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Date July 27, 1978

EFFECTS OF A CAREER-LIFE PLANNING WORKSHOP ON THE VOCATIONAL
MATURITY OF MONTANA STATE UNIVERSITY STUDENTS

by

MARIAN KLISIS BLACKWOOD

A professional paper submitted in partial fulfillment
of the requirements for the degree

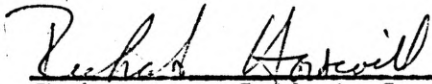
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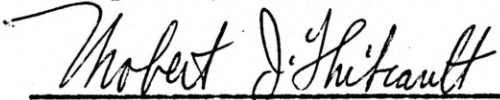
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Approved:


Chairperson, Graduate Committee


Head, Major Department


Graduate Dean

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ABSTRACT

The Attitude Scale of the Career Maturity Inventory was administered as a pretest and posttest to determine if the Career-Life Planning Workshop during spring quarter, 1978, increased the career maturity of the 28 participating Montana State University General Studies and undecided students. A control group consisted of 16 General Studies or undecided students not involved in the workshop.

Three null hypotheses were outlined and tested using the F test of variance and 't' test of means. The 0.05 level of significance was used for all tests. The test results showed the posttest mean scores were significantly greater than the pretest mean scores indicating the workshop had a positive effect on the career maturity of the participants. The males made a greater increase than the females in career maturity scores in the experimental group though the results were not significant. The residual score of the experimental group was greater and showed significantly greater variability than the control group residual score.

Data from the pretest mean scores of the control and experimental group indicated females had higher vocational maturity scores than males in three of the four age groups; vocational maturity scores did not systematically increase with age of the students or with an increase in years of school. Students who listed parental occupation as professional scored higher than semiprofessional, or sales, service, protective, skilled, farm or ranch operator or owner. The place of childhood residence being either urban or rural did not seem to have much effect on the vocational maturity scores of these students.

As well as indicating the Career-Life Planning Workshop significantly increased the career maturity of the participants, the data showed there was a period of discontinuity in these students during the sophomore and junior years at about ages 19 and 20 implying these students may need help in vocational matters during these years and not just at the beginning of the college experience.

Recommendations for further study included a suggestion for a behavioral assessment of the workshop participants as well as an attitudinal, correlating grade point average with vocational maturity of the students, and assessment of the fall, winter, and spring workshops for more meaningful data on these General Studies and undecided students.

CHAPTER 1

Introduction

Career development theorists have found that increased vocational or career maturity results in more appropriate career choices, increased options for career decisions, and more realistic planning. Being one of the prime constructs of vocational development, vocational maturity allows one to assess both rate and level of an individual's development in his career planning. Vocational maturity involves decision-making as a part of an on-going process continuing over a number of years. It is a prerequisite for making a wise occupational choice. The greater the vocational maturity the more likely an individual will pursue an occupational choice that fits his individual lifestyle.

Experience, age, and career education programs contribute toward improvement in choice competencies and attitudes resulting in occupational plans that are more congruent with individual needs and abilities. Assessment of career education programs aids in determining what type of intervention is most effective in increasing an individual's vocational maturity.

Statement of the Problem

The problem of this study was to determine if the Career-Life Planning Workshop during spring quarter 1978 increased the vocational maturity of the participants as measured by the Attitude Scale of the Career Maturity Inventory. Those involved in this study were Montana State University General Studies students and students undecided as to

curriculum major.

Purpose of this Study

Since the early 70's prominent people on the American educational scene have shown concern about accountability in education which signifies education that is answerable to all types of students, to taxpayers, and to employers (Bailey & Stadt, 1973, p. 50). Accountability can be determined by evaluating programs designed to aid participants in meeting their vocational needs. Through evaluation it will be determined how effective the Career-Life Planning Workshop was on improving the vocational maturity of the participants.

To improve vocational counseling efforts with undecided students more research is needed to establish what type of intervention is most effective in increasing vocational maturity. This study will attempt to contribute information to this area.

General Questions to be Answered

This study is intended to provide answers to these general questions:

1. Did participation in the Career-Life Planning Workshop increase vocational maturity of participants as measured by the Attitude Scale of the Career Maturity Inventory?
2. Was there a difference in the career maturity levels between females and males of the same age in this group of students?
3. Did the workshop have the same effect on the career maturity of the females as on the males?

4. Did career maturity increase with an increase in grade level in these college students?
5. Was there an increase in career maturity with an increase in age in this group of students?
6. Did the parental occupation show a relationship to the career maturity of the students?
7. Did place of childhood residence, rural or urban, affect vocational maturity?

General Procedure

The vocational maturity of students participating in a Career-Life Planning Workshop was measured using the Attitude Scale of the Career Maturity Inventory. A pretest using this instrument was administered to these Montana State University General Studies and undecided students at the beginning of the six-week workshop spring quarter 1978. Following the series of three hour weekly meetings, the Attitude Scale was again administered as a posttest. A short questionnaire used as part of the workshop provided demographic data.

Results of the pretest and posttest were analyzed to determine if the Career-Life Planning Workshop participants showed an increase in vocational maturity. The results were also used to find if there was a difference in career maturity levels between females and males of the same age in this group of students and if the workshop had the same effect on the males and females in regard to career maturity. The pretest scores of all the students were analyzed to determine

if career maturity increased with an increase in age or an increase in years of schooling. Pretest scores of students indicating a rural childhood residence were compared to those with an urban residence to find if there was a difference. To determine if parental occupation may have some effect on the career maturity of the students, the pretest scores of those whose parental occupation was listed as professional, semiprofessional, or sales, service, skilled, and farm or ranch operator or owner were compared.

Delimitation

By the nature of this study it was delimited to the participants of the Career-Life Planning Workshop held spring quarter 1978 at Montana State University.

Definition of Terms

1. Career development is "a term used to describe the accumulation of individual behaviors related to work, both before and after entry into an occupation." (Bailey & Stadt, 1973, p. 347)
2. Career education "refers to educational programs and curriculums at many different developmental levels, and provided by several types of delivery systems, which provide experiences designed to help individuals become oriented to, select, prepare for, enter, become established, and advance in an individually satisfying and productive career." (Bailey & Stadt, 1973, pp. 346-347)
3. Career Maturity Inventory is an instrument developed by

John O. Crites to measure vocational or career maturity.

4. General Studies students are students who have not declared a choice of curriculum at the time of admission to Montana State University.

5. Vocational or career maturity was used interchangeably in this study. Crites (1961, p. 259) defined vocational maturity as that construct which "refers to the maturity of an individual's vocational behavior as indicated by the similarity between his behavior and that of the oldest individuals in his vocational life stage."

Summary

Increased vocational or career maturity results in career choices that are more congruent with individual needs and abilities. Career education programs, age, and experience contribute to the development of vocational maturity. Assessment of vocational maturity improves counseling efforts with undecided students.

This study used the Career Maturity Inventory Attitude Scale to measure the results of the Career-Life Planning Workshop on the vocational maturity of the participants at Montana State University during spring quarter 1978. Other questions answered by this study concerned the possibility of a difference in vocational maturity level of males and females of the same age, was there an increase in vocational maturity with an increase in age or an increase in years of schooling,

was there a difference in the career maturity levels of urban versus rural childhood residence of these students, and did parental occupation seem to affect the vocational maturity of the student.

A review of literature was conducted to investigate the use of the Career Maturity Inventory and research related to vocational maturity.

CHAPTER 2

Review of Literature

Career development, vocational development, and occupational development refer to the lifelong process of developing work values, crystallizing a vocational identity, learning about opportunities, and trying out plans in part time, recreational, and full time work situations (Tolbert, 1974, p. 25). Reflecting the current emphasis upon the longitudinal nature of career development and the related decision-making process, vocational maturity is a concept which refers to the various behavioral dimensions along which vocational development proceeds (Pietrofesa & Splete, 1975, p. 147). Vocational maturity facilitates assessing the rate and level of an individual's development in career matters.

The Contents

To better understand the concept of vocational maturity, the review of literature will first examine the various behavioral dimensions along which vocational development proceeds.

