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The Effect of Vocational Training and Group Counseling on Selected Vocational Attitudes

Royce Balch Martin

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DOCTOR OF EDUCATION

THE EFFECT OF VOCATIONAL TRAINING AND GROUP COUNSELING ON SELECTED VOCATIONAL ATTITUDES

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THE EFFECT OF VOCATIONAL TRAINING AND GROUP COUNSELING ON SELECTED VOCATIONAL ATTITUDES

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DISSERTATION
Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Education in the Graduate School of The University of New Mexico Albuquerque, New Mexico August, 1970
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R. B. M.

University of New Mexico
Albuquerque, New Mexico
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ABSTRACT OF DISSERTATION

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THE EFFECT OF VOCATIONAL TRAINING AND GROUP COUNSELING ON SELECTED VOCATIONAL ATTITUDES

Royce Balch Martin, Ed. D.

College of Education, Pupil Personnel Services

The University of New Mexico, 1970

The major purpose of this study was to determine whether there was significant change in selected vocational attitudes after a period of vocational training and whether participation in group counseling affected those attitudes.

The subjects were 135 adult women enrolled in post high school vocational training. One group was engaged in remedial academic work preparatory to entering a training major; the other was beginning a training major. From each of these groups, a random sample was selected for participation in group counseling.

Pretests were administered at the beginning of the four month training period and posttests at the end. Evaluation instruments were the Chicago Q-sort, the Attitude Scale of the Vocational Development Inventory, and the Minnesota Importance Questionnaire.

An analysis of covariance was applied to the data to elicit statistically significant differences among the four groups. Although all four groups showed growth in congruence of self-concept to chosen-vocation-concept as measured by the Chicago Q-sort, there was no significant difference among them.

Neither was there significant difference among them in growth in vocational maturity as measured by the Attitude Scale of the Vocational Development Inventory.
The groups differed at the .05 level of confidence on five scales of the Minnesota Importance Questionnaire. The group taking only vocational training reflected no significant changes in preferences for working conditions which they anticipated would make the job satisfying. The group participating in vocational training and group counseling indicated lower interest in the Social Service aspects of the job. The third group, taking only remedial preparatory work, showed greater desire for Creativity and Responsibility in the job and lower interest in Compensation and Social Service. The group taking remedial work plus participating in group counseling showed greater interest in Compensation and less in Variety.

Neither vocational training nor group counseling caused clearly significant change in the selected vocational attitudes within the beginning training period, although all groups grew in self-to-vocation congruence. It was recommended that counselors become more aware of work expectancies in pre-training counseling and that greater effort be expended in developing realistic vocational attitudes before the post high school training period. Group counseling appeared to be most useful as a supportive, encouraging factor in adjusting to immediate training requirements and in continuing toward vocational preparation.
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CHAPTER I

INTRODUCTION

One of the problems encountered by counselors who work with persons making vocational decisions is the anticipation that a trainee may develop new interests and preferences as a result of training. One relevant example of this might be the adult who had never participated in the labor force but is now seeking skill training. Another example might be the worker who has held a routine job with limited horizons for growth and hesitates to judge whether the new job prospect, as described by a counselor, would be a successful and satisfying one.

The counselor seeks to work with a counselee so that a realistic self-appraisal joins with an adequate vocational description. Then a viable decision can be made. Training alerts the counselor to many of the pitfalls threatening the success of the counselee. He is often acutely aware of his own responsibility for identifying these within the context of a given vocation or a specific training program.

THE PROBLEM

The major purpose of this research was to determine if there was significant change in certain vocational attitudes after a period of skill training. A second purpose was to determine whether participation in group counseling affected these vocational attitudes.

Two groups of adult students were identified. One group was attending school in order to take remedial academic work, basically mathematics and English, before entering a skill training program. The second group had already been accepted into a major program and was
participating in skill development through laboratory periods as well as related subjects. Within each of these groups, voluntary units for group counseling were formed. The measures of vocational perceptions were taken at the beginning and the end of the trimester period.

THE HYPOTHESES

In an effort to clarify the effects of vocational training and group counseling as compared to remedial academic training, the following null hypotheses were proposed:

\[ H_1 \] - There is no significant difference in changes in the correlation of self-concept to chosen-vocation concept among the four groups of students.

\[ H_2 \] - There is no significant difference in growth of vocational maturity among the four groups.

\[ H_3 \] - There is no significant difference in changes of perceived vocational needs among the four groups.

IMPORTANCE OF THE STUDY

The entire problem of communicating counseling information so that the individual may make productive decisions is receiving increased attention. The projects of David Tiedeman (1961; 1963; 1967) at Harvard and Ann Martin (1966) at the University of Pittsburgh are two examples of this research.

Vocational decision making is one portion of this work. The search for new ways to describe jobs realistically and new ways to interrelate the individual's self-image and his achievement of job proficiencies are among the counseling tools being developed. More complete understanding of the changes in attitudes which may be developed by skill training should enable counselors to be more effective.
For the individual, occupational and employment information plus an understanding of personal aptitudes and goals are vital factors in making suitable vocational decisions. Realistic attitudes, vital to successful employment, need to be developed.

This research project is concerned in part with these problems as they are encountered by vocational counselors at the post high school level. It is also concerned with a special group of those students enrolling in training programs beyond the high school level.

Adult women are a growing segment of those enrolled in post high school training programs and are an increasing portion of the labor force. As they approach training for employment, they frequently lack knowledge of the realities of the working world as well as an understanding of their own abilities to contribute to it. Berry (1966) calls them "movices" and says that they may be of any age, any marital status, at any level of education or training, of any background of experience, and at any level of need for the income.

There appear to be some needs for specialized guidance among this group. A number of governmental as well as private groups have demonstrated an awareness of this need. The result has been several study groups and other commissions who have recommended a reassessment of educational opportunities for women and the strengthening of guidance services for them (Berry, 1968).

Research in the areas touched by this project should be of interest to those specializing in the problems of the woman worker, to the vocational counselor, and indirectly to the women making vocational decisions.
LIMITATIONS OF THE STUDY

This study has been restricted to a small group of adult women at one post high school training institution which draws its students from a limited geographical area.

Another limitation was the time period selected for the measurement of change. One trimester, about four months, may not be an adequate period to permit consolidation of attitude change. However, since some training programs in vocational schools, as well as some in industry and by governmental agencies, fall within such a time boundry, the limitation may not be unrealistic.

A third limitation was the small number of major courses of study available to students and the conflicting of time schedules which did not allow all subjects to participate in the group counseling sessions.

Still a fourth factor was the large number of drop-outs from the original group tested. Women starting such training often must leave because of family obligations or personal problems. The trimester of this study proved an especially hazardous one. The weather was colder than is usual for this climate and an outbreak of flu in the city affected most families. Therefore, a larger than anticipated number of absences and withdrawals from school should be noted.

DEFINITION OF TERMS

Many of the terms used in this type of study are generalized in meaning and tend to be ambiguous. For this reason the following terms are defined as a means of clarification.

Adult women  - All of the women in this study were over eighteen years of age. Most of those under twenty-
one had completed high school.

**Vocational training** - In this study it will mean preparation for a specific area of work through participation in a program combining academic study and skill in performance.

