career choice whereas the process dimension refers to career related competencies and attitudes. The CMI assesses five attitudinal variables (involvement, orientation, decisiveness, independence, and compromise) and five competency variables (occupational, information, planning, self-appraisal, goal selection and

problem solving). Thus, the inventory is providing an attitudinal and a cognitive measure of vocational maturity.

During two decades of research on the assessment of career development, the CMI underwent revisions. In 1961, the preliminary forms of the attitude scales were administered to a senior high school in Cedar Rapids, Iowa (Crites, 1965). Since 1961, there have been hundreds of studies completed on the CMI (Attitude Scale and Competence Test). The original 50 item Attitude Scale, form A-1 and it's successor, the Screening Form A-2 have been followed by a new and longer scale which is called the Counselling Form B-1. The current form, published in 1978, is comprised of the counselling form B-1 and the competency test.

The CMI was designed to have five main applications: to study career development, screening for career maturity, assessing guidance needs, evaluating career education and testing career counselling. The CMI evaluates various variables that measure components of career development which are expected outcomes of career education programs. These may include career awareness, career attitudes and career knowledge.

The Attitude Scale, Counselling Form B-1 is 50 original items and 25 new items. The Scale elicits true/false responses to personality items. The Attitude Scale is a hierarchial one, which interrelates but has distinct clusters of attitudes which converge upon the overall factor of general attitudinal maturity.

Counselling Form B-1 comprises several different variables. The

first variable is decisiveness in career decision-making which means the extent to which an individual is definite about making a career choice. The second variable is involvement in career decision-making which means the extent to which an individual is actively participating in the process of making a choice. The third variable is independence in career decision-making which means the extent to which an individual relies upon others in the choice of an occupation. The fourth variable is orientation to career decision-making which means the extent to which an individual is task- or pleasure-oriented in his or her attitude toward work and the values he or she places upon work. The final variable is compromise in career decision-making which means the extent to which an individual is willing to compromise between needs and reality. These career choice attitude variables (decisiveness, involvement, independence, orientation and compromise) have ten items that measure each one, with the exception of compromise which currently has seven items in the career attitude scale.

The Attitude Scale was initially designed for high school students. The Scale is equally applicable to males and females. The items are phrased to be meaningful to both sexes. The Attitude Scale mean scores of vocational-technical students are significantly lower than those of college level (Crites, 1978). It is also applicable to minorities and other special groups.

Crites (1978) suggested the Attitude Scale should be administered to those students who read at approximately the sixth grade level, unless the items are read orally to the students. Crites (1978) determined the

level of reading difficulty using the Dale-Chall (1948) Index.

As reported in Crites' Theory and Research handbook (Crites, 1978), the CMI shows evidence of acceptable levels of reliability and validity. The reliability is described in terms of internal consistency and stability. Crites used the Kuder-Richardson formula twenty internal consistency estimates were calculated for the subscales. The internal consistency coefficients for the attitude scale range from .50 for compromise in career decision-making to .72 for orientation in career decision-making. Crites suggested that the scores were lower than an aptitude or achievement tests, but for a nonintellectual scale (attitude variables) these internal consistencies were actually more desirable since the scales had been constructed partially empirically and partially rationally. Another aspect of reliability is stability. The stability of the attitude scale is stable (r = .71) over a one year interval. If maturational variance is taken into consideration the career choice attitudes is almost as reliable as measuring single traits with aptitude tests (Super and Crites, 1962).

The validity of a measurement device refers to how well it measures what it is intended to measure. Content validity refers to the extent to which an instrument measures a well defined educational or psychological construct (Crites, 1978). Crites used two sources of content: logical and empirical.

For content validity, the statements were written from central concepts in career development theory and gathered from relevant instances of verbal vocational behavior. Crites (1978) pooled 1,000

items and selected 100 according to Flanagan's procedures for the
initial item study. It would appear that the content of the attitude
scale is relevant and representative.

Empirical validity was studied by Hall (1962) where ten expert
judges (five males and five females counselling psychologists) were to
indicate which they considered to be more mature responses to each
attitude item. The criterion used was agreement between eight out of
ten judges. Of the fifty items in the attitude scale, Hall found the
percentage of agreement between the judges and the student majority was
74 percent. Thus, the attitude scale appeared to have acceptable
content validity.

Criterion-related validity was investigated by Hollender (1964). He
found significant covariation of career attitude maturity with all of
these "criterion" variables (response bias, correlations with other
variables, experimental-interventive manipulation) in a sample of 1,648
males and females in grades 6-12. Multiple T tests between high and low
groups within each grade established that students making more realistic
career choices generally score higher on the attitude scale.

On the Attitude Scale, Counselling Form B-1, Crites (1978) used
screening correlations. All items correlated more highly with their own
subscale than with any other subscale which means there is a rational
and empirical construction of the subscales. The subscale-subscale r's
ranged from 1.8 (Decisiveness vs Independence) to .55 (Decisiveness vs
Orientations). The subscale total correlations are consistent with the
model of career maturity as are the item-subscale and subscale-subscale

interrelationships. Crites (1978) suggested that the subscale-total correlations are consistent with the model of career maturity as are the item subscale and subscale-subscale interrelations. The career choice attitudes interrelate but have distinct clusters of attitudes which combine together into attitudinal maturity.

Questionnaire

The researcher developed a questionnaire to gather information on work experience and on the computer program CHOICES Junior. The questionnaire was field tested on eight students and there were no changes made to the questionnaire. The questionnaire is presented in Appendix E.

Procedure

In September, 1990, approval was obtained from a suburban school division to carry on the study (Appendix A). Following approval from the school division, the school principal was contacted for his approval. The University of Manitoba, Faculty of Education Ethics Committee approved the initial proposal for the study. Letters of permission were given to each student before the testing was started (Appendix B). The students had to volunteer for the study and were told that they may withdraw from the study at any time.

At the suburban Junior High School, a brief explanation of the study and permission letters were given to the students a week prior to the testing date. During the testing time, the students filled out a

questionnaire (Appendix E) and completed the CMI Attitude counselling

Form B-1 (Appendix D). The testing was administered in the classroom by

the principle investigator. Approximate time required to complete the

CMI attitude scale and the student questionnaire was 80 minutes. The

entire test administration was completed during the second week of May,

1991. In Appendix C, the researcher has a step-by-step procedure for

organizing the material and administering the devices.

Following the collection and analysis of the data, the investigator

discussed the general results of the study with the students. No

individual scores were made available to the students.

Generalization and Treatment of Data

The research plan used in the study was Causal-Comparative method as

described by Gay (1976). This plan is one where an attempt is made to

determine the cause or reason for existing differences in behavior of

the subjects.

The Causal-Comparative design was selected to determine if a

difference, in terms of career attitudes, existed between males and

females, students in work experience and students not in work experience

and students who felt that the CHOICES Junior Computer Program helped

them and students who felt that the CHOICES Junior Computer Program did

not help them, who influences your career decisions and words they value

the most.

The Career Maturity Inventory scores and the questionnaire responses

data collected from these instruments were analyzed descriptively by

computing the means, standard deviations, percentages. A one-tailed independent t-test was used to compare differences in career attitudes among females and males, differences in career attitudes among students who were on work experience and not on work experience, differences in attitudes among subjects who say that CHOICES Junior Computer program helped them, differences in the normative career attitude data of the American students in grade 9 and Canadian grade 9 students. Crosstabs and chi-square were used on differences in the motivators or values chosen by career mature students and the difference between the less mature and the mature student as to who influences their career decisions. The research hypotheses were tested at the conventional probability level of .05 (Gay, 1976).

CHAPTER IV

Results and Discussion

The purpose of the study was to survey the career attitudes and career maturity of grade 9 male and female students in a suburban school. The results in this chapter are presented as follows: descriptive data, career attitudes (work experience and CHOICES), career attitudes of Canadian versus American students, career maturity and motivators, career maturity and who influences students in career decisions.

Descriptive Data from the Questionnaire

The number of subjects in this study consisted of 73 females (46%) and 84 males (54%) for a total of 157 grade 9 subjects. The age of the subjects was 16 years (1%), 15 years (38%) and 14 years (61%). The mean age for males and females was 14.4. The distribution for the male age groups were as follows: 14 years (69%), 15 years (36%) and 16 years (1.2%) with a mean of 14.4 while the female age groups were 14 years (58%), 15 years (39%) and 16 years (1.4%) with a mean of 14.4 (Appendix F).

The students at this suburban junior high school were asked if they had been involved in work experience. There were 34 students (22% of the total population) involved in the work experience program while 123

students (78% of the total population) were not involved in work experience. The students involved in work experience were broken down into females (15 students or 44%) and males (19 students or 56%) (Appendix F).