Different measures of vocational maturity will be described next.

The third section will deal with variables related to vocational maturity.

The fourth section will cover the effect of the intervention processes on vocational maturity.

The fifth and final section will summarize research on career maturity.

Behavioral Dimensions Related to Vocational Maturity

Vocational maturity was first defined by Super in his work on the Career Pattern Study as readiness to make the vocational decisions called for by society and revealed by methods of coping with developmental tasks which are occupational in nature (Super, 1964). At the ninth-grade level vocational maturity appeared to consist of a planning orientation to life and to occupational choice, a tendency to look ahead, rather than consistency or wisdom of vocational preferences or of crystallization of traits relevant to vocational choice. More recently, Super has stated (1977) that decision-making principles are the same at any age and in dealing with any life stage. He states that these are planfulness or time perspective, exploration, information, decision-making, and reality orientation.

Gribbons and Lohnes (1964) launched a ten year longitudinal study in 1958 related to career maturity which measured variables pertaining to readiness for vocational planning. These eight variables consisted of factors in curriculum choice, factors in occupational choice, verbalized strengths and weaknesses, accuracy of self-appraisal, evidence for self-ratings, interests, values, independence of choice.

John O. Crites began a rigorous and thorough scientific investigation of the measurement of career maturity in 1961. The Vocational Development Project sought to devise an objective measure of vocational maturity that was systematically related to time. He operationally defined vocational maturity in two parts as attitudes and competencies.

Attitudinal dimensions of vocational maturity which are more conative in nature include involvement in the choice process, orientation toward work, independence in decision-making, preference for choice factors, and conceptions of the choice process. Choice competencies involve cognitive or ego functions such as assimilating information about self and reality, resolving conflicts between alternative courses of action, establishing future goals, and relating means to ends through planning.

Measures of Vocational Maturity

Only a few measures of vocational maturity have been developed and according to Westbrook and Cunningham (1970), these do not possess the quality needed for objective, reliable, and valid measurement of vocational maturity.

Super began collecting longitudinal data for the Career Pattern Study in 1951 (Tolbert, 1974, p. 33) primarily by means of scoring interview responses from ninth-grade boys to measure their vocational maturity. These boys were again interviewed as twelfth-graders, about seven years following high school graduation, and again between the ages of 35 and 40. There is an elaborate scoring manual available from this study but it is cumbersome (Westbrook & Cunningham, 1970).

Recently, Super was involved in developing the Career Development Inventory, an objective paper and pencil measure of vocational maturity (LoCasio, Nesselroth, Thomas, 1976). This inventory, still in early research stages, contains three scales: Scale A - Planning Orientation, Scale B - Resources for Exploration, and Scale C - Information and

Decision-making. The Career Development Inventory, Adult Form, was developed in 1974 by Super, Thompson, and Zelkowitz (Super, 1977). This form is designed to assess the degree to which career development tasks of adolescent and adult life stages have been dealt with or are currently the concern of the adult subjects. It has been tried on a variety of subjects with many studies in progress. The Career Development Inventory has been useful in assessing recycling concerns and in identifying new roles in mid-career.

A multi-dimensional personal interview scales to measure a student's readiness for vocational planning was developed by Gribbons and Lohnes (1964a, 1964b). The forty-one open-ended questions require the use of an involved scoring procedure which is a limiting factor (Westbrook & Cunningham, 1970). A group of 110 boys and girls were interviewed in 1958 as eighth-graders and again in 1961 as tenth-graders. Eight numerical variables were scaled from the interview responses which are considered to represent eight dimensions of readiness for vocational planning traits. The variables (Gribbons & Lohnes, 1964a) include factors in curriculum choice, factors in occupational choice, verbalized strengths and weaknesses, accuracy of self-appraisal, evidence for self-ratings, interests, values, and independence of choice. For the nine year follow-up of the career patterns of the original eighth-graders, a univariate vocational maturity scale, Readiness for Career Planning, was used. This scale consists of 22 items selected from the original 45 of the eighth-grade interview (Gribbons & Lohnes, 1969).

Crites designed the Attitude Scale of the Vocational Development Inventory as an instrument to measure the attitudinal dimensions of vocational maturity as part of the Vocational Development Project. A person takes the inventory by answering 50 true or false statements concerning vocational behavior. Except for seven items, all are scored "false" for the more vocationally mature response. The initial standardization sample consisted of 2,822 pupils 11-17 years old about equally divided by sex in grades five through twelve at Cedar Rapids, Iowa during the 1961-62 academic year (Crites, 1971, p. 17).

The Vocational Development Inventory was renamed the Career Maturity Inventory in 1973 with the addition of the Competence Test. The Competence Test was designed to measure cognitive variables. The five parts measure five career choice competencies: knowing yourself (self-appraisal), knowing about jobs (occupational information), choosing a job (goal selection), looking ahead (planning), what should they do? (problem solving). The Competence Test was written for a sixth-grade reading level but could be used with adults.

Vocational Maturity Variables

Numerous studies have been conducted and many are in progress to determine what variables contribute to vocational maturity.

Investigators found vocational maturity was related to general adjustment, intelligence, goal-directedness, scholastic achievement, persistence in college, success in vocational training, and job success (Crites, 1971). Crites and Semler (1967) studied the interrel-

ationships of adjustment, educational achievement, and vocational maturity as dimensions of adolescent development of 483 students as fifth-graders, as seventh-graders, and later as twelfth-graders. They found earlier adjustment related to later adjustment as well as to educational achievement and vocational maturity.

Gribbons and Lohnes (1969) concluded that vocational maturity scaled in early adolescence is related to career aspirations on into early adulthood in ways that complement the relations of sex, socioeconomic status, and intelligence to those criteria. They indicated (1964a) that readiness for vocational planning was not appreciably related to socioeconomic level of the family but was related to the subject's socioeconomic level of occupational choice.

Super hypothesized (1961) variables which could be related to vocational maturity include age, socioeconomic level, intelligence, scholastic achievement, patterning of vocational interests, emotional adjustment, and peer acceptance.

Studies investigating a link between career maturity and cultural and socioeconomic determinants have been conducted by Asbury (1968), Maynard and Hansen (1970), Hansen and Ansell (1973), Lawrence and Brown (1976), Dillard (1976), Moracco (1976), and Smith (1976).

Asbury (1968) found that eighth-grade rural Appalachian Kentucky boys were vocationally immature but didn't express low occupational aspirations. He suggested that vocational development may be quite discontinuous for the disadvantaged as the correlation between educa-

tional aspirations and occupational aspirations was not high.

Maynard and Hansen (1970) conducted a study using the Vocational Development Inventory to measure vocational maturity of 180 white and 180 black inner-city and 90 white suburban eighth-grade boys. Scoring highest were the suburban boys followed by the white inner-city group with the black inner-city group scoring lowest. The findings indicated vocational maturity was linked to certain cultural and socioeconomic determinants.

Another study conducted by Hansen and Ansell (1973) used the Vocational Development Inventory to assess the vocational maturity of 375 urban boys aged 8-12 composed of lower-class white, lower-class black and middle-class white. The middle-class whites earned highest mean scores in three of five grades, the lower-class whites scored highest in two grades and lowest in one, while lower-class blacks scored lowest in four of five grades. The results showed an overall progression in vocational maturity at different grade levels as well as between socioeconomic groups.

Career maturity as measured by the Career Maturity Inventory highly correlated with intelligence scores in a study completed by Lawrence and Brown (1976). They investigated intelligence, self-concept, socioeconomic status, race, and sex as predictors of career maturity in an integrated United States high school. The experiment was composed of 266 12th-grade male and female white and black students. There was a positive correlation between career maturity and intelligence.

Indications were that socioeconomic status and self-concept have lesser effect on career maturity than intelligence, race, or sex.

Dillard (1976) found a modest correlation between career maturity and self-concept of 252 black sixth-grade males but the relationship varied with socioeconomic class. He suggested that middle-class males may have greater stimulating home and/or educational environments than do lower-class males. The urban lower-class males were less mature in career development than the suburban and urban middle-class males. Socioeconomic background seemed to be the most useful factor in predicting career maturity of these subjects.