**Group counseling** - A small group of ten to fifteen people meeting in a permissive discussion situation with a trained counselor present will describe this term.

**SELECTION OF CHARACTERISTICS TO BE STUDIED**

This study attempted to assess some of the movements in vocational development effected by an individual's acquiring a vocational skill. Three characteristics were chosen for investigation: first, the individual's description of self as related to his concept or description of the chosen vocation; second, the growth in vocational maturity of the student; third, the changes in preferences for work environment which the student anticipated would make the job satisfying.

These three characteristics represent critical elements which influence both vocational choice and vocational satisfaction. Super (1951), Borow (1966), and others have pointed out tendencies of individuals to choose a vocational area on the basis of self-concept. The vocational maturity of the student at the time of choice may be closely related to the realistic implementation and consistency of his choice. The person's attitude toward vocational environment strongly predicts the tenure of the individual in that area and his personal satisfaction with the work he performs.

If these three characteristics remain largely unchanged during a training period, then counselors need to be accurately aware of them within the counseling framework. If, on the other hand, these are emerging
aspects of vocational growth the counselor may be more concerned with basic aptitudes of the individual. He will be expecting that growth and change in preferences will occur as the individual experiences the acquiring of new skills.

**SELECTION OF METHODS FOR EVALUATION**

The vocational characteristics selected for study are within an evolving concept of vocational theory. Their study is still experimental so the choice of methods for evaluation was not a simple one.

**Measurement of self-concept and vocational-concept**

Several published studies have used the Q-sort to study the implementation of the self-concept through occupations. Englander (1961), searching for a new method to study occupational decisions within the framework of self-psychology, used an eighty item Q-sort. College women in their junior year were asked to select or reject elementary teaching as a vocation. These constituted three groups: elementary education majors, other education majors, and non-education majors. The data did not indicate any significant difference between elementary education majors and other education majors. Both of these groups differed from non-education majors at the one percent level of confidence in their acceptance of the vocation. Results of the study indicate that elementary majors perceived elementary education as a means of perpetuating their self-image, thus supporting Super's (1951) theory of vocational choice.

Morrison (1962) asked first year nursing students and sophomore education majors to describe themselves, their perceptions of a nurse, and their perceptions of a teacher through a Q-sort. The nursing students
reflected greater identification with nursing than with teaching; the education majors showed a reverse identification. There was also some indication that those making decisions before high school years about a career had a higher self-to-chosen-career correlation. This suggests that identification with a role leads a person to discover more and more aspects of the role as similar to self.

Neff and Helfand (1963) explored the use of a Q-sort to assess the meaning of work. Tested on handicapped rehabilitation clients, the instrument did differentiate between "successful" and "unsuccessful" individuals. The senior experimenter suggests that this instrument could be used to identify individual attitudinal structures which can constitute a psychological barrier against adequately performing the role of a worker.

Since the Q-sort has proved a useful measure of self-concept in relation to work, this technique was chosen as a means of self-report. It was anticipated that such self-reports would indicate any significant change in the trainee's identification with the chosen vocation during the period of training.

Measurement of vocational maturity

Vocational development for all individuals does not follow a smooth course. LoCascio (1964) has directed theoretical thinking toward this often neglected aspect in vocational behavior. He feels that theories of vocational development "tend to emphasize the continuous, uninterrupted and progressive aspects of vocational behavior." Using Super's (1951) model of vocational development, he is able to hypothesize patterns for both delayed and impaired vocational development units.
When faced with a new task in vocational development, the individual may not move smoothly to the next step of applying his repertoire of vocationally relevant behavior. He may delay movement toward the task either because of initial lack of awareness of the task with which he is faced, or because he is unwilling or unable to cope with it. He may not deal successfully with the task so that he is delayed or frustrated as he attempts to incorporate sufficient relevant learning into the behavior repertoire.

The consideration of these behaviors suggests one aspect to consider about women's vocational development. The elements of discontinuity of many women's working life and of the delayed entrance into work by many should be considered. It appears that concentration upon parental and homemaking interests, either in anticipation or in participation, constitutes an interruption in the standard pattern of development toward vocational maturity.

Entrance into vocational training represents a task within vocational development. Ideally a great deal of occupational information is presented in well planned courses of vocational training. In addition, students are confronted almost daily with the concrete task of self-evaluation through the actual performance of job-required skills. Since this requires incorporating relevant learning into behavior, it seems feasible to expect some changes in vocational maturity.

The concept of vocational maturity within vocational development has been emphasized by Super (1955). Through even more detailed analysis of the ideas involved, Crites (1965) has concluded:

...the concept of vocational maturity is more comprehensive than vocational choice, including not only the selection of an occupation but also attitudes.
toward decision making, comprehension and understanding of job requirements, planning activity and ability, and development of vocational capabilities (p. 4).

Many secondary students have neither received sufficient information nor have been motivated to build an adequate vocational concept. A great deal of this development must continue into the early adult years. It may be that the delay of some women in entering the labor force has also delayed the growth of vocational maturity. Samler (1964), Rusalem (1954) and Hoppock (1957) have all referred to the influence of emotional factors, including personal preferences, upon adequate communication of occupational information. Since vocational maturity could be expected to be an area of growth and change during training, it was selected as a factor for study. An experimental instrument for measuring this quality was available from the research of Dr. John O. Crites whose work will be described later in this paper.

Measurement of work preferences

The relationship between job performance and job satisfaction continues to interest industrial psychologists. One approach of recent studies has been to examine the moderator variables which influence the relationship between the worker and the job environment.

Carlson (1969) has demonstrated that ability level, one phase of job fit, is a moderating factor in job attitudes and job performance. His hypothesis was drawn from "A Theory of Work Adjustment." This theory provides a framework to view the complementary effectiveness of worker abilities and need reinforcement within the work setting.

Betz (1969) has drawn upon this same theory to study the job satisfaction of three groups of women employees in a discount department
store. Three of the instruments developed at the University of Minnesota to test the Theory of Work Adjustment were used: The Minnesota Importance Questionnaire to measure vocational needs, The Minnesota Job Description Questionnaire to measure need-relevant reinforcers in the work environment, and The Minnesota Satisfaction Questionnaire to measure job satisfaction according to need dimensions.

Job satisfaction on the basis of "good fit" was predicted at a significant level for both cashiers and sales clerks. Results for the checker-marker positions were not significant. This study lends empirical evidence to support the importance of evaluating needs for satisfaction within the job setting.

These needs for satisfaction within the vocation appear to be closely related to vocational interests. Recent statistical analysis by Thorndike, Weiss, and Dawis (1958) presents evidence that these interests and needs represent the same factors in the individual's choice patterns.

While vocational interests are sometimes explored, there is seldom close consideration of these needs for personal satisfaction in educational and vocational guidance. There is the possibility that neither skill development nor employment opportunities can replace the consideration of these elements for personal satisfaction.

Since it was expected that participation in training programs would present the students with new information concerning the jobs for which they were training, it seemed important to know whether this information affected their preferences for satisfaction within the work environment. An experimental instrument for evaluating these needs was available through the University of Minnesota. It will be described in
later portions of this report.