Students were asked if they have worked with the CHOICES computer system. The results revealed that 156 students (99%) were involved with the CHOICES Computer career program. The students were further asked if the system helped them become aware of career options and information. The results showed that 82% (129 students) of the students who responded stated that the system helped them with career options and information while 17% (27 students) stated that the system did not help them with their career options and information (Appendix F).

Career Attitudes

The first hypothesis tested in this analysis was that there would be significant differences in career attitudes among female and male grade 9 students. The researcher predicted that females will have higher levels of career maturity than males. In order to test this hypothesis, the Career Maturity Inventory -- Attitude Scale Form B-1 was administered to one hundred and fifty-seven grade 9 students.

The results were analyzed by finding the mean and standard deviation for both males and females. Individual t-test for independent samples was used to determine if there was a statistical significant difference on the total of the five variables in career decision-making between male and female grade 9 students at the .05 probability level. The

results for the total of the five variables are shown in Table 1.

Table 1

Males/Females: Total of the Five Variables

	Mean	SD	t-ratio	df	Level of Significance
Females	34.01	5.7	1.52	155	p > .05
Males	32.76	4.6			

Females had a mean in the total of the five variables of 34.01 and a standard deviation of 5.7. Males had a mean in the total of the five variables of 32.76 and a standard deviation of 4.6. The mean for the total of the five variable score between females and males differed by 1.25. The t-ratio of the difference between the means was 1.52. The results showed that the males and females did not differ in the total variables of the scale.

The first hypothesis was to investigate the career attitude differences among female and male grade 9 students. The researcher predicted that females would have higher levels of career maturity than males. On the total of the five variables, there was no difference.

Sex emerges as a significant predictor of career maturity. The findings tend to suggest that females score higher than males is consistent with Crites (1978) revised expectation about the relationship with career maturity variables. He suggested that females score higher than males. Other researchers support Crites' revised stance about sex

differences. Studies by Herr and Enderlein (1976), Neely (1980), Omvig and Thomas (1977), and Rathburn (1973) support these results. Chodzinski (1983) found that females scored higher than males on two subtests of the attitude scale (Involvement and Independence) and the total attitude score. In this study females scored higher on both Involvement and Independence and no difference on the total of the five variables. Thus, this study partially supports Crites (1969) earlier findings that there is no difference in the career maturity between males and females. Foudad (1988) supports Crites' earlier findings that the attitude scale is applicable to both males and females. In her study the females scored higher on Involvement and Orientation while males scored higher on Compromise. She found no difference on the total attitude scale.

The second hypothesis stated that there would be significant differences in career attitudes among subjects that have been or not been involved with work experience. The researcher suggested that the students who have been on work experience will have higher levels of career maturity. In order to test this hypothesis, the Career Maturity Inventory-Attitude Scale, Form B-1, was administered to one hundred and fifty-seven grade 9 male and female students.

The results were analyzed by finding the mean and standard deviation for students on work experience and those who were not on work experience. Individual t-tests for independent samples were used to determine if there was a statistically significant difference on the total of the five variables in career decision-making between those

students on work experience and those not on work experience for grade 9 students at the .05 probability level.

The results for the total of the five variables are shown in Table 2.

Table 2

Work Experience/No Work Experience: Total of the Five Variables

	Mean	SD	t-ratio	df	Level of significance
Not on Work Experience	33.86	4.9	2.19	155	p < .05
Work Experience	31.47	5.8			

Students not on work experience had a mean of 33.86 and a standard deviation of 4.9. Students on work experience had a mean of 31.47 and a standard deviation of 5.8. The mean for the total of the five variables scores between students not on work experience and students on work experience differed by 2.39. The t-ratio of the difference between the means was 2.19. The results showed that students not on work experience had statistically significant higher scores on the total of the five variables as compared to students on work experience.

The second hypothesis stated that there would be significant differences in career attitudes among subjects that have been or not been involved with work experience. The researcher predicted that students on work experience would have higher levels of career maturity.

The results indicated that students who were not on work experience scored higher on the total of the five variables.

Chodzinski (1983) found in his study that students who were on part-time work experience was not statistically a good predictor of the career maturity variables. He found that students who were not on work experience scored higher on one subtest (Decisiveness) and scored higher on the total score of the Attitude Scale. More research was suggested by Chodzinski to address the question of what variables are good predictors. This researcher would concur that a separate study be designed to study students on work experience with a pre- and post-testing design.

The third hypothesis tested in this analysis was that there would be significant differences in career attitudes among students who say that CHOICES Junior Computer Program helped them and those who it did not help. The subjects who say that the Program was helpful will probably have higher levels of career maturity. In order to test this declarative hypothesis, the Crites Career Maturity Inventory-Attitude Scale, Form B-1, was administered to one hundred and fifty-seven grade 9 male and female students.

The results were analyzed by finding the mean and standard deviation for those students who said that the CHOICES Computer Program helped them and those students who said that the CHOICES Computer system did not help them. Individual t-tests for independent samples was used to determine if there was a statistical significant difference on the total of the five variables in career decision-making between students who

said that CHOICES Junior Computer Program helped them and those students who said that the Program did not help them at the .05 probability level.

The results for the total of the five variables are shown in Table 3.

Table 3

CHOICES: Total of the Five Variables on Career Decision-Making

	Mean	SD	t-ratio	df	Level of significance
CHOICES Junior did not help	35	5.8	1.84	154	p > .05
CHOICES Junior helped	33	5.0			

Students who felt that the CHOICES Junior Computer Program did not help them had a mean of 35 and a standard deviation of 5.8 on the total of the five variables in career decision-making. Students who felt that the CHOICES Junior Computer Program helped them had a mean of 33 and a standard deviation of 5.0 on the total of the five variables in career decision-making. The means for the total of the five variables scores between students who felt that CHOICES Junior Computer Program did not help them and those who felt that the CHOICES Junior Computer Program helped them differed by 2.0. The t-ratio of the difference between the means was 1.84. It was concluded that there was no difference between the students who did not feel that CHOICES helped them and those who said that CHOICES helped them.

A pre- and post-study on the effects of CHOICES Junior would be worthwhile to complete so that in-depth information may be found. Studies seem to indicate that computerized programs improve the decision-making process for students (Pinder and Fitzgerald, 1984) and career maturity attitudes of students (Cassie, 1975, 1979; Starr, 1980). The CHOICES Junior Computer Program is a viable counselling intervention program that may assist in meeting career developmental needs of students. There are several advantages to the CHOICES Computer system which can be easily updated with current information on the new occupations that are constantly being created; thus allowing students to have the latest information. CHOICES provides a lot of information for a short intervention time and introduces the career decision-making process for students.

Career Attitudes of the Grade 9 Students Versus American Students

The fourth hypothesis tested in this study was that there would be significant differences in the normative data of the American grade 9 students as compared to the grade 9 students. The researcher predicted that Canadian youth would have higher career maturity as measured by the Crites Career Maturity Inventory-Attitude Scale, Form B-1.

The results were analyzed by finding the mean and standard deviation for American students in grade 9 as compared to grade 9 students in this study. Individual t-test for independent samples was used to determine if there was a statistically significant difference between the American and the grade 9 students at the .05 probability level.

The results for the total of the five variables are shown in Table 4.

Table 4

Career Attitudes of the Grade 9 Students Versus American Students: Total of the Five Variables on Career Decision-Making

	Mean	SD	t-ratio	df	Level of significance
Grade 9 Student Scores	33.34	5.16	2.90	18,449	p < .05
American Student Scores	32.01	5.73			

Grade 9 students had a mean of 33.34 and a standard deviation of 5.16. American students had a mean of 32.01 and a standard deviation of 5.73. The means for the total of the five variables scores between American and grade 9 students differed by 1.33. The t-ratio of the difference between the means was 2.90. It was concluded that students in this sample tended to score significantly higher than American students on the total of the five variables.

The fourth hypothesis said that there was significant differences in the normative data of the American grade 9 students as compared to the grade 9 students in this study. The results showed that students in the suburban junior high school in this study scored higher on the total of the five variables as compared to the American students.

A study by Omvig and Thomas (1977) showed that American females

(32.08 mean) and American males (30.33) were lower than the mean in this study (33.34). Also, the study in Crites' frequency distribution for grade 9 American students had a lower mean (32.01) than the students in this study (33.34). Further in-depth studies need to be completed to develop Canadian normative data.

Career Maturity and Motivators

The fifth hypothesis in this analysis was that there are significant differences in the motivators or values chosen by career mature students and less career mature students. The researcher hypothesized that the career mature student would more likely choose words like money, family and job while the less mature student would more likely choose freedom, happiness and friends. In order to test this hypothesis, a cross tab between the total of Crites Attitude Scale and the seven motivators was taken. The results of the chi square analysis are presented in Table 5.