Moracco (1976) observed consistent differences between Arab and American students which he attributed to cultural rather than maturity differences. He suggested caution in using the Career Maturity Inventory with other nationality groups as these differences may reflect cultural differences or a difference in the rate of maturation of verbal behavior.

Smith (1976) also suggested caution in using the Career Maturity Inventory with lower-class and minority groups. In the study of 188 lower socioeconomic black high school students results indicated the lower socioeconomic black students with middle-class orientation tended to be more career mature than those with a lower-class orientation. The real significance of the study seemed to be that lower socioeconomic black youths' vocational maturity varies as their reference group perspectives, their post-high school plans, as well as their views of the

opportunity structure vary.

Decision-making occurs throughout one's career development whether by choice or chance. Several factors affect decision-making such as self-knowledge, occupational knowledge, experience, and vocational maturity (Pietrofesa & Splete, 1975, p. 160).

The relationship between decision-making, personality characteristics, and vocational maturity was investigated by Dilley, (1965), Enger & Jackson (1978), Gasper & Omvig (1976), Bodden (1970), Bodden & Klein (1972), Walsh & Hanle (1975), Bohn (1966), and Bartlett (1968).

Dilley (1965) found a relationship between the decision-making ability of high school students and three correlates of vocational maturity which were intelligence, achievement, and participation in extra-curricular activities. A relationship between decision-making and vocational maturity was implied. He suggested that vocational maturity may reflect growth in rational decision-making ability.

Enger and Jackson's (1978) study used the Career Maturity Inventory Attitude Scale to measure maturity of students' attitudes in regard to realistic career choices. The college bound academic group scored significantly higher than the nonacademic vocational group. There was a significant relationship between career maturity and decision-making. Results of this study showed a consistent positive relationship between decision-making and the academic group, sex, ability, and career maturity. They found no significant relationship between decision-making and socioeconomic status.

Results of Gasper and Omvig's study (1976) of 169 junior high school students in Kentucky indicated that individuals with low career maturity chose occupations which were inconsistent with their abilities, values, and interests. They suggested an individual may not achieve a high level of career maturity until the 20's or until he has experienced occupational entrance, exploration, and adjustment. Improvement of choice competencies and attitudes should result in occupational plans more congruent with individual needs and attitudes. Age, experience, and planned career education programs should all contribute to career maturity.

The relationship between cognitive complexity and the making of appropriate vocational choices among college students was investigated by Bodden (1970). A moderate but significant relationship was found between cognitive complexity and the choice of an occupation in which the environment was compatible with the person's personality coping style.

Bodden and Klein (1972) in replicating Bodden's earlier study found a significant positive correlation between cognitive complexity and the choosing of an occupation in which the environment was compatible with the subject's personality coping style. It was also found that cognitive complexity operates independently of personality style in career choice.

Walsh and Hanle (1975) explored difference in vocational maturity, academic aptitude, and achievement variables using the Career Maturity Inventory. Research subjects were 53 undergraduate Ohio State women.

It was shown that incongruent and undecided students were less vocationally mature than congruent students who were more involved in the career choice process. The congruent group also had a higher mean on grade-point average variables than the undecided or incongruent students. These findings indicated that college students with career choices consistent with their personal characteristics seemed more vocationally mature than those who remained undecided or reported an occupation inconsistent with their personal style.

Bohn's study of 75 male university counseling service clients revealed that a more vocationally mature person is goal-directed, more realistic, independent, and achievement-oriented. The vocationally mature person was also more mature in personality characteristics being more sociable, sensitive, and persuasive but less prone to be self-critical or admit personality shortcomings.

In a study of 81 females and 69 males 16-21 years old involved in a program to train or retrain unemployed, Bartlett found that development of vocational behavior is analagous to development of personality characteristics. The individuals more vocationally mature as measured by the Attitude Scale of the Career Maturity Inventory were more self-confident, achievement-oriented, forceful, independent, less self-critical, and less deferent than the subjects with lower vocational maturity. There was no significant difference in the mean age scores of the high, middle, and low scoring vocationally mature groups but there was a significant difference among the groups in

educational attainment with the higher vocational maturity scores corresponding to higher educational attainment.

Career development has been expected to proceed in continuous fashion with tests of vocational maturity expected to show higher scores with increases in grade level thus meeting a monotonic criterion (Crites, 1965). In a study by Titley, Titley, and Wolff (1976) the findings were not entirely consistent with these expectations. It was found in a study of college undergraduates who were changing their majors that even though the students were able to be more specific in describing their new as compared with their old majors, freshmen performed better on this task than did seniors. The indication was that as age increases and progression through college occurs, a decreasing number of students become able to specify their probable future occupation. The researchers felt that certain students need more assistance in dealing with ambiguity at all levels of their educational and vocational development and not just at the start of their college careers. The college years may be a period of discontinuity for many students and an age-related linear progression in the career process for all people in all environments should not be assumed.

In a study by Tilden (1978) that involved upper to upper-middle class college students in a private church-affiliated college in Pennsylvania, scores on the college version of the Career Development Inventory failed to show systematic increase with college-grade level. These findings help provide evidence that the process of career

development may be discontinuous in the post high school years.

Crites (1965) concluded sex may not be a crucial factor in the development of vocational attitudes as only a few differences existed between boys and girls in their self-reports of vocational attitudes. Sex differences in vocational maturity were indicated in studies by Smith and Herr (1972), Herr and Enderlein (1976), Glade and Peterson (1977), Omvig (1977), Enger and Jackson (1978), Lunneborg and Lunneborg (1972), Putman and Hansen (1972), and Lokan and Boss (1977).

In a study by Smith and Herr (1972) vocational maturity of 534 female and 489 male eighth-grade and 495 female and 502 male tenth-grade students in Pennsylvania was measured using the Attitude Scale. The females scored higher on the Attitude Scale and had less variance in scores. At each grade level the girls' mean score was higher. Scores increased with grade level for both girls and boys but the differential of difference in the mean scores was maintained. Indications were that females possessed more maturity in terms of their attitudes toward work and career planning than males in eighth and tenth grades.

A longitudinal study by Herr and Enderlein (1976) involving 1553 high school students in Pennsylvania suggested that increases in vocational maturity are not only incremental functions of age and grade level but are influenced by school effects, curriculum effects, and sex differences which influence rate and level of vocational maturity. The study found that females begin with greater vocational maturity

in ninth-grade and widen difference in vocational maturity by the twelfth-grade as they mature earlier. The study also confirmed earlier findings of a positive relationship between career maturity and grade in school as well as between career maturity and intelligence.

Gade and Peterson (1977) used the Career Development Inventory as a vocational maturity measure on 48 male and 31 female vocational-technical students. Women were found to be more vocationally mature than the men. Intrinsic work values were generally found to be more significantly related to vocational maturity for women but generally not for men. Extrinsic work values did not appear to be generally related to vocational maturity for either men or women.

Omwig's (1977) study consisted of 2600 sixth-grade and 2600 eighth-grade students in Kentucky participating in career education versus non-career education programs. The Career Maturity Inventory findings suggest that students' career maturity levels are affected by career education programs and by sex with no interaction present. The females consistently displayed higher means on the Career Maturity Inventory measure with most differences significant.

In Enger and Jackson's study (1978) of a program developed to provide a counseling intervention to improve career maturity and decision-making skills, females scored higher than males on career maturity.

Lunneborg and Lunneborg (1972) researched sex differences in aptitude maturation in a noncollege sample of 50 women and 43 men four years after college graduation. In the absence of continuing edu-

cation, these women declined in intellectual growth while the men grew slightly indicating that women not enrolled in school suffer more intellectually than men.

Putnam and Hansen (1972) investigated the relationship of self-concept and the feminine role to vocational maturity using Crites' Vocational Development Inventory. The research included 375 suburban and rural suburban 16 year old middle-class girls. The results of the study indicated that self-concept was significantly positively associated with vocational maturity. Self-concept and the feminine role concept of one's own self were useful in predicting vocational maturity.