ORGANIZATION OF THE REMAINDER OF THE STUDY

This study of changes in attitudes toward a vocation during a period of school attendance has been divided into five chapters. Chapter I has presented a short statement of the problem, pointed toward some of the limitations of the study and outlined the factors to be explored.

The second chapter will review relevant literature and introduce background information. This should provide perspective for understanding the inter-related forces affecting such research.

Chapter III will explain the handling of statistical data and the techniques of analysis applied. The presentation of data will appear in Chapter IV while Chapter V will include summary, conclusions, and recommendations.
CHAPTER II
SURVEY OF THE LITERATURE

Material from a number of backgrounds is relevant to this study. It involves adult women who are developing vocational skills so that they may be employable, and it uses a technique of counseling identified as group work. Background literature will be reviewed in the following areas: (1) the current role of women in the working world, (2) industrial studies of the motivation to work, (3) theories of vocational behavior, (4) specific studies of women's vocational behavior, and (5) group counseling with adults.

THE CURRENT ROLE OF WOMEN IN THE WORKING WORLD

Recently the vocational counseling of women has been described as "one of the most neglected guidance frontiers today" (Vincent, 1967). The impact of this apparent neglect is noted by educational institutions, prospective employers, and observers of sociological patterns. The growing unrest of women themselves and their well documented desire to become something other than wives and mothers are subjects for various publications. Concern has become intense enough to generate governmental commissions to study the problem and private programs seeking to meet the more obvious needs. The special dilemma of the college trained American woman has found its way into the realm of popular writing, including women's magazines and the best seller list. There are also several anthologies (Cassara, 1962; Farber and Watson, 1963; Ginzberg, 1966; Lewis, 1968; Lifton, 1965; Mead and Kaplan, 1965) in which outstanding authors have explored the historical and philosophical perspective
of the American woman in this century.

The characteristics of women in the labor market should be considered. According to Parella (1968) large numbers of these are not college trained, although the attainment of a college degree enhances a woman's chances of being employed. In 1965, 72 percent of all women who had completed five or more years of college and 54 percent of all women with four years of college were in the labor force. In contrast, women with fewer than eight years of education had only 24 percent of their number working.

Women tend to be underutilized in relation to their educational achievement. Seven percent of employed women who had completed five or more years of college were working as service workers, operatives, sales workers, or clerical workers. Almost 20 percent of the women in those fields had completed four years of college, and 65 percent had one to three years of college.

Actually women form a smaller percentage of all professional and technical workers today than they did before World War II. In 1966 women represented 37 percent of that total, while in 1940 they represented 45 percent. They also held only 22 percent of the faculty and professional staff positions in institutions of higher learning in 1966 although in 1940 they had held 28 percent. Statistics for other professional groups show similar patterns.

Today one of three married women is working. Twenty years ago the ratio was one out of five. Married women constitute twenty percent of all civilian workers over fourteen years of age; in 1947 they accounted for only eleven percent of the total. During this period the ratios of labor force participation for all other groups have remained about the
same or showed a slight decrease. Statisticians project that the total female labor force in 1980 will be half again as large as it was in 1960 and that much of this growth will be among married women (U.S. Dept. of Labor, 1968).

There is even some movement in industry to recruit this "gold mine" of talent. Morgen (1967, p. 186) states that their abilities have furnished the labor reserve for an expanding economy. One economist, concerned with a study of labor supply, has remarked that:

Married women have become so important a segment of the labor force that attention to their work patterns is necessary for a full understanding of many important economic problems: economic growth and the cyclical behavior of national income, the personal distribution of income, the effects of income taxes on labor supply, and birth rates (Cain, 1966, p. 123).

While large numbers of women are already employed, others are seeking work or preparing themselves to enter the labor force. This transition of adult women into the world of work is seldom a simple one. It is a multi-faceted series of decisions and choices which is similar to, yet specifically unlike, vocational decisions typically made by men. Career patterns for women may not resemble the traditional one which is based upon the experience of typical male workers. Donald Super (1957, p. 76) has defined at least seven career patterns for women:

1. The stable homemaking career pattern
2. The conventional career pattern
3. The stable working career pattern
4. The double-track career pattern
5. The interrupted career pattern
6. The unstable career pattern
7. The multiple-trial career pattern

Most analysts see the biological role of women as the critical issue in their career growth. Participation in the bearing and rearing of children may decree a late-developing or unstable pattern.
Another aspect is the increasing number of early marriages. Both educational and vocational experience are interrupted as home responsibilities take precedence. Early feminists claimed that a concentration on youthful marriage by girls and their parents was detrimental to feminine independence. They declared that women were "warped permanently by failing to get an education in the hope of getting a husband instead." (Sinclair, 1965, p. 356) In this decade in America when a majority of the girls are married before they are twenty-one, it appears that the choice of early marriage is again shaping the vocational course of women's lives.

Corallary to the recognition that family and parental obligations shape a woman's vocational status is the acceptance of cultural role. One portion of this appears to be the societal expectancy that women are non-earners of money. Sinclair (1965) refers to this as the "New Victorian tradition" which rules that the proper place for a woman is in the home, dependent upon a man for her economic subsistence.

These social pressures and expectations may take precedence over individual preferences. They may mold a woman's choice and even suppress an early definition of vocational interests. Some (Mueller, 1954, p. 134) feel that this pressure even colors research attempts to study women's interests.

Some studies suggest that our society still prefers that women fulfill the traditional nurturant roles. Hewer and Newbeck (1964) found that college freshmen were not accepting of women's working for the fulfillment of personal interests and abilities although the role of supplementing the family income was acceptable.

Empey (1958) found that there is a growing tendency among young
women to plan for both marriage and a career. He suggests that young women no longer view the choices as mutually exclusive. Steinman (1964) and Freed (1965) reflect the same expectation, that college women in particular plan to combine a successful marriage with a satisfying career.

Even when a woman chooses to play the dual role, she may doubt her ability to fulfill one or the other. This conflict alone can preclude a smooth transition into a meaningful career.

Psychologically oriented observers are likely to see the central component of the problem within the individual's expectation of herself. Lewis (1968) has pointed out that the new feminist movement differs from that of the late nineteenth century in that it urges that women be treated as individuals, not that, as a group, they be accorded certain privileges. In fact, the apparent freedom to choose from a wide diversity of weakly defined roles may be the dilemma which confuses so many women. Parsons (1953) has reminded us that while a man's status may depend upon his job, this is rarely true for a woman even when she is employed.

While the more popular writings stress the importance of self-expression through vocations, most women in the labor force say they work because they want the money. In the case of the married woman, this is often used to raise the family's standard of living. Employed married women earn about one-fifth of their family's total income. Of the twenty-seven million women working in 1966, over six million were single and supporting themselves, about five and a half million were widowed, separated or divorced and generally supporting themselves and others, and of those married with husbands present in the home, twenty-two percent had husbands earning nothing or less than $3,000 a year. Another twenty-five percent had husbands earning between $3,000 and
$5,000 a year  (Cohen, 1967, p. 8).

A comprehensive study of both economic and non-economic factors for women's participation in the labor force is by Long (1958). He found that marital status, children, husbands' earnings, and education are more important in determining whether women work than either level of earnings or the availability of work.