The results were analyzed by raw score percentage and chi square as to their first choice and second choice of which word the students value the most. The first choice chosen by the students with a total score of 19-32 on a total of the five variables (2%-46% Crites percentile rank) chose the family as their first choice (raw score 35-33.1%). Students with a total score of 33-36 (54-73% Crites percentile rank) chose the family as their first choice (raw score 25-15.9%). Students with a total score of 37-38 (82-86% Crites percentile rank) chose the family (raw score 7-4.5%). Students with a total score of 39-44 (90-99% Crites percentile rank) chose the family (raw score 12-7.6%). There was no

significant difference in the mature and less mature students' first choice of motivators or values (chi square (138) = 160.9, p > .05). Table 5 presents the results of students' first choices.

Table 5

Career Maturity and Motivators: Which of the Words Do You Value the Most? (first choice)

	Categories						
Total of the Five Scales %	Money Raw %	Freedom Raw %	Health Raw %	Career Raw %	Friends Raw %	Family Raw %	Happiness Raw %
19-32 2%-46%	10 6.1%	8 4.9%	5 3.1%	0 0%	7 4.5%	35 22.1%	2 1.2%
33-36 54%-73%	1 .6%	1 .6%	3 1.9%	1 .6%	5 3.1%	25 15.9%	6 3.8%
37-38 82%-86%	1 .6%	0 0%	1 .6%	1 .6%	0 0%	7 4.5%	3 1.9%
39-44 90%-99%	0 0%	3 1.9%	1 .6%	1 .6%	0 0%	12 7.6%	9 5.6%
Total %	12 7.6%	12 7.6%	10 6.4%	4 2.5%	15 9.6%	84 53.5%	20 12.7%

Note. % - Crites grade 9 raw score converted to percentile rank.

The students second choice for which words the students value the most showed that the students with total scores between 19-32 (2-46% Crites percentile rank) chose friends (13-8.2%). Students with total scores of 33-36 (54-73% Crites percentile rank) chose friends (14-8.8%) as their second choice. Students with total scores of 37-38 (82-86% Crites percentile rank) chose freedom (6-3.7%) as their second choice. Students with total scores of 39-44 (90-99% Crites percentile rank) chose family (6-3.8%) and happiness (6-3.8%) as their second choice. The researcher expected the mature students (total score 37-44, 82-99% Crites percentile rank) chose freedom, family and happiness while the less mature (total score 19-36, 2-73% Crites percentile rank) chose friends. Table 6 represents the results for the student's second choice of word they value the most which revealed no significant difference between the mature student and the less mature student (chi square (161) = 160.3 $\underline{p}$ > .05).

Table 6

Career Maturity and Motivators: Which of the Words Do You Value the Most? (second choice)

	Categories						
Total of the Five Variables % Crites	Money Raw %	Freedom Raw %	Health Raw %	Career Raw %	Friends Raw %	Family Raw %	Happiness Raw %
19-32 2%-46%	12 7.6%	8 4.8%	6 3.7%	10 6.4%	13 8.2%	9 5.6%	10 6.4%
33-36 54%-73%	5 3.1%	4 3.1%	7 4.5%	2 1.2%	14 8.8%	6 3.8%	4 2.5%
37-38 82%-86%	4 2.5%	6 3.7%	3 1.9%	1 .6%	5 3.1%	1 .6%	0 0%
39-44 90%-99%	2 1.2%	3 1.9%	2 1.2%	2 1.2%	5 3.1%	6 3.8%	6 3.8%
Total %	23 14.6%	21 13.4%	18 11.5%	15 9.6%	37 23.6%	22 14%	20 12.7%

Note. % - Crites grade 9 raw score converted to percentile rank.
      * - No answer at 37 total score was 1 (.6%).

The fifth hypothesis was to test for significant differences in the motivators or values chosen by career mature students and less career mature students. The career mature student would choose words like money, family and job while the less mature student would choose freedom, happiness and friends. The results showed that from the 2nd percentile to the 99th percentile there was no significant difference. The first choice was family for all the students. The second choice showed that students in the 2nd to the 73rd percentile chose friends while students

in the 82nd to the 86th percentile chose freedom and the students in the
90th to the 99th percentile chose family and happiness.

A search of the literature did not reveal any studies that compared
career maturity to motivators or values chosen by students. Students
are choosing motivators or values that are important to them such as the
family or whom they are familiar with and trust. The study seems to
revitalize the fact that the family is not a crumbling institution, but
is seen as a valued institution.

Career Maturity and Who Influences Students in Career Decisions

The sixth hypothesis in this analysis was that there would be
significant differences between the less mature student and the mature
student as to who influences their career decisions. The mature student
was expected to choose his/her parents whom he thinks has accurate
information while the less mature student was expected to choose peers
who may or may not have accurate information.

The results were analyzed by raw scores, percentages and chi square
as to who influences the students the most when thinking about their
careers. The first choice chosen by students with a total score of 19-
32 (2%-46% Crites percentile rank) on the total of the five variables
was parents (43-27.3%). Students with a total score of 33-36 (54%-73%
Crites percentile rank) on the five variables was parents (26-16.5%).
Students with a total score of 37-38 (82%-86% Crites percentile rank) on
the five variables was parents (13-8.2%). Students with a total score
of 39-44 (90%-99% Crites percentile rank) on the five variables was

parents (15-9.4%). Table 7 represents the first choice of the student as to who they feel influences their career plans. The researcher concluded that there was significant difference between the less mature and the mature student as to who influences their career decisions (chi square (115) = 155.9, p < .05). The less mature were influenced to a higher degree by parents when making career decisions.

The students second choice for who they felt influenced their career decisions showed that students with a total score of 19-32 (2%-46% Crites percentile rank) chose parents (19-13.3%). Students with a total score of 33-36 (54%-73% Crites percentile rank) chose friends (12-7.6%). Students with a total score of 37-38 (82%-86% Crites percentile rank) chose friends as their second choice (7-4.5%). Students with a total score of 39-44 (90%-99% Crites percentile rank) chose parents as their second choice (6-3.8%). Table 8 represents the second choice of the students as to who they feel influences their career plans. The researcher concluded that there was no significant difference between the less mature students and the mature students (chi square (138) 132.09, p > .05).

Table 7

Career Maturity and Motivators: Who Influences You the Most When Thinking About Your Career Plans? (first choice)

			Categories			
Total of the Five Variables % Crites	Parents Raw %	Friends Raw %	Teacher Raw %	Siblings Raw %	Relatives Raw %	Other Raw Raw % %
19-32 2%-46%	43 27.3%	8 5%	3 1.8%	2 1.2%	0 0%	1 6.9%
33-36 54%-73%	26 16.5%	3 1.9%	1 .6%	2 1.2%	2 1.2%	8 5.1%
37-38 82%-86%	13 8.2%	2 1.3%	0 0%	1 .6%	2 1.3%	4 2.5%
39-44 90%-99%	15 9.4%	0 0%	1 .6%	1 .6%	0 0%	9 5.7%
Total %	97 61.8%	13 8.3%	5 3.2%	6 3.8%	4 2.5%	32 20.4%

Note. % – Crites grade 9 raw score converted to percentile rank.

Table 8

Career Maturity and Motivators: Who Influences You the Most When
Thinking About Your Career Plans? (second choice)

			Categories			
Total of the Five Variables % Crites	Parents Raw %	Friends Raw %	Teacher Raw %	Siblings Raw %	Relatives Raw %	Other Raw %
19-32 2%-46%	19 13.3%	18 11.4%	10 6.3%	6 3.8%	9 5.7%	4 2.5%
33-36 54%-73%	10 6.3%	12 7.6%	4 2.5%	6 3.8%	7 4.5%	3 1.9%
37-38 82%-86%	5 3.2%	7 4.5%	2 1.2%	2 1.2%	4 2.5%	1 .6%
39-44 90%-99%	6 3.8%	4 2.5%	5 3.2%	4 2.5%	3 1.9%	3 1.9%
Total %	40 25.5%	41 26.1%	21 13.4%	18 11.5%	23 14.6%	11 7%

Note. % - Crites grade 9 raw score converted to percentile rank.

The sixth hypothesis was that there would be significant differences
between the less mature student and the mature student as to who
influences their career decisions. The less mature student would
probably choose friends while the mature student would choose parents.
The first choice of students from the 2nd percentile to the 99th
percentile was parents. The second choice showed that students in the
2nd to the 46th percentile and the 90th to the 99th percentile chose
parents. Students in the 54th percentile to the 86th percentile chose
friends.

The researcher was unable to find specific research related to career maturity attitudes and who they would choose to help them make career decisions. One study related to who influences you with making post-secondary plans was completed by Larter, Cheng, Capps and Lee (1982). They found that parents were the most influential for helping students make post-secondary plans with their children. Other research supported that students tend to seek out someone who is familiar and who they trust such as parents and friends (Shapiro, 1980; Ames and Lau, 1982; Morgan and Sawyer, 1979). People working with students to plan their futures must recognize who is most influential in their lives. By recognizing the people who influence our students, then and only then, may programs be developed to assist our students in making career choices.