In a study of locus of control and career maturity of college women, Gable, Thompson, and Glanstein (1976) found that internally controlled women who felt they had control over their environment scored significantly higher on vocational maturity than externally controlled women who believed they were controlled by chance, fate, luck, and powerful others. No relationship was found between career maturity and typical versus atypical career choices.

In a study by Lokan and Boss (1977) involving more than 700 high school students in Ottawa, Canada, Super's Career Development Inventory was used to measure vocational maturity. It was found that internally controlled adolescents exhibited more mature vocational behavior than the externally controlled, grade eleven students were more vocationally mature than grade nine students, and the males scored higher on vocational maturity than the females.

Effects of Intervention Processes

Crites' Career Maturity Inventory can be a useful tool to identify problems in career development, to determine career maturity, to evaluate career education programs, and to assess curriculum and guidance needs of students (Hansen, 1974).

Flake and Roach (1975) studied effects of short-term counseling on career maturity of tenth-grade students. The Career Maturity Attitude Scale and self-appraisal subscale of Competence Test were administered to 87 tenth-grade middle-class metropolitan area Texas students. Those scoring below the mean were assigned randomly into a control group and an experimental group. The experimental group received career counseling in three sessions. After six weeks all students were posttested with results showing short-term counseling did facilitate career maturity of tenth-grade students as measured by the Career Maturity Inventory. The experimental group gained in mean scores while the control group and the above-mean group scores fell. The study supported Crites' conclusion that career maturity as a developmental process could be measured and facilitated through counseling.

The effect of career education on career maturity was the topic of a study by Omvig, Tulloch, and Thomas (1975). The null in the study was that there is no significant difference in career maturity levels of students who participated in career education programs and students who participated in traditional education programs. Group sampling techniques were used to select 120 pupils each for sixth-grade control and

experimental groups and 120 pupils for each seventh-grade control and experimental group in Kentucky. The groups were pretested in the fall of 1973 and posttested in the spring of 1974 following a career education program for the experimental group. The results showed the students' career maturity levels as measured by the Career Maturity Inventory were affected by the career education program. The sixth-grade career education group scored higher on posttest career maturity levels on all six scales while the sixth and eighth-grade career education students consistently showed higher adjusted posttest means.

Herr and Enderlein (1976) found that high school students in the academic curriculum scored highest on the Career Maturity Inventory followed by students in business, vocational, and general curriculums. The study indicated that vocational maturity can be modified and curriculum differences can advance it. Students in the academic curriculum in Enger and Jackson's (1978) study also showed higher vocational maturity scores than the nonacademic vocational group.

Aiken and Johnson's study (1973) concerned effects of group reinforcement counseling on frequency of career information seeking behaviors for college freshmen and sophomore male students. The Attitude Scale was used to identify vocational maturity-immaturity. Results showed that subjects with a vocationally consistent personality profile tended to increase their information seeking responses more than the vocationally inconsistent. A positive relationship existed between the use of group reinforcement counseling and an increase in career

information seeking responses.

The purpose of the Schmielting and Jensen (1968) study was to assess the impact of an occupations class on vocational development and vocational tenacity of a group of American Indian students in the eleventh and twelfth grades. The eight-week occupational unit had no significant effect on their vocational development as measured by the Vocational Development Inventory but trends were observed in a positive direction.

Omwig (1977) studied the effect of career education on the career maturity levels of sixth and eighth-grade Kentucky students. The Career Maturity Inventory was used to collect data on career education versus noncareer education students. Career education students consistently displayed higher career maturity levels than the noncareer education students.

The Career Maturity Inventory was used to test career development aspects of a career orientation program in the Danville, Virginia middle schools (Lewis, 1977). The program did not appear to affect career development nor academic achievement of the 50 fifth-grade, 50 sixth-grade, and 50 seventh-grade students.

The Malheur Intermediate Education District in Oregon (Banner, 1977) selected the Career Maturity Inventory for grades 10-12 and Career Development Inventory for grade nine as instruments to assess guidance processes of three types of schools. There were no statistically significant differences found to exist across the treatment groups

composed of schools with programs using no formal guidance, a guidance processes program with all teachers involved, and a guidance cadre for purposes of developing career decision-making.

McGowan (1977) investigated the use of Holland's Self-Directed Search for Educational and Vocational Planning (SDS) as an experimental treatment in reducing career indecision on 66 male and 60 female vocationally undecided senior high New York City students. The Attitude Scale was used to measure vocational maturity. Results showed that 51% of the experimental subjects arrived at a career choice without the aid of a counselor following use of the SDS but there were no significant differences among the experimental and control vocationally decided, indecisive, and undecided group in terms of anxiety level and vocational maturity.

Smith and Evans' study (1973) concerned an experiment involving college students receiving individual counseling, those in a five week vocational guidance program, and a controlled group with no treatment. to determine which contributed more to vocational development. Evaluation using Tiedman and O'Hara's Vocational Decision Checklist and a Counseling Assessment Form showed the experimental group most effective with the individual counseling more effective than the control receiving no treatment. There was no difference found among the three groups in regard to individual counselors, sex of the students, or in student counseling assessments.

Research reveals that life planning workshops can be used as a

vehicle for exploration of personal and emotional growth, educational and vocational growth, and interpersonal growth.

Johnson (1977) indicated that workshop results led to statistically significant changes in a more internally controlled direction for the participants. Satisfaction with the workshops was uniformly high at Brigham Young University which is consistent with findings at Colorado State University. The workshop starts the students in looking at how they perceive themselves and what their needs and values are. After exploring what they would like to be, they become aware of the difference between these two positions.

Knickerbocker and Davidshofer (1978) examined the impact of a life planning workshop upon attitudes toward future life planning and self-actualizing attitudes of feeling reactivity and self-regard. Results showed that the 34 women and eight men participants had significantly higher mean scores on measures of positive attitudes toward future planning and feeling reactivity. These gains continued over a mean follow-up period of three weeks. The findings indicate that participation in a life planning workshop program fostered an attitude of confidence in formulating realistic future goals and a sense of personal competence in problem solving and decision-making. Participation encouraged participants to have confidence in their ability to make personal changes necessary for attainment of their goals.

Mencke and Cochran (1974) hypothesized that participation in a life planning workshop would foster greater acceptance of active

responsibility for one's own career direction, a greater recognition that choice of an academic major is only one decision in the continuing process of vocational development, and greater awareness of personal attributes that contribute to career choice. The Attitude Scale plus other items were used to test these hypotheses. The results failed to confirm any of the three hypotheses on the experimental group of 64 male resident hall members at the University of Arizona. No changes were found in attitudes about choosing a career or perceptions of strengths and weaknesses. The life planning workshop appeared to influence the behaviors of the participants in two important ways. The participants tended to take more responsibility for career decision-making by actively seeking information relevant to their career, their future plans, and themselves. They also tended to consider career areas and majors more congruent with their measured interests than those considered by subjects who had not participated. It was concluded that behavioral indices have an advantage over measures of attitude for future studies in this area.

Summary

The work of Crites, Gribbons and Lohnes, and Super indicates that the concept of vocational maturity is more inclusive than vocational choice as it comprises not only the selection of an occupation but attitudes toward decision-making, understanding of job requirements, planning activities, and development of vocational capabilities.

Behavioral dimensions related to vocational maturity consist of

planfulness or time perspective, exploration and information about self and occupations, decision-making, and reality orientation.

Instruments designed to measure vocational maturity include Super's elaborate Career Pattern Study scoring manual as well as the recent objective paper and pencil Career Development Inventory plus an Adult Form of this test. Gribbons and Lohnes developed a multi-dimensional personal interview scales to measure readiness for vocational planning followed recently by a univariate scale, Readiness for Career Planning. Crites designed the Attitude Scale of the Vocational Development Inventory to measure attitudinal dimensions as well as the Competence test which combined with the Attitude Scale completes the Career Maturity Inventory.