While fewer women are employed at professional levels, there are many employment opportunities for the non-professional woman in the labor market. The President's Manpower Report to Congress for 1967 reported that the increase in women operatives actually exceeded that for men and was the largest increase since 1950. There was also a rise in clerical employment and service workers, most of whom were women.

Regardless of level of training, however, certain segments of the female population may be subject to special problems as they consider employment. Some of the group oriented concerns which have been studied are attitudes of working class families, opportunities for mature women, and the aspirations of college women.

Working class families, who have traditionally felt that women should stay at home, may be changing their attitudes. Kamarovsky (1953) found that about one-third of these wives held favorable attitudes toward working. Husbands were also accepting of women working, not only for economic motives but "just to get out of the house."

Another sociologist is not so positive of the vocational aspirations of youth from poorer economic backgrounds. Miller (1964, p. 133) says that although many of these girls will work for a good part of their lives, they are not concerned with the job world but think of marriage as an alternative to work.
The mature woman who wishes to reenter the labor force after a period of rearing children and full time homemaking confronts some other adjustments. She generally lacks confidence in herself as an employable person and may also have difficulty acquiring the information she needs concerning job openings and education opportunities (Zapoleon, 1966, p. 240).

The college woman has been the subject for a number of studies concerning attitudes, work expectations, career plans, personality characteristics and adjustment to the role of homemaker. Her expanding career opportunities are lauded; she is encouraged to become creative and contributing.

Yet, a smaller percentage of women are completing college degrees and are a smaller proportion of all professional and technical workers today than they were before World War II. Women are increasing among those in less skilled jobs.

Perhaps Margaret Culkin Banning (1960, p. 10) put it more succinctly:

So we can assume that whether women will work outside the home or in it has passed beyond choice. The majority will work in both places. The girl of today therefore must be prepared for this. The old argument of home or career has been settled in favor of home ...and in a paying job, which is very rarely a career.

This point, that even college women are likely to be seeking a job rather than preparing for a career, should not be ignored in a study of women at work.

Harbeson (1967) found that graduates of a woman's college preferred work that can be combined with homemaking. Kuhlen (1963) found that for women teachers that the occupation appears to be clearly a
secondary role and not a major source of need gratification. Cross (1968) found that women enrolled in junior colleges were taking courses not just to learn specific skills but for personal satisfaction.

While women in growing numbers are joining the labor force in America, there is evidence that they face many personal and family decisions before a satisfying adjustment can be achieved. Educators and counselors are often the persons consulted by those in the process of decision making. The backlog of vocational knowledge concerning these decisions needs strengthening.

INDUSTRIAL STUDIES OF THE MOTIVATION TO WORK

The literature concerning man and his relationship to his work is voluminous. Vroom (1964) undertook a monumental task in attempting to organize the existing research. A brief resume of key studies is pertinent here because of the concern of this paper with the satisfaction expected from work.

Early in the Twentieth Century, industrial psychologists began the specialized study of the standardization of work methods. In a quest for efficiency in production, they became involved in understanding the worker as a tool of production. Their goal was the optimal use of machines and equipment by the worker.

Frederick W. Taylor (1911), called the father of scientific management, systematically analyzed specific jobs so that employers could select people well qualified for the job and train them in the proper skills. Later the efficiency studies of Frank and Lillian Gilbreth (1917; 1918) touched upon conditions of work which affected production.

The work of Elton Mayo (1945) and his colleagues (Landsberger,
1958; Roethlisberger, 1939) in the Hawthorne Works of Western Electric Company in Chicago opened the door to the study of factors other than work methods which might influence production. Their experiments at the Harvard Graduate School of Business were instrumental in making good human relations an approved goal for modern management.

Concern with worker morale as a factor in production remained high during the 1930's and through World War II. Some impetus was the result of the growing strength of labor unions and their bargaining potential.

Studies concerning supervisors who were "employee centered" and "production centered" became a major emphasis. Renesis Likert (1961; 1967) who has become a major spokesman for these studies stresses the need for a positive approach to a supervisory style which enhances the workers' proprietorship feeling about their jobs.

Another important series of studies was conducted in the 1950's by Frederick Herzberg (1957; 1959). As they studied what people wanted from their jobs, this group of psychologists identified a group of factors which they called "motivators." These have an uplifting affect upon attitudes or performance and included opportunities to experience achievement and responsibility, to handle more demanding assignments, and to receive advancement.

Another group of factors were termed "hygienic" and served only to prevent losses of morale and efficiency or to serve as prerequisites for effective motivation. These included pay, job security, working conditions, and to some extent supervisory conditions.

Others have searched for motivators within the organization of a company. Whyte (1957) began by studying monetary incentives but found
that probably power, including the setting of production goals, standards, working methods and rewards, was the most important motivator of all. Argyris (1957; 1960) has considered the adaptation of the individual to the demands of the organization. A group at Cornell University (Hulin, Smith, Kandall, and Locke, 1963) has studied the job satisfaction of workers already employed.

Generally these studies point out that the traditional motivators of pay incentives, security, recognition, good communications, and promotion are not sufficient to produce positive motivation. They only make jobs endurable in the anomic of a large organization. Those in management positions have found themselves searching for workable philosophies which can set the tempo for continued productivity in a growing but competitive economy.

More recently, the impact of management style in creating a motivating environment has received much attention. McGregor (1960) has contrasted Theory X, authoritarian management, and Theory Y, employee-centered management. Others such as Drucker (1964; 1967), Ewing (1964), and Haire (1966) have emphasized understanding of management and organizational goals. Their work underlies Gellerman's (1963) summation which points to the lack of intangible rewards as the newest and greatest barrier to productivity.

Much of recent industrial research has stressed understanding the manager and helping him create proper working climate. Another approach has been taken at the University of Minnesota where the problem of individual adjustment has been the focus. Under a grant from the United States Office of Vocational Rehabilitation, this research team began to study the employment problems of the disabled and the effectiveness
of job placement procedures for them. The work has expanded into the Work Adjustment Project at the Industrial Relations Center there.

To provide a conceptual framework within which the many research activities and results could be organized, "A Theory of Work Adjustment" was developed and a series of instruments for measuring variables in the theory have been developed (Dawis, Lofquist, and Weiss, 1968).

A basic concept of this theory is that of correspondence between individual and environment. Correspondence is defined as "a relationship in which the individual and the environment are mutually responsive" (Dawis, Lofquist, and Weiss, 1968, p. 4). It assumes that an individual seeks to achieve and maintain correspondence with his environment. The work setting is one important aspect of normal environment for the average individual.

It further suggests that as the individual and the work environment continue to maintain correspondence so that a degree of stability is achieved, this is manifested as tenure on the job. Two factors, satisfactoriness and satisfaction, form the basis for job tenure. "Satisfactoriness" indicates that the individual is judged as meeting the demands of the job; "satisfaction" is the internal measure by which the worker judges that the work environment is meeting his needs. Predicting worker tenure through the study of these elements is the partial goal of this research.