Other Results

Students were asked "Who influences you the most when thinking about your career plans?" The students placed a "1" after their first choice and "2" after their second choice as to who influences their career decisions. Appendix H shows that students chose parents (62%) as their first choice. Both males (64.3%) and females (58.9%) chose parents as the key person who influences their career choices. Both students who were on work experience (38.2%) and not on work experience (68%) chose parents as the person who influences their career choices.

Students' second choices are presented in Appendix I. Friends (26%) and parents (25%) were the most frequent choices. Males chose friends

21.8% of the time and parents 23.9% of the time while females chose friends 31.5% of the time and parents 27.4% of the time. Work experience students chose parents 36% of the time and friends 21% of the time while non work experience students chose friends 28% of the time and parents 23% of the time.

The third question on the questionnaire asked students "who influences you the most when thinking about your career plans?" Both males and females, students on work experience and not on work experience chose parents as their first choice to help with their career planning. The second choices were friends for males, females and students not on work experience, while students on work experience remained with parents. During the adolescent phase we think of the students as not wanting to listen to parents, but the evidence seems that even though they may rebel during this time they still feel that parents are important people who help them with their career plans. It is a person who they know and trust. The students seem to perceive the willingness of friends and parents from positive past experiences as useful help. It becomes imperative that counsellors make available current career information to parents so that they may help their child to make good career decisions for the future. (See Table 9).

Table 9

Who Influences You the Most When Thinking About Your Career Plans?
(first and second choice)

Other Category

Other	1st Choice Raw Score %	2nd Choice Raw Score %
Me	24 75%	5 50%
Experience	1 3.1%	2 20%
T.V.	2 6.3%	1 10%
Doctors	0 0%	1 10%
Nobody	1 3.1%	0 0
Singer/songwriter	1 3.1%	0 0%
Surroundings	1 3.1%	0 0%
University students	1 3.1%	0 0%
Cadets	0 0%	1 10%
People I look up to	1 3.1%	0 0%

The students responded to the other category with 24 students saying "me" as the person who influences them the most when thinking about

their career plans.

The final question on the questionnaire was "which words do you value the most?". They were asked to place a "1" by their first choice and a "2" by their second choice. Appendix J shows the students' first choice. The students value family the most (53.5%). More females (61.6%) than males (46.4%) chose family as the word they value the most. Both students who were on work experience (38.2%) and those not on work experience (58%) chose family as the word they value the most.

The results of the students' second choice of words that they value the most is presented in Appendix K. Their second choice was friends (23.6%). Both males and females value friends as their second choice of words. There is a difference in students who were on work experience. They chose money (23.9%) as what they valued the most rather than friends while students not on work experience had chosen friends (27.6%).

The fourth question on the questionnaire was "which words do you value the most?" The students first choices were family for males, females, students on work experience and students not on work experience. It seems that in this day and age the family should not be underestimated. We tend to think of the family as disintegrating and not influencing the students while friends seem to be the strong focal point as compared to the family. This does not seem to be the case. The students' second choice is friends for males, females and students not on work experience while the students on work experience seem to value money more. When students go on work experience they may begin to

realize that work may provide money if a job is done correctly which is the ultimate reward for a job well done. The research supports that students chose words that are familiar to them, such as parents and friends. Laxter, Cheng, Capps and Lee used such words as family, health, education and happiness in their study to find out which words were of importance to the student. Both males and females in grade 9 felt that family was the most important, while health was second.

Attitude Scale

The results of the CMI Attitude Scale were dealt with as total scores in this research, even though the Attitude Scale can be divided into five subscales. Nevertheless, by examining each of the five subscales individually, valuable information on how grade 9 students make career decisions was obtained. The first subscale is decisiveness in career decision-making. This means the extent to which an individual is definite about making a career choice. Appendix L shows the total raw score, mean, standard deviation, Crites percentile rank, raw score and percentages for males and females on work experience and not on work experience. There were nine statements that the students had to respond to on the Inventory. The test statements had a total mean of 4.8 (44% Crites percentile) on a scale of 9 and a standard deviation of 2.36. The females scored at the 46th percentile which is above the total mean of correct statements (mean = 4.8) on decisiveness in career decision-making while males scored at the 31st percentile which is below the total mean of correct statements (mean = 4.8). The students on work

experience scored at the 46th percentile while the students who were not on work experience scored at the 58th percentile which is above the total mean of correct statements (mean = 4.8). The raw scores for males and females placed them between the 46th percentile and the 58th percentile which is above the total mean of correct statements (mean = 4.8).

The second subscale of the Attitude Scale was involvement in career decision-making. This means the extent to which an individual is actively participating in the process of making a choice. There were ten statements that the students had to respond to on the Attitude Scale. In Appendix M, the total raw score, Crites percentile ranking, raw score and percentage for males and females, raw score and percentage for students not on work experience and those on work experience are presented. The mean of the number of correct test statements was 8.9 (46th percentile), and a standard deviation of 1.4. Both males (33.3%) and females (60.3%) scored at the 82nd percentile which is above the mean of the number of correct statements. Students not involved with work experience scored at the 82nd percentile which is above the mean of the number of correct statements while students on work experience scored at the 24th percentile which is below the mean of the number of correct statements.

The third subscale of the Attitude Scale is independence in career decision-making. This means the extent to which an individual relies upon others in the choice of an occupation. There were ten statements that the students responded to on the Attitude Scale. Appendix N

presents the total raw score, Crites percentile ranking, raw score and
percentages for males and females, raw score and percentages for
students not on work experience and students on work experience. The
students had a number of correct test statement mean of 8.6 (54th
percentile), and a standard deviation of 1.79. Both males (29.8%) and
females (47.9%) scored at the 84th percentile which is above the mean of
the number of correct statements. Students who were involved with work
experience (32.4%) and students who were not involved with work
experience (39.8%) scored at the 84th percentile which is above the mean
of the number of correct statements.

The fourth subscale of the Attitude Scale is orientation in career
decision-making. This means the extent to which an individual is task
or pleasure-oriented in his or her attitude toward work and the values
he or she places upon work. There were ten statements for the students
to respond to on the Attitude Scale. Appendix O presents the total raw
score, Crites percentile ranking, raw score and percentage for male and
female, raw score and percentage for students not involved in work
experience and those students who were involved in work experience. The
mean of the number of correct test statements was 6.9 (41st percentile)
and standard deviation of 2.57. Both males (17.9%) and females (20.5%)
scored at the 92nd percentile which is above the mean of the number of
correct statements. Students on work experience (17.6%) and students
not on work experience (19.5%) scored at the 92nd percentile which is
above the mean of the number of correct statements.

The final test subscale was compromise in career decision-making.

This means the extent to which an individual is willing to compromise between needs and reality. Appendix P presents the total raw score, Crites percentile ranking, raw score and percentage for males and females, raw score and percentage for students who were not on work experience and for students who were on work experience. The mean of the number of correct test statements was 5.2 (42nd percentile) and standard deviation of 1.45. The males (28.6%) and females (30.1%) scored at the 69th percentile which is above the mean of the number of correct statements. Students on work experience (32.4%) and students who were not on work experience (28.5%) scored at the 69th percentile which is above the mean of the number of correct statements. The results suggest that males and females, students on work experience and students not on work experience scored at the 69th percentile on compromise which is above the mean of the number of correct statements.

The five attitudinal subscales combine to provide career choice attitudes as related to the career choice process which give a portion of the total students career maturity. The mean of the number of correct test statements from the five subtests was 33.3 (54th percentile) with a standard deviation of 5.16. The majority of the students scored above the 54th percentile (mean = 33.3). The majority of students not involved in work experience scored above the 54th percentile (mean = 33.3) to the 99th percentile (60.8%). The majority of the students on work experience scored below the 54th percentile (mean = 33.3) to the 2nd percentile (54.2%). The males who scored from the 54th percentile to the 99th percentile was 53.7% of the total males.

The females who were between the 54th percentile to the 99th percentile had 61.6% of the females scoring in this range. Table 10 presents the above data.

Table 10

Total of the Five Subtests

			Sex		Work Experience	
Crites Total of the Five Subtests	% ile Crites *	Total Raw Score %	Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
19	2%					
22	5%					
23	7%	42.3%	46.6%	38.2%	38.1%	54.2%
24	10%					
25	12%					
26	16%					
27	18%					
28	24%					
29	27%					
30	34%					
31	38%					
32	42%					
33	54%					
34	62%	26.8%	29.8%	23.3%	28.4%	20.5%
35	66%					
36	73%					
37	82%					
38	86%					
39	90%					
40	93%	30.5%	23.9%	20.5%	32.4%	20.5%
41	96%					
42	98%					
43	99%					
44	99%					

Mean = 33.3   Standard Deviation = 5.16   Standard Error Measurement = .41

Note. % Crites – Grade 9 raw score converted to percentile rank.