Investigators have found vocational maturity was related to variables such as general adjustment, intelligence, scholastic achievement, school curriculum, socioeconomic status, sex, personality characteristics, extra-curricular activities, and decision-making skills.

Findings were inconsistent related to results of interventions such as career education, career counseling, and life planning workshops in increasing the vocational maturity of the participants.

CHAPTER 3

Procedures

The purpose of this study was to determine if participation in a Career-Life Planning Workshop during spring quarter 1978 increased the vocational maturity of the participants as measured by the Attitude Scale of the Career Maturity Inventory. This chapter details the procedures used in obtaining this data.

Population Description and Sampling Procedures

The population of this study was all the students who participated in a Career-Life Planning Workshop directed by the Office of Student Affairs at Montana State University during spring quarter 1978.

Montana State University is a land-grant state-supported coeducational institution located in Bozeman, Montana. Bozeman is one of the largest cities in Montana with a population totaling 25,000 including 9,800 students.

Of the 2805 freshmen (1488 males, 1317 females) entering Montana State University during the fall of 1977, 312 males and 364 females were in General Studies because they were undecided in their choice of major. In addition to these 676 freshmen, 290 other students were in General Studies during 1977.

The Career-Life Planning Workshop is a result of a federally funded research project designed to reduce sexual stereotyping and biasing with regard to career choice at Montana State University in selected faculty and General Studies students. The goals of the workshop for the participants were increased self-awareness, including

career testing and feedback, recognition of alternative career choices, reduction of sexual stereotypes and biases with regard to career choice, and the opportunity to learn how to make decisions.

During the 1977-78 academic year the Career-Life Planning Workshops were conducted during fall, winter, and spring quarters. The workshop participants were volunteer students enrolled in General Studies or undecided students in relation to curriculum choice.

Experimental Technique

The experimental model consisted of six (6) three (3) hour career-life planning workshops (18 hours total) designed to assist students in discovering their strengths and weaknesses, interests, values, life-style choices, and examination of their own sex bias and stereotypes with regards to career choice. The workshop format consisted of four to five students working with a trained facilitator in a series of structured exercises designed to assist students in exploring the above. In addition to the exercises designed to bring about increased awareness of what is important to the participant in choosing a career, the students interviewed two faculty advisors or other knowledgeable people in the field regarding possible career choices. Two workshops were devoted to guest speakers from a variety of fields with whom the participants could visit concerning potential careers. The ACT Interest Inventory was administered and interpreted to the participants.

The control group consisted of students who signed up for the Career-Life Planning Workshop but were unable to participate for

various reasons and other volunteer General Studies or undecided students. The control group was used to insure against mistaking effects of history, pretesting, maturation, and instrumentation, for the main effects of the treatment.

Method of Collecting Data

The data in this study was collected by means of the Attitude Scale of the Career Maturity Inventory in addition to a demographic questionnaire used in the workshop. The questionnaire dealt with variables such as age, year in school, sex, and parental occupation.

The Attitude Scale was used as a pretest and posttest for the workshop participants to measure any changes in career or vocational maturity as a result of the intervention process. The control group was also administered the Attitude Scale as a pretest and posttest.

Research on the use of the Career Maturity Inventory revealed it is useful for measuring present student vocational maturity levels and in evaluating the effects of an intervention process.

The internal consistency reliability of the Attitude Scale was .74 for 6-12th graders on the standardization sample. One year test-retest reliability for the scale was .71. The internal consistency coefficients for the Competence Test were in the .70's and .80's for each grade level of the standardization sample.

Studies on the validity of the Attitude Scale showed agreement between the empirical scoring key and a rationally derived one. Judges had 74% agreement with the standardization sample when asked to indicate

the more mature response. Other studies indicate the criterion-validity of the Attitude Scale. Validation research showed it is not significantly affected by response set or response style. Intellective variables such as verbal intelligence and aptitude relate to career maturity. The higher scoring individuals on the Attitude Scale were better adjusted than those with lower scores. Construct validity of the Competence Test has been explored by obtaining product-moment correlations among subtests. The r 's range from .25 to .73, with a mean of .54. Criterion related validity has been shown to have a relationship to three external variables: vocational aspiration, vocational choice, and vocational maturity (Hansen, 1974).

No special training was required to administer or score the instrument. All instruments were hand scored and the computations were done on a hand calculator

Method of Organizing Data

The mean average for the pretest was calculated separately for males, females, and total experimental group as well as for the males, females, and total control group. The mean average on the posttest was calculated in similar fashion. The difference was then computed between the mean of the pretest and the mean of the posttest for each individual grouping. This will be known as the residual score in this study. The data was arranged in tabular form showing pretest and posttest mean scores for experimental group, residual scores of experimental and control groups, and residual scores of males and

females in experimental group. Tables were also used to show pretest mean scores of males and females according to age, pretest mean scores listed according to subject's years in school, pretest mean scores in relation to parental occupation, and pretest mean scores according to childhood residence.

Statistical Hypotheses

1. The null hypothesis is that there is no significant difference between mean pretest score and the mean posttest score of the experimental group.

The alternative hypothesis is that the posttest mean score will be significantly greater than the pretest mean score of the experimental group.

2. The null hypothesis is that there is no significant difference between the mean residual score of the experimental group and the mean residual score of the control group.

The alternative hypothesis is that the mean residual score of the experimental group will be significantly greater than the mean residual score of the control group.

3. The null hypothesis is that there is no significant difference between the mean residual score of the females and the mean residual score of the males in the experimental group.

The alternative hypothesis is that the male residual score will be significantly higher than the female residual score in the experimental group.

The level of significance for these hypotheses was 0.05 using a one-tailed test. This level of significance was chosen to better control for Type 2 error.

Questions to be answered by this study:

1. Was there a difference in the career maturity levels between males and females of the same age in this group of students?
2. Did vocational maturity increase with an increase in grade level in these college students?
3. Was there an increase in vocational maturity with an increase in age?
4. Was vocational maturity related to the occupation of the parent?
5. Did place of childhood residence affect vocational maturity?

Analysis of Data

The statistical model for this study was the 't' test of means for dependent samples for hypothesis one and the 't' test for independent samples and F test for variance for hypotheses two and three. The significance of any difference was determined by using the 't' statistic and F test of variance. The level of significance was 0.05.

To insure accuracy, the hand calculator was used in computing the data as well as the Computing Center at Montana State University.

Summary

Students participating in the Career-Life Planning Workshop during spring quarter 1978 were the subjects of this study. A control group consisted of students signed up for the workshop but unable to attend

as well as other volunteer General Studies or undecided students. The Attitude Scale of the Career Maturity Inventory administered as a pretest and a posttest served as the data-collecting instrument. The raw data was compiled in tabular form. There were three null hypotheses in this study. The first null hypothesis was that there is no significant difference between the mean pretest score and the mean posttest score of the experimental group. The second null hypothesis is that there was no significant difference between the mean residual score of the experimental group and the mean residual score of the control group. The third null hypothesis was that there is no significant difference between the mean residual score of the females and the mean residual score of the males in the experimental group.

The 't' statistic for dependent samples and F test for variance and 't' test of means for independent samples were used with 0.05 as the level of significance using a one-tailed alternative.

The means of the pretest scores were used to determine if there was a difference in career maturity levels between males and females of the same age in this group, if career maturity increased with an increase in age and in grade, if vocational maturity was related to the occupation of the parent, and if place of childhood residence had an effect on vocational maturity.

CHAPTER 4

Analysis of Data

The problem of this study was to determine if the Career-Life Planning Workshop increased the career maturity of the participants as measured by the Attitude Scale of the Career Maturity Inventory. The study was also designed to answer questions related to the vocational maturity of the subjects such as was there a difference in career maturity levels between males and females of the same age, did vocational maturity increase with an increase in age as well as an increase in grade level, was vocational maturity related to the occupation of the parent, and did the place of childhood residence seem to affect vocational maturity.

The data from this study will be presented in tabular form to illustrate and interpret the results of this study.

Table I presents the means of the pretest and posttest scores on the Attitude Scale for the experimental group.