The Project reports the development (Weiss, Dawis, Lofquist, and England, 1966) of the following instruments for testing the propositions of "The Theory of Work Adjustment:"

1. The Minnesota Satisfaction Questionnaire to measure the satisfaction of the individual's needs through work.
2. The Minnesota Satisfactoriness Scales to measure how satisfactorily individuals perform on their jobs.

3. The Minnesota Importance Questionnaire to measure individual's vocational needs.

4. The Minnesota Job Description Questionnaire to measure the kinds of reinforcers available in specific jobs and the levels at which they exist.

In addition to these measurements, the project makes use of the General Aptitude Test Battery through the United States Department of Labor. This work seems to pioneer a practical bridge between the theories of vocational satisfaction and relevant action within an employment setting.

THEORIES OF VOCATIONAL DEVELOPMENT

Even a cursory survey of research concerning vocational behavior reveals little basic formulation toward one applicable theory. One of the strongest groups has centered around Super (1957; 1960) and his colleagues who have explored vocational development. Much of his published work has concerned adolescent boys and the longitudinal study of their career development.

Super points out that the development of vocational behavior does not take place independently of development in other areas. He also considers the tasks achieved at different life stages. Others have used similar approaches. Havighurst (1953) describes typical developmental tasks for different life stages: infancy and early childhood, middle childhood, adolescence, early adulthood, middle age and later maturity. He indicates that coping adequately with tasks at one stage is vital before advancing to the next.
Miller and Form (1951) have described the stages of working life: preparatory work period, initial work period, trial work period, stable work period, retirement period. Another group, headed by Ginzberg (1951) while not emphasizing the developmental concept, have classified periods in the determination of occupational choice: the period of fantasy choices, period of tentative choices, and period of realistic choices.

A second major project of Super's group has closely examined the individual's vocational preferences and career patterns which they view as attempts to implement a self-concept (Super, Starishevsky, Matlin, and Jordaan, 1963). They postulate that the individual seeks to choose a vocation with requirements which are consistent with his picture of himself. They also present a model for translating these self-ideations into vocational goals.

Crites (1965; 1967; 1969) at the University of Iowa is now expanding and consolidating research built around the concept of vocational maturity. Roe (1954; 1956; 1957; 1964) at Harvard has stressed the importance of personality and family background in vocational behavior.

Two other major research groups have studied high school students and their vocational aspirations. Flanagan (1962) through Project Talent has investigated vocational choice and predictors of creativity and productivity. Holland (1966) has directed research for the National Merit Scholarship Corporation which made a longitudinal study of talented students and their vocational choices. He has also constructed a Vocational Preference Inventory (1958) and published a theory which matches personality types with job environments (1960).

Several other studies of the relationship of personality to career choice should be mentioned. Siegelman and Peck (1960) studied
the personality dimensions for three professional groups: chemist, minister, and military officer. Segal (1960) found partial support for vocational choice predictors based upon personality when he studied accountants and creative writers. Nachman (1960) explored childhood experiences of lawyers, dentists and social workers. These and others lead to the hypothesis that certain personality characteristics are involved in vocational choice.

Another group in research has applied themselves to the mechanics of choice within the self-concept. Tiedeman (1961; 1963; 1967) at Harvard has led in some very broadly based research on a wide range of problems in career development. He has attempted to delineate a system of "mediation" which articulates the decision making process with the individual's personal goal determination. The individual seems to "forge a vocational identity" as he moves toward vocational maturation.

Recently Osipow (1968) has published a meticulous analysis of theories in vocational counseling. He concludes that the present theories appear to be much too broad in scope and skimpy in detail, have over-emphasized the aspect of interest, and erred in the assumption that all men want to work. He also says:

A third problem lies in the treatment of female career development by the theories. Few special explanations or concepts have been devised to deal with the special problems of career development of women, yet all who have observed or counseled women with respect to their career behavior realize that special problems exist for them as opposed to men... (p. 247).

WOMEN AND VOCATIONAL BEHAVIOR

Studies concerning motivation to work and vocational behavior have to some degree and in varying manners included women in their samples.
If women do face a different challenge than do men in making satisfactory career adjustments, it seems important to review empirical studies about them.

The largest number of studies involves college women. Many of these (Hoyt, 1958; Rand, 1968; Simpson, 1961; Schissel, 1968; Surette, 1967; Wagman, 1966) test the career-homemaking preferences of women students in an attempt to relate their educational choices to future vocational usage. Risch (1966) attempted to predict career choice on the basis of perceived parental relationships. Elton and Rose (1967) found differing personality patterns between vocational choices among freshmen women. Recent work by Astin (1968) suggests that it may be possible to identify specific personality variables among high school girls in relation to career choice. Baruch (1966; 1967) has explored the achievement motive and its relationship to the homemaking responsibility.

Some of the studies have used samples of atypical women. Roe and Siegleman (1964) used women engineers and women social workers to compare with their male peers. Brophy (1959) studied nurses according to self-concept and occupational requirements. Kibrick and Tiedeman (1961) also used the self-concept in relation to withdrawal from or continuation in nursing school. Mowbray and Taylor (1967) found that the overriding determinant of adjustment to nursing school is the social service orientation.

Studies of more typical samples have indicated that job preferences, expectations and interests do vary among groups of men and women, college and non-college groups.

Wagman (1965) who studied college sophomore men and women found
significant differences in occupational values among various age and sex sample. Steward (1966) has been able to differentiate among vocational training groups, both men and women, by the use of a personality inventory at the junior college level. He concluded that career choices of trade-oriented students are related systematically to certain psychological variables.

Some other studies of post high school students are of importance here. Medsker (1960) found that while vocational groups tend to have lower mean scores of tests of academic aptitude that their range of scores is as great as for other students. Clark (1955) found the interests of various classifications of Navy enlisted men to be quite different. While Kelleher, Kerr and Melville (1968) have isolated a group of testable factors which can predict success in the hospital aide field. White (1959) studied freshmen women in a junior college and found some support for the relationship of parental concept of the girl and its influence upon her career choice. Applying the theory of the influence of birth order on personality, Very and Zannini (1969) studied 200 female beauticians in Rhode Island. A statistically significant number of them were the second born in the family.

The varying patterns of women's careers was the focus of a major study by Mulvey (1963). Her sample was almost five hundred middle-aged women. She sought to find out not only how their lives had developed but their level of adjustment and some of the factors affecting this adjustment. Her conclusions closely supported Super's hypothesized seven career patterns.

Matthews and Tiedeman's (1964) study of over 1,200 young women found that attitudes toward career and marriage differed in the three
developmental stages, early adolescence, adolescence, and young adulthood. While a pseudo-career drive seems to appear in early adolescence, other attitudes seem to become dominant in high school and young adult years.

The studies from industrial settings are nearly always concerned with some phase of job satisfaction. Among the factors investigated have been job level, wage level, type of leadership, age of workers, and personality of the worker.

Over twenty years ago, Bolanovich (1948) studied women working in the factories of the Radio Corporation of America. In this same period, Jurgensen (1947) found that women were more interested in type of work, their co-workers, supervisors, hours and working conditions. Men were more interested in security, advancement opportunities and benefits. Hinrichs (1968) also noted that certain components of job satisfaction were more important for women than for men. Beer (1968) also found that jobs which appeared as more complex in the clerical field did not always provide more satisfying to the women workers.