Detailed Table in Appendix G.

The attitude scale results for each subscale and the total of the
five subscales revealed interesting results. The first subscale of
Decisiveness in Career Decision-making which means the extent to which
an individual is definite about making a career choice. The majority of
the females scored at the 46th percentile on this subscale as compared
to the males who scored at the 31st percentile. The majority of the
students on work experience scored below the 46th percentile as compared
to students not on work experience who scored at the 58th percentile.
Overall, the majority of students scored at the 44th percentile. The
second subscale was involvement which means the extent to which an
individual is actively participating in the process of making a choice.
The majority of males, females and students not on work experience
scored at the 82nd percentile while students on work experience scored
at the 24th percentile. Overall, the majority of students scored at the
46th percentile. The third subscale, Independence in Career Decision-
Making means the extent to which an individual relies upon others in the
choice on an occupation. The majority of males, females, students on
work experience and students not on work experience scored at the 84th
percentile. Overall, the majority of students scored at the 54th
percentile. The fourth subscale, Orientation in Career Decision-Making
means the extent to which an individual is task or pleasure-oriented in
his or her attitude toward work and the values he or she places upon
work. The majority of males, females, students on work experience and
students not on work experience scored at the 92nd percentile. Overall,
the majority of students scored at the 41st percentile. The final

subscale is Compromise in Career Decision-Making which means the extent to which an individual is willing to compromise between needs and reality. Males, females, students on work experience and students not on work experience scored at the 69th percentile. Overall, the majority of students scored at the 42nd percentile. The five attitudinal subscales combine to provide career choice attitudes as related to the career choice process which gives a portion of the total students career maturity. Between the 54th and 99th percentile the majority of females scored higher (61.6%) than the males (53.7%). The research evidence supports that females have higher career maturity levels than males (Omvig & Thomas, 1975; Omvig & Thomas, 1977; Neely, 1980) which is consistent with the results of this study. The majority of students on work experience scored between the 2-42nd percentile (54.2%) while the majority of students not on work experience scored from the 54-99th percentile (60.8%). The results of the study did not support that work experience increases career maturity.

While this suburban aspect of the student population would seem to allow wide generalization of findings to ninth graders, in other suburban schools, the readers, are urged to take the nature of this student population into account when generalizing their findings.

CHAPTER V

Summary, Conclusion and Recommendations

This final chapter of the study contains a summary of the study, conclusions that were drawn and recommendations for further research.

Summary

The purpose of the study was to investigate the career attitudes and career maturity of grade 9 male and female students in a suburban junior high school. Additional objectives of the study were: (a) to determine whether career programs such as students reactions to CHOICES Junior Computer System and participation in work experience was associated with students' career attitudes, (b) to determine whether the grade 9 students have higher levels of career maturity as compared to the American normative students, (c) to determine who reportedly influences students' career decisions, (d) to determine which motivators or values the students feel are important. Data was collected by using the Crites Attitude Scale and by using a questionnaire designed by the researcher. The number of subjects in this study consisted of 73 females (46%) and 84 males (54%) for a total of 157 grade 9 students. In the study the majority of the students were either 14 or 15 years of age. All the students were involved with CHOICES Junior Computer Program except one student who came into the school after the Program was presented. The

students who were involved in work experience was 22% of the total grade 9 population.

Results indicated that there was no difference between males and females on the Attitude Scale with the exception of involvement and independence variables where females scored higher. Thus, there is no difference in career maturity between males and females.

Career programs such as work experience indicates that students who were not on work experience had higher levels of career maturity as measured by Crites Attitude Scale. Students who said that CHOICES Junior Computer Program helped them were as career mature as those students who said that CHOICES did not help them. These programs seem to make students aware of career options and information.

Career maturity among grade 9 students and American normative students was measured by Crites Attitude Scale. The results indicated that the students in this study were higher on the total of the five subscales. Are Canadian schools doing more in classes to increase the career maturity of students?

Motivators and values that students chose as their first choice was family. The students reported the people who influenced their career decisions the most were parents. It seems apparent that the family and parents are the key people in their lives in helping them to make career choices.

Limitations of the Study

This study was limited to one suburban junior high school in

Winnipeg, Manitoba, Canada. Thus, the results may only be generalized to grade 9 students in one suburban school. Also, the personal impact of the counsellor reading each question may or may not affect the results of the tests. The standardized presentation of the survey form was followed and, as a result, possible presenter effects were minimized. The reader should be aware that the study does not control for extraneous factors such as socioeconomic factors. A larger sample of work experience students may have produced a more representative and hence more consistent differentiation from students not on work experience. Only the attitudinal scale of the Career Maturity Inventory was used. This means that to have an overall career maturity level would mean that the competency scale needed to be completed by the students. Thus, a broader measuring of career maturity may or may not have affected the results of the study.

Conclusions

The results of this research study have provided pertinent information about grade 9 male and female students' career maturity and other factors. Based on the results of this study, and in light of the limitations, the following conclusions are:

1. The overall career maturity of grade 9 male and female students in one suburban junior high school was similar. The study supports Crites (1969, 1965) earlier studies that males and females do not score differently on the five subscales of the Career Maturity Attitude Scale. Thus, the scale norms are applicable to both females and males.

In support of this study, Fouad (1988) and Crites (1969, 1965) found that females and males scored the same in the total of the five subscales. Fouad (1988) found that females scored higher on involvement and orientation. This study seems to indicate that females see themselves as more active in the process of making a career choice (involvement) and less reliant on others in making a career choice (independence) as compared to males.

2. The overall career maturity of students who were not on work experience was higher than students on work experience. The study did not attempt to measure change in career maturity for work experience students. The sample size for the work experience students was below 50 students which may have influenced the results of this study. Another study (Shively, 1977) has confirmed that students who are out on work experience showed significantly more positive attitudes towards work and higher levels of career maturity. The impact of these work experience and CHOICES Junior Computer Programs must not be overlooked. If these programs are not done in isolation, but with other career activities, they will have a powerful impact on students in increasing career maturity levels.

3. The CHOICES Junior Program had an impact on career maturity of grade 9 students. Using the CHOICES Junior Computer Program may be used to increase career maturity of students. This is another way to manipulate the external environment so as to increase career maturity. This study shows that eighty-two percent of the students were helped to become aware of career options.

Although there was no difference in career maturity of students who felt that the CHOICES Program helped them and those who felt it did not help them, there are studies (Cassie, 1975; Cassie, 1979) that have concluded that career maturity is increased with computerized career programs. This type of program must not be done in isolation but with other career activities as they complement each other with the idea to increasing the student's career knowledge.

4. The overall career maturity in the grade 9 students in this study was higher than American students. This study confirms that grade 9 students have higher career maturity as compared to American students. The results of other studies (Omvig & Thomas, 1977; Crites, 1978) have shown that American students scored lower in the career maturity than did the students in Canada. The grade 9 students in this study have been provided with career education activities which seem to provide career skills and information to the student. Thus, the grade 9 students in this study appear to be more career mature as compared to the American students from Crites (1978) normative data.

5. Grade 9 students are concerned about the family as opposed to money or jobs in their lives. The students in this study value the family over money, friends, health, career/job, freedom and happiness. The fact that students feel the family is important strengthens the position of the family as a valued part of the student's life. A review of the literature showed this research is the first known Canadian study to explore values from a career perspective.

6. Grade 9 students feel that parents influence and help them with their career decisions. Students seek certain individuals who they value and trust to help with their career decisions. Students seek help with career planning from parents, friends or relatives (Ames & Lau, 1982). The researcher confirms that parents and friends are important sources of help for students making career decisions. Parents are the most influential people in helping a student to make career plans. Students may see parents and friends as understanding of their career problems. A parent or friend may be quicker to recognize when a student is having problems and a parent or friend feels comfortable in providing feedback.

Recommendations

The following suggestions for future research are presented as a result of this study:

1. Research is needed to determine if the CHOICES Junior Computer Program is providing appropriate information and increasing the career maturity of students. The CHOICES Junior system has been in junior high schools since 1987. Very little research has been completed on this Program as compared to CHOICES Senior. The review of the literature shows that the CHOICES for senior high school has been researched extensively while CHOICES Junior has not been studied extensively. In order to have this Program in our school and use time for this Program it is important to validate whether these Programs are meeting the needs of our students.

Therefore, a study involving CHOICES Junior Computer system and career maturity needs to be conducted in the junior high schools.

2. The counsellors need to be aware that parents, friends, and relatives play a large part in helping students with their career plans because they know these people and trust them. Counsellors should be providing information to the key people that are helping students develop appropriate career plans.