Table I

Experimental Pretest and Posttest Mean Scores on Attitude Scale

	Number	Mean	Standard Deviation	't' test
Pretest	28	36.11	3.82	2.174 *
Posttest	28	37.68		

* significant at the 0.05 level

Since the computed 't' test for dependent samples was significant beyond the 0.05 level, the null hypothesis that there is no significant

difference between the mean of the pretest scores and the mean of the posttest scores was rejected. For 27 degrees of freedom a 't' of 1.703 is required for significance at the 0.05 level. The alternative hypothesis that the posttest mean would be significantly greater than the pretest mean was accepted. The workshop appeared to have a significant effect on the career maturity level of the participants.

Table II shows the difference between the mean residual scores of the experimental and control groups on the Attitude Scale.

Table II

Experimental and Control Group Residual Scores on Attitude Scale					
Group	Number	Mean	Standard Deviation	F test	't' test
Experimental	28	1.57	3.82	3.182 *	.608
Control	16	.94	2.14		

* significant at the 0.05 level

The null hypothesis that there is no significant difference between the mean residual scores of the control group and the mean residual scores of the experimental group was rejected as the F test of variance showed a significantly greater variability in the residual scores of the experimental group when compared to the control group residual scores. This suggests participants in the workshop who scored lower on career maturity at the beginning of the workshop gained more, the ones scoring highest at the beginning did not gain as much, while the control group pretest and posttest scores did not vary as much.

In Table III the residual scores on the Attitude Scale of the males and females in the experimental group are shown.

Table III

Experimental Male and Female Residual Scores on Attitude Scale

Group	Number	Mean	Standard Deviation	F test	't' test
Males	11	2.00	3.16	1.82	.47
Females	17	1.29	4.268		

The null hypothesis that there is no significant difference between the male mean residual score and the female mean residual score was retained as neither the 't' test of means nor the F test for variance was computed as being significant at the 0.05 level.

Table IV shows the mean average on the pretest of the males and females grouped according to age of the subject.

Table IV

Attitude Scale Pretest Mean Scores for
Males and Females According to Age

Age	Number	Females	Number	Males
18	7	38.29	1	37.00
19	13	35.23	4	36.00
20	4	38.75	3	31.33
over 20	5	38.60	6	38.00

In this group of students it appears that career maturity scores do not systematically increase as age increases. For the females

age 19 revealed the lowest career maturity score with age 20 having the highest. The females consistently scored higher than the males except for the age 19 males who scored higher than age 19 females. The age 20 males scored lowest but this was partially due to a foreign exchange student whose score was 24.

In Table V the pretest mean scores on the Attitude Scale are tabulated according to the subject's years in school.

Table V

Attitude Scale Mean Pretest Scores According to Years in School

Year in School	Number	Pretest Mean
Graduate	4	40.50
Senior	1	38.00
Junior	5	33.40
Sophomore	6	35.80
Freshman	27	37.22

Table V indicates that the graduate students have the highest mean pretest career maturity scores followed by the one senior subject. The freshmen scored higher than the sophomores who scored higher than the juniors. In this group of students it appears that career maturity does not increase regularly with increase in grade level although the senior and graduate students did obtain the highest mean scores.

Table VI represents the pretest mean scores grouped as to the parental occupation.

Table VI

Parental Occupation in Relation to Pretest Mean Scores on Attitude Scale

Parental Occupation	Number	Pretest Mean
Professional	15	38.27
Semiprofessional	11	34.18
Sales, Service or Protective, Skilled, Farm or Ranch Owner or Operator	16	36.88

This table indicates that students whose parents were in professional occupations attained the highest mean pretest score followed by those with parental occupations listed as sales, service or protective, skilled, farm or ranch owner or operator. The students listing parental occupation as semiprofessional such as accountant, librarian, dental technician, manager, proprietor or executive, scored the lowest.

In Table VII the pretest mean scores are grouped according to the childhood residence of the subject.

Table VII

Attitude Scale Pretest Mean Scores In Relation to Childhood Residence

Childhood Residence	Number	Pretest Mean
Rural	26	36.54
Urban	16	36.88

When the subjects' pretest scores were grouped as having a rural or urban childhood residence, the mean shows the urban group only slightly higher than the rural group. From the data on this group of students, the difference between rural or urban childhood residence did not seem to influence their career maturity.

Summary

The analysis of data showed there was a significant difference between the pretest mean scores and the posttest mean scores of the experimental group indicating the Career-Life Planning Workshop had a positive effect on the vocational maturity of the participants. There was a significant difference in the variance of the experimental group residual scores on the Attitude Scale when compared to the control group residual scores indicating those scoring lowest on the scale at the beginning of the workshop increased their score the most as a result of the workshop. There was no significant difference between the male and female residual scores in the experimental group but data showed the males made the larger increase. All hypotheses were tested at 0.05 level of significance using the 't' test for dependent samples on hypothesis number one and 't' test for independent samples and F test for variance on hypotheses two and three.

Interpretation of data revealed that career maturity scores of these students did not increase systematically with an increase in age or years of school. The females scored higher than males at three of four age levels. Students listing parental occupation as professional

scored higher than those listing parental occupation as sales, service or protective, skilled, farm or ranch owner or operator. Scoring lowest were those indicating parental occupation as semiprofessional.

Place of childhood residence when listed as rural or urban did not seem to have any differential effect on the vocational maturity of the subjects.

CHAPTER 5

Discussion

Summary

Increased vocational or career maturity results in more appropriate career choices, increased options for career decisions, and more realistic planning. The greater the vocational maturity the more likely an individual will pursue an occupational choice that fits his or her individual lifestyle.

The problem of this study was to determine if the Career-Life Planning Workshop during spring quarter 1978 increased the vocational maturity of the participants as measured by the Attitude Scale of the Career Maturity Inventory. The subjects involved in this study were Montana State University General Studies students or those undecided as to curriculum major.

One null hypothesis was tested using the 't' test of means and two hypotheses were tested using the 't' test of means and F test of variance. The 0.05 level of significance was used for all tests. The null hypotheses were compared with statistical evaluations and either retained or rejected. The pretest means of the control and experimental groups were tabulated and discussed regarding variables pertaining to career maturity.

Conclusions

The hypothesis that there is no significant difference between the mean pretest and mean posttest score of the experimental group was rejected. The 't' test for dependent samples revealed the posttest

mean score was significantly greater than the pretest mean score. It appears the workshop had a positive effect on the increase of the vocational maturity of the participants.

The null hypothesis that there is no significant difference between the mean residual score of the experimental group and the mean residual score of the control group was rejected. The F test of variance showed there was a significantly greater variability in the residual scores of the experimental group when compared to the control group residual scores. It appears that the workshop participants scoring lowest on the pretest made the greater gains during the workshop while those scoring highest did not gain as much on the Attitude Scale. Part of the gain in the control group could be attributed to the fact that some of the students had left school to work which tends to contribute to vocational maturity. Some of the control group received individual career counseling during this time which also contributes to increased vocational maturity.

The third null hypothesis that there is no significant difference between the male mean residual score and the female mean residual score of the experimental group was retained. The data in Table III indicated the males gained more in career maturity than the females but the difference was not computed as significant. The males mean pretest score was lower than the females but due to more gain during the workshop their mean posttest score was greater.

To answer the question whether there is a difference in the career

maturity levels between the females and males of the same age in this group of students, the data in Table IV indicated that the females had higher career maturity pretest mean scores except for age 19. At this age the males scored higher than the females but at age 18, 20, and over 20 they scored lower. In the studies by Gade and Peterson (1977), Omvig (1977), Enger and Jackson (1978), Smith and Herr (1972), and Herr and Enderlien (1976) it was also found that females showed greater levels of career maturity than males.

Table IV was used to answer the question whether vocational maturity increases systematically with an increase in age. Neither the males nor the females increased in vocational maturity systematically with increase in age. In the females the greatest vocational maturity score was at age 20 followed by age over 20, age 18, and finally age 19. The males indicated greatest vocational maturity scores at age over 20, followed by age 18, age 19, and age 20 was lowest. One of the males in the age 20 group was a foreign exchange student who scored well below the mean which is consistent with Moracco's (1976) study on students from other cultures. He suggested caution in using the Career Maturity Inventory with other nationality groups because of cultural differences.