Hardin, Reef and Heneman (1951) studied factors in job preferences of department store employees. Over half the sample were women. There was significant difference between male and female groups. Women ranked the type of work they did as equally important with security. Men chose job security first and ranked opportunity for advancement second. Gadel (1953) found that type of work was chosen as the most important factor in job satisfaction among older, part-time women clerical workers.

Hulin and Smith (1964) chose to investigate the contribution of sex differences to work satisfaction. In three of their samples the women were less satisfied with their jobs than the men. Promotional opportunities was the most frequently mentioned area of dissatisfaction.
Two more recent studies by Hulin (1966; 1968) are concerned with female clerical workers. These indicate that as levels of job satisfaction increased, there was a marked decrease in turnover.

Although this report concerns nonprofessional and noncollege adult women, there are two studies using high school samples which seem useful. Singer and Stefflre (1954) studied two personality dimensions, level of vocational aspiration, and job values and desires. For girls the level of interest had no significant relationship to the selection of job values and desires although they were positively related for the boys. Davis (1964) presents a useful picture of the vocational aspirations of daughters of blue-collar workers. These girls anticipated work satisfaction to come, first, from enjoyment of the work itself; second, the chance to help others; third, working with nice people; fourth, steady work; fifth, high pay; sixth, opportunity for advancement.

A different approach to women's attitudes toward work was adapted by Sheppard and Belitsky (1966). They explored job seeking behavior in Erie County, Pennsylvania. One portion of the study concentrated upon comparisons of 60 female office-machine operators and white collar workers, and 146 female blue-collar workers. There were critical differences between the two groups in the time the job hunt was started, in techniques used and in achievement values.

Probably the most exasperating aspect of an attempt to study women and their vocational development is their refusal to fit into neat categories. Any attempt to analyze or classify research becomes a frustrating venture.

Pioneers in studying women vocationally tend to have left the problem for more fruitful study of men at work. Early studies of women's
interests by both Manson (1931) and Strong (1943) led researchers to conclude that women were largely a heterogeneous group who took a job because of convenience, proximity, and as a stopgap until marriage. Strong did find some parallel interests among men and women in certain professional groupings.

Recent work on the Strong Vocational Interest Blank by Harmon (1967) found that vocational interests do not necessarily diminish when the housewife role is fulfilled.

Other work involving the interests of nonprofessional women has been more definitive. Campbell and Harman (1968) revised and enlarged the Strong Vocational Interest Blank. This instrument now promises significant help to the woman who wishes to choose a vocation.

While research may be pointing toward meaningful classification of women's vocational interests, there is also evidence of attack upon the problem of career development. Zytowski (1967) has recently suggested nine postulates as the basis of a theory for career development for women. He has recombined and refined elements of other theories which have included women. One interesting viewpoint is that he sees the life of women becoming more like men's and hopes that altered social expectations and technical innovations will ultimately result in the obsolescence of his entire scheme.

GROUP COUNSELING WITH ADULTS

The group approach to problem solving has been applied in a wide variety of circumstances. Wright (1959) was able to list research from at least a dozen separate areas, ranging from group psychotherapy to community action groups. McGrath and Altman (1966) have published
a lengthy synthesis and critique of the research conducted with small groups. Techniques of group organization, leadership approach, and participant interaction are varied, usually adapting to specific situations.

The primary basis of group work lies in the thesis that groups influence individual opinions, attitudes, and actions. Katz and Lazarfield (1955) suggest group change as the beginning for individual attitude and behavior changes. Lifton (1966) presents a rather inclusive series of hypotheses concerning the way an individual may be helped to achieve behavior change with a group:

1. To help people we need to start with their perception of a situation.

2. Help is most useful if it is initially directed toward the problem causing an individual (or group) the most immediate concern.

3. Individuals (groups) have an innate capacity to heal themselves, if they are provided a setting where they can feel secure enough to examine their problems.

4. As an individual (group) is helped to feel more secure, his need to shut out unwanted bits of information decreases.

5. A change in any part of an individual's life affects all other aspects of his being (p. 28).

The application of counseling techniques within a group has become a widely accepted part of counseling programs at all levels of education. After extensive experiment, one expert concluded that "small group discussions carried on in a permissive atmosphere are an excellent learning medium for personality growth of high school, college, and adult students" (Driver, 1954, p. 23).

Among the earliest recognized advantages of group counseling was
that of conservation of counselor time. It soon became evident that
group work possessed counseling benefits that were different from indi-
vidual sessions. Some have reported that the personal interactions among
group members hold therapeutic value not found in individual counseling.
Froehlick (1958), Cohn (1964), Ford (1962), and Stewart and Warnath
(1965) have all written concerning the unique attributes of group work.
Bennett (1955) lists some useful identifying characteristics:

1. All members of the group have a common problem.
2. All members identify themselves with this common element which has real meaning for them.
3. The counselor functions as one of the group, not as teacher, leader, or interviewer.
4. The permissive atmosphere and absence of credit or marks favor freer expression of feeling than the usual classroom situation.
5. Interaction among members of the group is essential and they have the responsibility of evaluating pressures created by the group situation.
6. While no group standards are set, the participants are stimulated to evaluate themselves and their opportunities... (p. 125).

Driver (1954, pp. 27-28) also delineates some differences in
psychoanalytic group therapy and "multiple counseling:" group members
are not forced into self-revelation; discussion topics cover a wide
range of personal and social problems introduced by the leader; enjoyment
of the sessions as social gathering is considered an important factor
in learning; the group leader does not limit himself to nondirective
leadership techniques.

While there are general reports of the successful use of group
techniques, there are few published reports of controlled experiments
using group counseling with adults. Several studies of college under-
achievers are available (Chestnut, 1965; Fairies, 1955; Fretz, 1967; Gilbreth, 1967; Klingelhofer, 1954; LeMay, 1967; Teachan, 1966). Some report results of group work with teacher and counselor groups in training (Bonney and Gazda, 1966; Gazda and Bonney, 1965; Strickler, 1957; Waldkoetter, 1961). Social workers have reported on some special types of groups and the use of non-trained counselors working with groups in industry are published (Carkhuff and Truax, 1965).

Most published reports have worked with adults as teachers or parents of a specific group of children. Groups involving parents of mentally retarded children have been the focus of several articles (Appell, 1964; Coleman, 1953; Cummings, 1962; Gordon, 1956). Buchmueller (1954) reports a group therapy project for parents of normal children with behavior problems. Russell (1959) and Samuels (1958) reported children's achievement improved when they worked with mothers of children in remedial reading classes. Shatter (1958) found that including mothers in group therapy increased the child's growth in maturity. Keppers and Caplan (1962) found that counseling the parents of under-achieving boys was effective in helping the boys achieve a stronger self-concept.

Vocational counseling at the post high school level, except for course work, is also sparsely reported. One special type of group procedure, a televised vocational guidance course for parents, was evaluated by Tamminen (1957). Kagen (1953) found that a parent's course in vocational guidance benefited parental attitudes and skills in helping children make vocational plans.