   A study designed to survey parents, friends and relatives as to their attitudes, knowledge and how they see their role in helping students to achieve career planning would be helpful to the counsellor in providing appropriate programs for students, parents, friends and relatives.

3. The research on values/motivators that students feel are important was not extensive. The researcher could only find one study related to words that students value the most. Further research is needed to verify what values/motivators students feel are important.

4. Programs need to be developed to increase the students' career maturity, especially students who are on work experience and males. Further study needs to be done on students who were on work experience as their group had a small number of students involved. A Divisional study would be appropriate.

5. Further studies should be conducted in other suburban junior high schools to provide counsellors with additional information on the career maturity of junior high school students.

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Appendix A

October 20, 1990

Ms. Shirley Whitaker
Counsellor
Westdale Junior High
6720 Betsworth Avenue
Winnipeg, Manitoba
R3R 1W3

Mr. Steve Dvorak
Superintendent
Assiniboine South School Division #3
3401 Roblin Boulevard
Winnipeg, Manitoba
R3R 0C6

Dear Mr. Dvorak:

I have been an employee of Assiniboine South School Division for the past ten years. I am currently completing my masters at the University of Manitoba in the area of counselling under the direction of Dr. Bill Schultz.

I am writing to gain permission from Assiniboine South School Division to gather career information on grade nine students. The purpose of the study is to investigate the career attitudes and career maturity of grade nine male and female students. The study will utilize a questionnaire and the career maturity inventory. (Career Attitudes) The research tools have been included with this letter. The career attitude scale takes 60 minutes to complete the introduction of the study and the initial questionnaire takes 15 minutes to complete. The total testing time is approximately 78 minutes. The students may discontinue the test at any time.

I would like to use the following school in the study if the principal feels comfortable: Westdale Junior High, I have submitted a possible form letter for the study that the principal may send to parents that gain their permission to have their son/daughter involved in the study.

The information in the study will be treated as confidential. The results of the study will be made available to Assiniboine South School Division. (Students, Parents, Administrators, Superintendents, etc.) Hopefully, the study will provide information about our student's attitudes about careers so that educators might provide appropriate programming and preparation for our students into the future.

I hope that the information provided is clear and complete, if not please contact me for further information.
Awaiting your reply.

Sincerely yours,

(Ms.) Shirley Whitaker
Counselor
Westdale Junior High
(   )

Appendix B

May 13, 1991

Dear Parent;

In order to learn more about career development of adolescents, it is sometimes necessary to conduct investigations into their perceptions and attitudes towards careers. The purpose of this letter is to inform you that Shirley Whitaker, a counsellor in our school division and student at the University of Manitoba is conducting such a study and is requesting your permission to allow your child to participate in this research.

The purpose of the study is to find out what type of attitudes that your son or daughter has towards work. The study will be introduced to the students and a questionnaire will be completed by the student. Following the introduction and the questionnaire, the students will work on one instrument that gathers information on their attitudes towards jobs. The total testing time will be approximately 78 minutes. At the beginning of the session the researcher will emphasize that a student may discontinue the testing at anytime without penalty. The survey will be administered by a professional counsellor. A discussion of the results will be conducted with the students at a later date. The information in the study will be treated as confidential.

If you have any questions about the study or the nature of the questionnaire please contact Shirley Whitaker at Westdale Junior High (895-8205). The school will be given the results of the survey. Please complete the bottom portion of this letter and have your child return the letter to the school.

Yours truly,

S. Whitaker
Counsellor

D. W. Thompson
Principal

PLEASE CHECK: _____ I WISH MY CHILD TO PARTICIPATE.

_____ I DO NOT WISH MY CHILD TO PARTICIPATE.

_____

Appendix C

DISCUSSION WITH STUDENTS

Purpose of the Study

The purpose of the study was to survey the career attitudes and career maturity of grade nine male and female students in a suburban school.

Testing Instruments

1. The first instrument is a short questionnaire asking for information on: choices, C.A.R.E., who influences your career decisions and what is most important to you.

2. The Attitude Scale of the Career Maturity Inventory is a survey questionnaire rather than a test. It is suggested that you complete the Scale indicating your feelings about each item rather than being concerned with whether the answer is correct. Thus, you should respond to each item solely on the basis of how that item applies to your own feelings about the world of work. This Attitude Scale, Counselling Form B-1, takes approximately 60 minutes to administer.

Researchers Procedures

Materials that each person would need for the testing periods are as follows:

1. Attitude Scale and the questionnaire

2. Answer sheet for the appropriate form

3. Lead pencil (number 2 or softer) with eraser attached

The test administrator should have the following:

1. CMI administration and user manual

2. Attitude Scale booklet and the questionnaire

3. Answer sheets and direction for completing the forms

4. Time piece

The following steps will be followed to administer the devices:

1. Students will have a soft-lead (number 2) pencil

2. Distribute the questionnaire and have each student complete this form

3. Distribute the appropriate answer sheets to the students

4. Ask the students to complete the biographical information on the answer sheet

5. Read aloud, to the students, the section "About This Inventory" directions and answer any questions

ABOUT THIS INVENTORY

The Career Maturity Inventory has been constructed to survey the various attitudes which are important in making decisions about your career; it is not a personality inventory, an interest inventory, an achievement test, or an aptitude test.

The Attitude Scale, which you are about to take, asks you about your attitudes and feelings toward making a career choice and entering the world of work.

The information you get from taking the Career Maturity Inventory can be used in choosing and planning for your career and can

contribute to your career maturity. Complete this inventory
carefully and thoughtfully; it may help you choose a more satisfying
and successful career (Crites, 1978).

Take time to answer any questions which may be asked about the
introductory statement.

6. The administer will read aloud (Crites, 1978, p. 9) the "Directions".

                          DIRECTIONS

There are a number of statements about career choice which will be
read aloud. Career choice means the kind of job or work which you
think you will probably be doing when you have finished all of your
schooling.

a. I will read aloud the statements and mark your answers in the
    section marked ATTITUDE SCALE on the separate Answer Sheet. If
    you agree or mostly agree with the statement, use your pencil to
    blacken the space marked with a T. If you disagree or mostly
    disagree with the statement, blacken the space marked with an F.
    Be sure that your marks are heavy and black and that they
    completely fill the spaces. Erase completely any answer you wish
    to change. Do not make any stray pencil marks on the answer
    sheet.

b. In the Attitude Scale section of your Answer Sheet, find the row
    of spaces number "1". Mark your answers starting in this row.
    Mark only one space for each item. Make your mark heavy and
    black and make sure that it fills the space.

This is the end of the Attitude Scale. Make sure that you have completely erased any unwanted marks on your Answer Sheet (Crites, 1978, p. 10-11).

7. When the time is up, collect the Attitude Scale answer sheets and questionnaires.

Following the collection and analysis of the data, the investigator will discuss with each testing group the general results of the study. No individual scores will be made available to the students.

Appendix D

About
This
Inventory

The *Career Maturity Inventory* has been constructed to survey the various attitudes and competencies which are important in making decisions about your career; it is not a personality inventory, an interest inventory, an achievement test, or an aptitude test.

This inventory consists of an *Attitude Scale* and a *Competence Test*. The *Attitude Scale*, which you are about to take, asks you about your attitudes and feelings toward making a career choice and entering the world of work. The *Competence Test* is more concerned with knowledge about occupations and the decisions involved in choosing a career.

The information you get from taking the *Career Maturity Inventory* can be used in choosing and planning for your career and can contribute to your career maturity. Complete this inventory carefully and thoughtfully; it may help you choose a more satisfying and successful career.
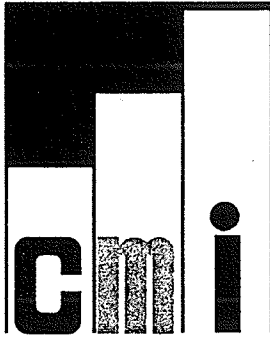
Directions

There are a number of statements about career choice in this booklet. Career choice means the kind of job or work which you think you will probably be doing when you have finished all of your schooling.

Read the statements and mark your answers in the section marked ATTITUDE SCALE on the separate Answer Sheet. If you agree or mostly agree with the statement, use your pencil to blacken the space marked with a T. If you disagree or mostly disagree with the statement, blacken the space marked with an F. Be sure that your marks are heavy and black and that they completely fill the spaces. Erase completely any answer you wish to change. Do not make any stray pencil marks on the Answer Sheet.
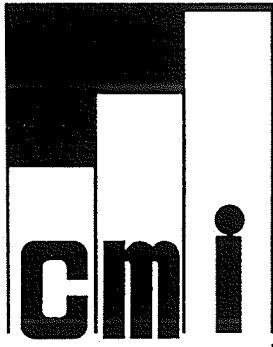
1   I often daydream about what I want to be, but I really haven't chosen a line of work yet.