Career maturity did not increase regularly with increase in grade level of these students as indicated by the data in Table V. The graduate students attained highest vocational maturity pretest mean scores followed by the one senior subject, freshmen, sophomores, and finally the juniors. These findings correspond to those in studies by Titley,

Titley, and Wolff (1976) and Tilden (1978) who found that college years appear to be a period of discontinuity in the process of career development.

As indicated in Table VI students listing parental occupation as professional scored higher on the pretest than those whose parent was in an occupation listed as sales, service or protective, skilled, farm or ranch owner or operator. Scoring lowest were those whose parental occupation was semiprofessional which included fields such as librarian, accountant, dental technician, manager, proprietor or executive.

To answer the last question, Table VII indicated that the difference between a rural or urban childhood residence does not seem to have much effect on the career maturity of the subject. The pretest mean of the urban group was slightly higher than the rural group pretest mean.

The major findings from this study were that the Career-Life Planning Workshop did significantly increase the vocational maturity of the participants, the females were generally more vocationally mature but the males gained more in vocational maturity from the workshop. Vocational maturity did not increase systematically with an increase in age or an increase in years in school for this group of subjects. There appears to be a period of discontinuity during the sophomore and junior years and ages 19 and 20. This implies that students need help in vocational matters during these years and not just at the beginning of their college experience.

Recommendations

An evaluation of the fall, winter, and spring workshops would have provided a larger number of subjects for the experimental and control groups to make the findings from this study more meaningful. More definite conclusions could then be drawn about the vocational maturity of the Montana State University General Studies students. It is recommended that the next series of Career-Life Planning Workshops be evaluated for an increase in vocational maturity for all three workshops.

It is recommended that the grade point average be obtained for each subject to determine how this relates to vocational maturity of these students.

It is recommended that a behavioral type of assessment along with the attitudinal measure be used for the workshop participants to determine if their behaviors toward career development changed as a result of the workshop.

APPENDIX

NAME _____ APPENDIX A

ADDRESS _____

PHONE NO. _____

ATTITUDE SCALE

DIRECTIONS

Following are a number of statements about career choice. 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.

If you agree or mostly agree with the statement circle the T.

If you disagree or mostly disagree with the statement circle the F.

1. T F Once you choose a job, you can't choose another one.
2. T F In order to choose a job, you need to know what kind of person you are.
3. T F I plan to follow the line of work my parents suggest.
4. T F I guess everybody has to go to work sooner or later, but I don't look forward to it.
5. T F A person can do any kind of work he wants as long as he tries hard.
6. T F I'm not going to worry about choosing an occupation until I'm out of school.
7. T F Your job is important because it determines how much you can earn.
8. T F Work is worthwhile mainly because it lets you buy the things you want.
9. T F The greatest appeal of a job to me is the opportunity it provides for getting ahead.
10. T F I often daydream about what I want to be, but I really haven't chosen a line of work yet.

11. T F Knowing what you are good at is more important than knowing what you like in choosing an occupation.
12. T F Your parents probably know better than anybody else which occupation you should enter.
13. T F If I can just help others in my work, I'll be happy.
14. T F Work is dull and unpleasant.
15. T F Everyone seems to tell me something different; as a result I don't know which kind of work to choose.
16. T F I don't know how to go about getting into the kind of work I want to do.
17. T F There is no point deciding on a job when the future is so uncertain.
18. T F I spend a lot of time wishing I could do work I know I can never do.
19. T F I don't know what courses I should take in school.
20. T F It's probably just as easy to be successful in one occupation as it is in another.
21. T F By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.
22. T F There are so many things to consider in choosing an occupation, it is hard to make a decision.
23. T F I seldom think about the job I want to enter.
24. T F It doesn't matter which job you choose as long as it pays well.
25. T F You can't go very far wrong by following your parents' advice about which job to choose.
26. T F Working is much like going to school.
27. T F I am having difficulty in preparing myself for the work I want to do.

- 28. T F I know very little about the requirements of jobs.
- 29. T F The job I choose has to give me plenty of freedom to do what I want.
- 30. T F The best thing to do is to try out several jobs, and then choose the one you like best.
- 31. T F There is only one occupation for each person.
- 32. T F Whether you are interested in a particular kind of work is not as important as whether you can do it.
- 33. T F I can't understand how some people can be so certain about what they want to do.
- 34. T F As long as I can remember, I've known what kind of work I want to do.
- 35. T F 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.
- 36. T F You get into an occupation mostly by chance.
- 37. T F It's who you know, not what you know, that's important in a job.
- 38. T F When it comes to choosing a job, I'll make up my own mind.
- 39. T F You should choose an occupation which gives you a chance to help others.
- 40. T F When I am trying to study, I often find myself daydreaming about what it will be like when I start working.
- 41. T F I have little or no idea of what working will be like.
- 42. T F You should choose an occupation, then plan how to enter it.
- 43. T F I really can't find any work that has much appeal to me.
- 44. T F You should choose a job in which you can someday become famous.
- 45. T F If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.

- 46. T F You should choose a job which allows you to do what you believe in.
- 47. T F The most important part of work is the pleasure which comes from doing it.
- 48. T F I keep changing my occupational choice.
- 49. T F As far as choosing an occupation is concerned, something will come along sooner or later.
- 50. T F I am not going to worry about choosing a job since you don't have anything to say about it anyway.

APPENDIX B

GENERAL INFORMATION

Please circle the correct response.

1. Please indicate your sex.

- a. female
- b. male

2. Indicate your age.

- a. 17 years old
- b. 18 years old
- c. 19 years old
- d. 20 years old
- e. over 20 years old

3. Indicate the number of quarters you have been enrolled at MSU.

- a. one quarter
- b. two quarters
- c. three quartets
- d. four quarters
- e. more than four quarters

4. Please indicate which of the careers is closest to describing the occupation of the Head of your household (i.e., father or mother, etc.). Mark only one answer. If he/she works on more than one job, mark the most important one. If he/she is temporarily unemployed, deceased, or if he/she is retired, mark the one he/she held last.

- a. professional - such as clergyman/woman, dentist, doctor, engineer, lawyer, professor, scientist, teacher
- b. semiprofessional - such as accountant, airplane pilot, actor, armed forces officer, medical technician, musician, writer, librarian, artist, dental technician, engineering aid, etc.
- manager-proprietor-executive - such as sales manager, store manager, owner of small business, factory supervisor, wholesaler, retailer, contractor, restaurant owner, manufacturer, banker, official in a large company, government official, etc.

c. sales person - such as life insurance, real estate or industrial goods salesperson, etc.

clerical worker - such as sales clerk, office clerk, bookkeeper, ticket agent, etc.

d. skilled worker or foreman/woman - such as baker, carpenter, electrician, mechanic, plumber, plasterer, tailor, foreman/woman, etc.

farm or ranch - owner or manager

e. service or protective - such as armed forces enlistee or non-commissioned officer, barber, beautician, bus driver, fire fighter, police officer, waiter/waitress, etc.