One series of experiments is of particular interests. Williams (1962) reported on the use of brief educational-vocational counseling with college students. The counseling was problem oriented and consisted
of one interview, testing, then a follow-up interview. He found that
the adjustment level and over-all concept congruence of counseled clients
increased significantly. Two later studies with similar experimental
designs sustained the earlier findings (Hills, 1965; Williams, 1962).

Building upon Williams' work, Catron (1966) observed high school
students in an attempt to discover if group counseling of educational
and vocational problems also changed the self-concept. While the per-
ception of self changed significantly toward good adjustment in the
experimental or counseled group, it was not nearly so positively in the
control group.

SUMMARY

Chapter II has referred to theories and investigations from a
number of sources which relate to the study being reported. Women com-
prise a growing segment of the labor force. Work choice and job satis-
faction have not been closely correlated to formal or pre-employment
training. Theories of vocational behavior have generally not been
specifically related to women, although there have been industrial studies
of employed women. The group counseling studies of adults report very
little concerning vocationally related attitudes but the technique has
been used successfully in many other contexts.
CHAPTER III
RESEARCH METHODS AND PROCEDURES

A pretest-posttest evaluation of four groups of students using three instruments of measurement was used throughout this study. This chapter will describe the plan of the research and the organization of procedures for collecting the data. It will also present the plan for statistical analysis of the results.

THE SAMPLE

This study was conducted during the fall trimester of 1968 in the Albuquerque Technical-Vocational Institute, a public school offering technical and vocational education at the post high school level. Tuition is waived for any legal resident of the State of New Mexico. The student body is drawn principally from Bernalillo County although some students come from other areas of the state. Enrollment in the Day Division totaled 1,088 during the trimester of this research. The school operates on a year around schedule of three trimesters. Each term provides about fifteen weeks (75 days) of classroom instruction.

Institute records describe the typical student body as about 60 percent male and 40 percent female with an age range of 17 through 63 years. About 40 percent have Spanish surnames, while 70 percent report some work experience. The socio-economic background of the parental home is reported as 5 percent professional-managerial, 30 percent skilled, 31 percent unskilled, 30 percent unemployed and 4 percent not responding.

The student group was comprised of 244 women enrolled as new students. All of them were beginning a major program of vocational
academic skills before entrance into a major.

Before admission to the Institute all students had been given the General Aptitude Test Battery. Through interpretation of the aptitude testing, information concerning course content, and local vocational opportunity information, a professionally trained counseling staff had assisted each student in choosing a program of study.

Demographic information concerning the 135 students who completed all evaluation materials is presented in Appendix A. Their ages ranged from 17 through 50 years but the average was about 24 years and the median was 18 years. Over 60 percent were single and most of these reported less than one year's working experience. Many had never held a full time job. About three-fourths had finished high school while the socio-economic level of the parental home was typically reported as skilled or unskilled. Many came from bilingual backgrounds although the tabulation of Spanish surnames is obviously not an adequate measure of this factor.

EVALUATION INSTRUMENTS

A description of published studies which influenced the choice of evaluation materials appears in Chapter I. The characteristics chosen for study included self-identification with the chosen training area, vocational maturity, and attitude toward the environment of the job.

Because of the variety of vocational aspirations of the participants, some method of self-report seemed a useful approach for studying identification with the chosen training area. Wiersma (1969, p. 202) has pointed out that the adequacy of self-report for research purposes of the subjects' remarks may be obscured by the researcher's interpretation of them. A second is that the adequacy of the self-report depends upon
the sophistication of the subjects. In the setting of this study, the latter factor became one for careful consideration.

Many of these students, particularly those in remedial academic work were not skillful in verbal usage. For this reason, as well as the research previously considered, a Q-sort which could be reduced to quantified values seemed preferable to the essay or interview. The single word type of Q-sort, as contrasted to the phrase or sentence type, was chosen because of the reading limitations of some of the students. As an added assistance a dictionary list of simple definitions (Appendix G) was made available during the administration of the Q-sort.

The Chicago Q-sort developed by Raymond Corsini and published by Psychometric Affiliates was finally selected. It consists of fifty personal adjectives printed on cards. These are sorted into ten columns of five items each. Those in the last column to the left are those which least describe the subject; those in the last column to the right are those most like the subject. The remaining adjectives are arranged on a continuum basis.

Participants in the study were asked to sort the cards to describe the ideal worker in the vocational field they had chosen. In the second sort they were asked to describe themselves. Each sort required approximately twenty minutes. These two sorts were made in both pretest and posttest evaluation sessions.

The second instrument chosen for this experiment is the outgrowth of the research in vocational development by Dr. John O. Crites. His work has included the construction of the Attitude Scale of the Vocational Development Inventory. It was "designed to elicit the attitudinal or dispositional response tendencies in vocational maturity which are
nonintellective in nature but which may mediate both choice behaviors and choice attitudes" (Crites, 1965, p. 4).

This scale measures a developmental task which usually takes place within the period of adolescence, from approximately age ten to entry into adulthood at age twenty-one. The concept is correlated both with age and grade in school. Research now in progress is exploring its development in young adulthood (Crites, 1969).

The fifty true-false items in the scale describe various concepts of the vocational choice process, feelings about the way career decisions are made, and values concerning work. It was administered in both pre-test and posttest sessions and required about fifteen minutes to complete.

The third measurement for this study was that of the subjects' attitude toward the work environment. An attitude measurement deals with the feeling of the individual toward an idea, a practice, a social custom, or some other identifiable situation. Well developed and published attitude inventories are not available for many areas of interest.

Fortunately the work at the University of Minnesota on "A Theory of Work Adjustment" has produced an instrument which permits the measurement of some attitudes about conditions found on a job. This theory defines "needs" as "the individual's preferences for reinforcing conditions in jobs" (Weiss, Dawis, and Lofquist, 1968, p. 1). Individual abilities which correspond to ability requirements of the job can help predict the person's chances of performing the job in a manner satisfactory to the employer. But personality needs must find reinforcement within the job setting if the worker is to be satisfied with his job.

The Minnesota Importance Questionnaire is self-administering and requires about forty minutes to complete. It consists of 210 items
which require a choice between pairs of statements. Twenty dimensions are measured. These will be further defined and clarified as the data from the two measurements are presented.

PROCEDURES USED IN THE RESEARCH

There were three major parts to this study: a pretest on evaluating instruments; participation by the sample in training and in counseling groups; and posttest on evaluating instruments. These materials were administered between October 7 and October 18 for the pretest and January 13 and January 24 for the posttest. It was collected through the voluntary cooperation of classroom teachers and students in the English classes. Approval for the project was granted by the Vice President of the Institute, who is the chief administrative officer, and the Director of Pupil Personnel Services.

In the pretest phase, the three evaluation instruments were administered in small class groups of no more than thirty participants. During the first class hour the administrator informally explained that the purpose of the questionnaires and the opinion-collecting materials was to help counselors understand what women were expecting from their jobs and to help counselors plan better counseling programs for women in vocational training. The voluntary participation and permission sheet was presented (Appendix F). At this first session the Attitude Scale of the Vocational Development Inventory and the Minnesota Importance Questionnaire were also completed. On the second day, in the same class groups, the Chicago Q-sort was presented and two sorts were completed. These were, first, a description of the ideal worker in the subject's chosen field of preparation and, second, a self-description.
Interest in the material was generally very high and many of the women were eager to discuss the questions raised by the materials. The testor avoided such discussion in the administration settings but found that many of the participants requested individual conferences or met her informally on campus to discuss the ideas.