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 your 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 think 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 more 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 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 it.

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 E

Questionnaire _____   _____

        Research Questionnaire for Grade Nine Students at Westdale Junior

The Research Questionnaire wants to know more about grade nine student's

attitudes toward work (jobs).

Please answer all the questions as honestly as you can.

All information will be kept strictly confidential.

_____

Name: _____   Date: _____

Age: _____   Sex: 1. Female ____   2. Male ____

1. Have you been involved in work experience in the school? (Check

    either Yes or No)

    (C.A.R.E.) A. Yes ____   B. No ____

2. Have you worked with the CHOICES computer system?

    A. Yes ____   B. No ____

    If Yes, did the system help you become more aware of career options

    and information?

    A. Yes ____   B. No ____

3. Who influences you the most when thinking about your career plans:

    (Place #1 after your first choice and #2 after your second choice).

    Parent(s)   _____   Brothers/Sisters   _____

    Friends   _____   Relatives   _____

    Teacher/

      Counsellor   _____   Others (Specify)   _____

4. Which of the words do you value the most? (Place #1 after your first choice and #2 after your second choice).

Money _____   Friends _____

Freedom _____   Family _____

Health _____   Happiness _____

Career/Job _____

When you have completed the questionnaire, place the forms face down on your desk.

Thank you for your cooperation.

_____

DE	INV	IND	OR	CO	TOTAL

Average: Mathematics _____
English _____

Appendix F

Questionnaire _____   _____

        Research Questionnaire for Grade Nine Students at Westdale Junior

The Research Questionnaire wants to know more about grade nine student's

attitudes toward work (jobs).

Please answer all the questions as honestly as you can.

All information will be kept strictly confidential.

Name: _____   Date: _____

Age: _____   Sex: 1. Female 73 (46%) ___   2. Male 84 (54%) ___

14 years: 95 (61%)   43 (58.9%)   .   52 (69.9%)

15 years: 60 (38%)   29 (39.7%)   31 (36.9%)

16 years: 2 (1%)   1 (1.4%)   1 (1.2%)

1. Have you been involved in work experience in the school? (Check

    either Yes or No)

    (C.A.R.E.) A. Yes 34 (22%)   B. No 123 (78%)

    Females: 15 (44%)

    Males: 19 (56%)

2. Have you worked with the CHOICES computer system?

    A. Yes 156 (99%)   B. No 1 (1%)

    If Yes, did the system help you become more aware of career options

    and information?

    A. Yes 129 (82%)   B. No 27 (17%) 1 (1%) not involved in the program

    females 61 (47%)   females 12 (44%)

    males   68 (53%)   males   15 (56%)

3. Who influences you the most when thinking about your career plans: (Place #1 after your first choice and #2 after your second choice).

Parent(s) _____

0 - 20 (13%)

1 - 97 (62%)

2 - 40 (25%)

Friends _____

0 - 103 (66%)

1 - 13 (8%)

2 - 41 (26%)

Teacher/

 Counsellor _____

0 - 131 (83%)

1 -   5 (3%)

2 - 21 (14%)

0 -- not chosen

1 -- first choice

2 -- second choice

Brothers/Sisters _____

0 - 133 (85%)

1 -   6 (4%)

2 - 18 (11%)

Relatives _____

0 - 130 (83%)

1 -   4 (3%)

2 - 23 (14%)

Others (Specify) _____

0 - 114 (73%)

1 - 32 (20%)

2 - 11 (7%)

4. Which of the words do you value the most? (Place #1 after your
    first choice and #2 after your second choice).

    Money   ____   Friends   _____

      0 - 122 (78%)   0 - 105 (67%)

      1 - 13 (8%)   1 - 15 (10%)

      2 - 22 (14%)   2 - 37 (23%)

    Freedom   ____   Family   _____

      0 - 124 (79%)   0 - 51 (32%)

      1 - 12 (8%)   1 - 83 (53%)

      2 - 21 (13%)   2 - 23 (15%)

    Health   ____   Happiness   _____

      0 - 129 (82%)   0 - 117 (74%)

      1 - 10 (8%)   1 - 20 (13%)

      2 - 15 (10%)   2 - 20 (13%)

    Career/Job ____

      0 - 138 (87%)

      1 -   4 (3%)

      2 - 15 (10%)

    0 -- not chosen

    1 -- first choice

    2 -- second choice

    When you have completed the questionnaire, place the forms face down
on your desk.

    Thank you for your cooperation.

_____

   ____   ____   ____   ____   ____   ____
    DE   INV   IND   OR   CO   TOTAL

Average: Mathematics _____
          English   _____

Appendix G

Table 11

Total of the Five Subtests

Crites Total of Five Subtests	% tile Crites *	Total Raw Score %	%	Male Raw Score %	%	Female Raw Score %	%	No Raw Score %	%	Yes Raw Score %	%
19	2%	1		1		0		0		1	
		.6%		1.2%		0.0%		0.0%		2.9%	
22	5%	1		1		0		0		1	
		.6%		1.2%		0.0%		0.0%		2.9%	
23	7%	3		1		2		2		1	
		1.9%		1.2%		2.7%		1.6%		2.9%	
24	10%	4		2		2		3		1	
		2.5%		2.4%		2.7%		2.4%		2.9%	
25	12%	3		1		2		2		1	
		1.9%		1.2%		2.7%		1.6%		2.9%	
26	16%	4		2		2		3		1	
		2.5%		2.4%		2.7%		2.4%		2.9%	
27	18%	7		3		4		4		3	
		4.5%		3.6%		5.5%		3.3%		8.8%	
28	24%	4		2		2		3		1	
		2.5%	(42.7%)	2.4%	(46.6%)	2.7%	(38.2%)	2.4%	(38.1%)	2.9%	(54.2%)
29	27%	11		4		7		8		3	
		7.0%		4.8%		9.6%		6.5%		8.8%	
30	34%	6		6		0		4		2	
		3.8%		7.1%		0.0%		3.3%		5.9%	
31	39%	15		11		4		11		4	
		9.6%		13.1%		5.5%		8.9%		7.5%	
32	42%	8		5		3		7		1	
		5.1%		6.0%		4.1%		5.7%		2.9%	
33	54%	11		7		4		10		1	
		7.0%		8.3%		5.5%		8.1%		2.9%	
34	62%	13		8		5		10		3	
		8.3%		9.5%		6.8%		8.1%		8.8%	
35	66%	9		5		4		7		2	
		5.7%	(26.8%)	6.0%	(29.8%)	5.5%	(23.3%)	5.7%	(28.4%)	5.9%	(20.5%)
36	73%	9		5		4		8		1	
		5.7%		6.0%		5.5%		6.5%		2.9%	
37	82%	9		5		4		7		2	
		5.7%		6.0%		5.5%		5.7%		5.9%	
38	86%	13		7		6		13		0	
		8.3%		8.3%		8.2%		10.6%		0.0%	
39	90%	7		3		4		6		1	
		4.5%		3.6%		5.5%		4.9%		2.9%	
40	93%	7		2		5		5		2	
		4.5%	(30.5%)	2.4%	(23.9%)	6.8%	(20.5%)	4.1%	(32.4%)	5.9%	(20.5%)
41	96%	5		3		2		4		1	
		3.2%		3.6%		2.7%		3.3%		2.9%	
42	98%	2		0		2		2		0	
		1.3%		0.0%		2.7%		1.3%		0.0%	
43	99%	4		0		4		4		0	
		2.5%		0.0%		5.5%		2.5%		0.0%	
44	99%	1		0		1		0		1	
		.6%		0.0%		1.4%		0.0%		2.9%	
Total		157		84		73		123		34	
		100%		100%		100%					

Mean = 33.3   Standard Deviation = 5.16   Standard Error Measurement = .41
Note. % Crites: Grade 9 raw score converted to percentile rank.