5. Please indicate the type of place that comes closest to describing the area in which you grew up.

- a. open country but not on a farm
- b. on a farm/ranch
- c. a rural city (10,000 - 49,999)
- d. a town or village (2,500 - 9,999)
- e. in a large city (50,000 and over)

REFERENCES

References

- Aiken, J., & Johnston, J. A. Promoting career information seeking behaviors in college students. Journal of Vocational Behavior, 1973, 3, 81-87.
- Asbury, F. A. Vocational development of rural disadvantaged eighth-grade boys. Vocational Guidance Quarterly, 1968, 17, 109-113.
- Bailey, L. J., & Stadt, R. Career education: new approaches to human development. Bloomington, Illinois: McKnight Publishing Company, 1973.
- Banner, S. Methodology for evaluation of career decision-making skills in rural schools. Vale, Oregon: Malheur Intermediate Education District, 1977. (ERIC Document Reproduction Service No. ED145 134)
- Bartlett, W. E. Vocational maturity and personality variables of manpower trainees. Vocational Guidance Quarterly, 1968, 17, 105-107.
- Bodden, J. L. Cognitive complexity as a factor in appropriate vocational choice. Journal of Counseling Psychology, 1970, 17, 364-368.
- Bodden, J. L., & Klein, A. J. Cognitive complexity and appropriate vocational choice: another look. Journal of Counseling Psychology, 1972, 19, 257-258.
- Bohn, M. J., Jr. Vocational maturity and personality. Vocational Guidance Quarterly, 1966, 15, 123-126.
- Crites, J. O. A model for the measurement of vocational maturity. Journal of Counseling Psychology, 1961, 8, 255-259.

- Crites, J. O. Measurement of vocational maturity in adolescence:
 I. Attitude test of the vocational development inventory.
Psychological Monographs, 1965, 79 (2, Whole No. 595)
- Crites, J. O. The maturity of vocational attitudes in adolescence.
APGA Inquiry Series, Number 2. Washington, D.C: American
 Personnel and Guidance Association, 1971.
- Crites, J. O., & Semler, I. J. Adjustment, educational achievement,
 and vocational maturity as dimensions of development in
 adolescence. Journal of Counseling Psychology, 1967, 14, 489-496.
- Dillard, J. M. Relationship between career maturity and self-concepts
 of suburban and urban middle- and urban lower-class preadolescent
 black males. Journal of Vocational Behavior, 1976, 9, 311-320.
- Dilley, J. S. Decision-making ability and vocational maturity.
Personnel and Guidance Journal, 1965, 44, 423-427.
- Enger, J. R. & Jackson, D. J. Effectiveness of a counseling inter-
 vention program for teaching career decision-making skills.
Journal of Counseling Psychology, 1978, 25, 45-52.
- Flake, M. H., Roach, A. J., Jr., & Stenning, W. F. Effects of short-
 term counseling on career maturity of tenth-grade students.
Journal of Vocational Behavior, 1975, 6, 73-80.
- Gable, R. K., Thompson, D. L., & Glanstein, P. J. Perceptions of
 personal control and conformity of vocational choice as correlates
 of vocational development. Journal of Vocational Behavior, 1976,
8, 259-267.

- Gade, E. M., & Peterson, G. Intrinsic and extrinsic work values and the vocational maturity of vocational-technical students. Vocational Guidance Quarterly, 1977, 26, 125-130.
- Gaspar, T. H. Jr., & Omvig, C. P. The relationship between career maturity and occupational plans of high school juniors. Journal of Vocational Behavior, 1976, 9, 367-375.
- Gribbons, W. D., & Lohnes, P. R. Relationships among measures of readiness for vocational planning. Journal of Counseling Psychology, 1964a, 11, 11-19.
- Gribbons, W. D. & Lohnes, P. R. Validation of vocational planning interview scales. Journal of Counseling Psychology, 1964b, 11, 20-26.
- Gribbons, W. D., & Lohnes, P. R. Eighth grade vocational maturity in relation to nine-year career patterns. Journal of Counseling Psychology, 1969, 16, 557-562.
- Hansen, J.-I., C. Test review--J. O. Crites Career Maturity Inventory. Journal of Counseling Psychology, 1974, 21, 168-172.
- Hansen, J. C., & Ansell, E. M. Assessment of vocational maturity. Journal of Vocational Behavior, 1973, 3, 89-94.
- Herr, E. L., & Enderlein, T. E. Vocational maturity: the effects of school, grade, curriculum and sex. Journal of Vocational Behavior, 1976, 8, 227-238.
- Johnson, R. B. Life planning and life planning workshops. Personnel and Guidance Journal, 1977, 55, 546-549.

- Knickerbocker, B., & Davidshofer, C. Attitudinal outcomes of the life planning workshop. Journal of Counseling Psychology, 1978, 25, 103-109.
- Lawrence, W., & Brown, D. An investigation of intelligence, self-concept, socioeconomic status, race, and sex as predictors of career maturity. Journal of Vocational Behavior, 1976, 9, 43-52.
- Lewis, J. R., Jr. The effect of career orientation program on the career development and academic achievement of students in selected middle schools of Danville, Virginia. Danville, Va.: Danville Public Schools, 1977 (ERIC Document Reproduction Service No. ED145 142)
- LoCasio, R., Nesselroth, J., & Thomas, M. The career development inventory: use and findings with inner city dropouts. Journal of Vocational Behavior, 1976, 8, 285-292.
- Lokan, J. J., & Boss, M. W. The relationship between locus of control and indices of vocational maturity in adolescents. New York: American Research Association, 1977 (ERIC Document Reproduction Service No. ED142 916)
- Lunneborg, P., & Lunneborg, C. E. Sex differences in aptitude maturation in a noncollege sample. Journal of Counseling Psychology, 1972, 19, 529-536.
- Maynard, P. E., & Hansen, J. C. Vocational maturity among inner-city youths. Journal of Counseling Psychology, 1970, 17, 400-404.

- McGowan, A. S. Vocational maturity and anxiety among vocationally undecided and indecisive students. Journal of Vocational Behavior, 1977, 10, 196-204.
- Mencke, R. A., & Cochran, D. J. Impact of a counseling outreach workshop on vocational development. Journal of Counseling Psychology, 1974, 21, 185-190.
- Moracco, J. C. Vocational maturity of Arab and American high school students. Journal of Vocational Behavior, 1976, 8, 367-373.
- Omvig, C. P. Relationship between career education, sex, and career maturity of 6th and 8th grade pupils. Journal of Vocational Behavior, 1977, 11, 322-331.
- Omvig, C. P., Tullock, R. W., & Thomas, E. G. The effect of career education on career maturity. Journal of Vocational Behavior, 1975, 7, 265-273.
- Pietrofesa, J. J., & Splete, H. Career Development. New York: Grune and Stratton, Inc., 1975.
- Putnam, B. A., & Hansen, J. C. Relationship of self-concept and feminine role concept to vocational maturity in young women. Journal of Counseling Psychology, 1972, 19, 436-440.
- Schmieding, O. A., & Jensen, S. F. American Indian students: vocational development and vocational tenacity. Vocational Guidance Quarterly, 1968, 17, 120-123.
- Smith, E. D., & Herr, E. L. Sex differences in the maturation of vocational attitudes among adolescents. Vocational Guidance

Quarterly, 1972, 20, 177-182.

Smith, E. J. Reference group perspectives and the vocational maturity of lower socioeconomic black youth. Journal of Vocational Behavior, 1976, 8, 321-336.

Smith, R. D., & Evans, J. R. Comparison of experimental group guidance and individual counseling as facilitators of vocational development. Journal of Counseling Psychology, 1973, 20, 202-208.

Super, D. E. Consistency and wisdom of vocational preference as indices of vocational maturity in ninth grade. Journal of Educational Psychology, 1961, 52, 35-43.

Super, D. E. A developmental approach to vocational guidance: recent theory and results. Vocational Guidance Quarterly, 1964, 13, 1-10.

Super, D. E. Vocational maturity in mid-career. Vocational Guidance Quarterly, 1977, 25, 294-302.

Tilden, A. J., Jr. Is there a monotonic criterion for measures of vocational maturity in college students? Journal of Vocational Behavior, 1978, 12, 43-52.

Titley, R. W., Titley, B., & Wolff, W. M. The major changers: continuity or discontinuity in the career decision process? Journal of Vocational Behavior, 1976, 8, 105-111.

Tolbert, E. L. Counseling for Career Development. Boston: Houghton Mifflin Company, 1974.

Walsh, W. B., & Hanle, N. A. Consistent occupational preferences,

vocational maturity, and academic achievement. Journal of Vocational Behavior, 1975, 7, 89-97.

Westbrook, B. W., & Cunningham, J. W. The development and application of vocational maturity measures. Vocational Guidance Quarterly, 1970, 18, 171-175.