Appendix H

Who Influences You the Most when Thinking About Your Career Plans?
(first choice)

Categories	Total Raw Score	%	Sex		Work Experience	
			Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
Parent	97	62%	54 64.3%	43 58.9%	84 68%	13 38.2%
Friend	13	8%	7 8.3%	6 8.2%	5 4%	8 24.5%
Siblings	6	4%	1 1.2%	5 6.8%	5 4%	1 2%
Teacher/Counsellor	5	3%	3 3.6%	2 2.7%	1 1%	4 11.8%
Relatives	4	3%	3 3.6%	1 1.4%	4 3%	0 0%
Other	32	20%	16 19%	16 21.9%	24 20%	8 23.5%
Total	157	100%	84	73	123	34

Appendix I

Who Influences You the Most when Thinking About Your Career Plans?
(second choice)

Categories	Total Raw Score	%	Sex		Work Experience	
			Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
Friend	41	26%	18 21.4%	23 31.5%	34 28%	7 21%
Parent	40	25%	20 23.9%	20 27.4%	28 23%	12 36%
Relatives	23	15%	15 17.9%	8 11%	19 15%	4 12%
Teacher/Counsellor	21	13%	14 16.7%	7 9.6%	17 14%	4 12%
Siblings	18	12%	10 11.9%	8 11%	17 14%	1 2%
Other	11	7%	6 7.1%	5 6.8%	6 5%	5 15%
No Answer	3	2%	1 1.2%	2 2.7%	2 1%	1 2%
Total	157	100%	84	73	123	34

Appendix J

Which of the Words Do You Value the Most? (first choice)

Categories	Total Raw Score	%	Sex		Work Experience	
			Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
Family	84	53.5%	39 46.4%	45 61.6%	71 58%	13 38.2%
Happiness	20	12.7%	6 7.1%	14 19.2%	17 14%	3 8.8%
Friends	15	9.5%	9 10.7%	6 8.2%	10 8%	5 14.7%
Money	12	7.6%	11 13.1%	1 1.4%	8 6.5%	4 11.8%
Freedom	12	7.6%	8 9.5%	4 5.5%	6 5%	6 17.6%
Health	10	6.6%	8 9.5%	2 2.7%	8 6.5%	2 5.9%
Career/Job	4	2.5%	3 3.6%	1 1.4%	3 2%	1 2.9%
Total	157	100%	84	73	123	34

Appendix K

Which of the Words Do You Value the Most? (second choice)

Categories	Total Raw Score	%	Sex		Work Experience	
			Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
Friends	37	23.6%	16 19.1%	21 28.8%	34 27.6%	3 8.8%
Money	23	14.6%	12 14.3%	11 15.1%	15 12.2%	8 23.6%
Family	22	14.0%	11 13.1%	11 15.1%	19 15.9%	3 8.8%
Freedom	21	13.4%	13 15.5%	8 11%	15 12.2%	6 17.6%
Happiness	20	12.7%	11 13.1%	9 12.3%	15 12.2%	5 14.7%
Health	18	11.5%	12 14.3%	6 8.2%	14 11.4%	4 11.8%
Career/Job	15	9.5%	9 10.7%	6 8.2%	10 8.1%	5 14.7%
No Answer	1	.6%	0 0%	1 1.4%	1 .9%	0 0%
Total	157	100%	84	73	123	34

Appendix L

Decisiveness in Career Decision-Making

Number of Correct Statement	% ile Crites *	Total Raw Score %	Sex		Work Experience	
			Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
0	1%	1 .6%	1 1.2%	0 0%	1 .8%	0 0%
1	4%	12 7.6%	5 6%	7 9.6%	9 7.3%	3 8.8%
2	10%	19 12.1%	8 9.5%	11 15.1%	10 8.1%	9 26.5%
3	21%	20 12.7%	9 10.7%	11 15.1%	18 14.6%	2 5.9%
4	31%	20 12.7%	15 17.9%	5 6.8%	18 14.6%	2 5.9%
5	46%	23 14.6%	12 14.3%	11 15.1%	16 13%	7 20.6%
6	58%	23 14.6%	14 16.7%	9 12.3%	20 16.3%	3 8.8%
7	73%	14 8.9%	8 9.5%	6 8.2%	12 9.8%	2 5.9%
8	86%	13 8.3%	6 7.1%	7 9.6%	9 7.3%	4 11.8%
9	95%	12 7.6%	6 7.1%	6 8.2%	10 8.1%	2 5.9%
Total		157	84 100%	73 100%	123 100%	34 100%

Total of Correct Statements Mean = 4.8   Standard Deviation = 2.36

Standard Error Measurement = .19

Note. % Crites – Grade 9 raw score converted to percentile rank.

Appendix M

Involvement in Career Decision-Making

| | | | Sex | | Work Experience | |
Number of Correct Statement	% ile Crites *	Total Raw Score %	Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
0	--	--	--	--	--	--
1	--	--	--	--	--	--
2	--	--	--	--	--	--
3	1%	1 .6%	1 1.2%	0 0%	0 0%	1 2.9%
4	1%	1 .6%	0 0%	1 1.4%	1 .8%	0 0%
5	4%	4 2.5%	3 3.6%	1 1.4%	1 .8%	3 8.8%
6	7%	4 2.5%	2 2.4%	2 2.7%	1 .8%	3 8.8%
7	14%	14 8.9%	12 14.3%	2 2.7%	12 9.8%	2 5.9%
8	24%	27 17.2%	15 17.9%	12 16.4%	18 14.6%	9 26.5%
9	46%	34 21.7%	23 27.4%	11 15.1%	28 22.8%	6 17.6%
10	82%	72 45.9%	28 33.3%	44 60.3%	62 50.4%	10 29.4%
Total		157 100%	84 100%	73 100%	123 100%	34 100%

Total of Correct Statements Mean = 8.9 Standard Deviation = 1.4

Standard Error Measurement = .11

Note. % Crites - Grade 9 raw score converted to percentile rank.

Appendix N

Independence in Career Decision-Making

			Sex		Work Experience	
Number of Correct Statement	% ile Crites *	Total Raw Score %	Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
1	1%	2 1.3%	1 1.2%	1 1.4%	1 .8%	1 2.9%
2	1%	1 .6%	1 1.2%	0 0%	0 0%	1 2.9%
3	--	--	--	--	--	--
4	4%	4 2.5%	3 3.6%	1 1.4%	1 .8%	3 8.8%
5	7%	3 1.9%	3 3.6%	0 0%	2 1.6%	1 2.9%
6	12%	7 4.5%	4 4.8%	3 4.1%	7 5.7%	0 0%
7	21%	14 8.9%	13 15.5%	1 1.4%	9 7.3%	5 14.7%
8	34%	24 15.3%	16 19%	8 11%	19 15.4%	5 14.7%
9	54%	42 26.8%	18 21.4%	24 32.9%	35 28.5%	7 20.6%
10	84%	60 38.2%	25 29.8%	35 47.9%	49 39.8%	11 32.4%
Total		157 100%	84 100%	73 100%	123 100%	34 100%

Total of Correct Statements Mean = 8.6   Standard Deviation = 1.79

Standard Error Measurement = .14

Note. % Crites – Grade 9 raw score converted to percentile rank.

Appendix O

Orientation in Career Decision-Making

			Sex		Work Experience	
Number of Correct Statement	% ile Crites *	Total Raw Score %	Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
0	1%	1 .6%	0 0%	1 1.4%	0 0%	1 2.9%
1	1%	2 1.3%	0 0%	2 2.7%	2 1.6%	0 0%
2	3%	7 4.5%	2 2.4%	5 6.8%	6 4.9%	1 2.9%
3	7%	11 7.0%	5 6%	6 8.2%	6 4.9%	5 14.7%
4	14%	10 6.4%	5 6%	5 6.8%	8 6.5%	2 5.9%
5	21%	16 10.2%	11 13.1%	5 6.8%	13 10.6%	3 8.8%
6	31%	19 12.1%	10 11.9%	9 12.3%	16 13%	3 8.8%
7	42%	20 12.7%	15 17.9%	5 6.8%	15 12.2%	5 14.7%
8	58%	16 10.2%	6 7.1%	10 13.7%	12 9.8%	4 11.8%
9	76%	25 15.9%	15 17.9%	10 13.7%	21 17.1%	4 11.8%
10	92%	30 19.1%	15 17.9%	15 20.5%	24 19.5%	6 17.6%
Total		157 100%	84 100%	73 100%	123 100%	34 100%

Total of Correct Statements Mean = 6.9   Standard Deviation = 2.57

Standard Error Measurement = .20

Note. % Crites - Grade 9 raw score converted to percentile rank.

Appendix P

Compromise in Career Decision-Making

Number of Correct Statement	% ile Crites *	Total Raw Score %	Sex		Work Experience	
			Male Raw Score %	Female Raw Score %	No Raw Score %	Yes Raw Score %
0	--	---	--	--	--	--
1	--	--	--	--	--	--
2	3%	6 3.8%	3 3.6%	3 4.1%	3 2.4%	3 8.8%
3	10%	18 11.5%	9 10.7%	9 12.3%	13 10.6%	5 14.7%
4	21%	28 17.8%	20 23.8%	8 11.0%	21 17.1%	7 20.6%
5	42%	26 16.6%	15 17.9%	11 15.1%	20 16.3%	6 17.6%
6	69%	46 29.3%	24 28.6%	22 30.1%	35 28.5%	11 32.4%
7	92%	33 21%	13 15.5%	20 27.4%	31 25.2%	2 5.9%
Total		157 100%	84 100%	73 100%	123 100%	34 100%

Total of Correct Statements Mean = 5.2   Standard Deviation = 1.45

Standard Error Measurement = .12

Note. % Crites – Grade 9 raw score converted to percentile rank.