After the completion of the first battery of materials, the second phase of the study began. Records of the participants were divided into two groups according to general program of study. These were remedial academic study and vocational skill training. All materials were coded by the student identification number assigned by the Institute at the time of admission. Student numbers were then arranged in sequential order for each of the two programs and every third number was chosen for possible participation in group counseling.

Subjects selected for group counseling were contacted individually and invited to participate in noon time discussions concerning occupations. Some were unable to join groups because of other commitments for use of their noon hour; others were not interested. From the number who accepted, four groups were formed, two from vocational majors and two from academic programs.

Group sessions were conducted by a qualified counselor. The leader had served as high school counselor for seven years and had completed course work for a doctorate in pupil personnel services. At the time of this research she was on the staff of the Albuquerque Technical-Vocational Institute with major responsibilities for personal counseling.

The counselor attempted to establish an open, permissive, non-judgmental and non-threatening atmosphere in each group. Early planning on the part of the counselor had included some suitable activities and
had anticipated some discussion topics (Appendix E). These were not presented to the group and in so far as possible the group members led in planning the activities of the meetings.

At the first meeting the group selected the day of the week for future meetings, agreed to designate weeks they would prefer not to meet, and choose a time for termination of the meetings. Participants were not told that the instruments presented in the classrooms were in any way related to the group counseling except as portions of an overall department program. The scores made on the materials were made available to the participants during the trimester following the completion of the study.

Groups met over a period of eight weeks. A log summarizing each session and giving a record of attendance appears in Appendix E.

The posttest evaluation was completed within the last two weeks of classes. The fall trimester period was a total of 75 class days over a seventeen week period from September 30 to January 24.

In the posttest sessions the explanation period and information sheet were omitted. Otherwise, administration followed the same pattern as the pretest sessions. Group counseling sessions had been terminated before the second administration and those participants completed the materials in class groups with non-group members. A great many of the original 244 participants did not complete the second testing because of withdrawal from the Institute or because of extended absences. No attempt was made to reach those who had not continued enrollment through the end of the trimester. The final sample totaled 135.
STATISTICAL TREATMENTS

The individual recording sheets for the Q-sort were tabulated and correlated. The scores were converted to Pearsonian correlation coefficients using the standard grading procedure for the Chicago Q-sort. These were then translated into Fisher's "z" scores which could be used in the standard computer programs.

The answer sheets for the Attitude Scales of the Vocational Development Inventory were mailed to the University of Iowa. There they were scored as part of the Vocational Development Project. Punched cards and print-out listings of raw data were returned for further analysis.

Answer sheets for the Minnesota Importance Questionnaire were scored through the Work Adjustment Project at the University of Minnesota. Raw data was returned for further analysis.

Materials for each individual who had completed the pretest and posttest batteries were consolidated. Information was identified by student number and group number showing type of individual participation. All information was entered on punched cards in preparation for statistical analysis.

The analysis of covariance was selected as the method for statistical analysis. This method offered several advantages for handling data from this type of study. First, it permits the matching of groups statistically. The variations due to wide individual differences as well as voluntary participation made exact matching of groups impossible.

Second, it permits the comparison of changes even when the original scores might be widely varied. The use of attitude and opinion questionnaires made this variation a distinct probability.

Basically, this technique includes the following steps:
(1) analysis of variance of the first variable, the pretest data in this experiment; (2) analysis of the second variable or the posttest data; (3) determination of the correlation coefficient; (4) analysis of the second variable, the posttest data, after it has been adjusted according to the correlation (Cooper, 1967, p. 46). The achievement of an "F" score that is significant permits us to see change among the groups assuming that they had started from an equal base.

Resources at the University of New Mexico Computing Center include an International Business Machines 360/40 computer. Access to previously compiled computer programs permitted the analysis of the research data in two ways. The Analysis of Covariance program is designated as U6604; the General Statistics program is U6601. Guidelines for preparation and use of these programs were available through the College of Education at the University of New Mexico (Cooper and Luft, 1969). Materials were prepared and processed according to these directions and the output read according to the designated format.

SUMMARY

This chapter has presented a description of the details of administering the research. It has described the sample tested, the evaluation instruments, and the procedures used during the three major phases of the experiment. It has also described how the data would be treated statistically.

Chapter IV will present a description of the results of the statistical treatment and the interpretation of these results.
CHAPTER IV
PRESENTATION AND INTERPRETATION OF DATA

This chapter will present the results of statistical analysis of the raw data. Then these results will be interpreted in terms of the null hypotheses chosen for the study.

The statistical treatment sought to find significant differences among four groups of students. These were: (1) women enrolled in a vocational training major, (2) women enrolled in a vocational training major and participating in group counseling, (3) women enrolled in a remedial academic program, (4) women enrolled in a remedial academic program and participating in group counseling.

A program of general statistics computations and of the analysis of covariance were applied to the pretest and posttest results of the Chicago Q-sort, the Attitude Scale of the Vocational Development Inventory, and the Minnesota Importance Questionnaire. The level of significance failed to meet the five percent level of confidence for the Q-sort and the Attitude Scale. A statistically significant level of difference was found for some groups on five scales of the Minnesota Importance Questionnaire.

In considering the analysis of the data for each instrument, the null hypothesis will be restated in operational terms and the results interpreted in those terms.

GENERAL STATISTICS

The computation of general statistics for all results of the pretest and posttest reveal that the vocational attitudes measured remain
very stable for the sample as a whole. The means seldom vary as much as one point and the correlation coefficients between the two evaluations is not below .40, in fact many are close to .70 (Appendix B).

ANALYSIS OF COVARIANCE FOR THE CHICAGO Q-SORT

Null Hypothesis One: There is no significant difference in changes in the correlation of self-concept to chosen-vocation-concept among the four groups of students as measured by the Chicago Q-sort.

The results of the Q-sorts are expressed in Pearsonian correlation coefficients. These represent the correlation between the way the individual describes himself and the way he describes the ideal worker in the chosen vocational field. In very simple terms, the raw data may be interpreted in relation to the number and the percentage of the group who showed increase or decrease in congruence.

TABLE I

SUMMARY OF RESULTS OF CHICAGO Q-SORT

<table>
<thead>
<tr>
<th>Group</th>
<th>Total Number</th>
<th>Number Increasing</th>
<th>Number Decreasing</th>
<th>No Change</th>
<th>Percentage Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>88</td>
<td>60</td>
<td>28</td>
<td>0</td>
<td>69</td>
</tr>
<tr>
<td>II</td>
<td>14</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>III</td>
<td>18</td>
<td>13</td>
<td>4</td>
<td>1</td>
<td>72</td>
</tr>
<tr>
<td>IV</td>
<td>15</td>
<td>13</td>
<td>2</td>
<td>0</td>
<td>86</td>
</tr>
<tr>
<td>Total</td>
<td>135</td>
<td>93</td>
<td>41</td>
<td>1</td>
<td>69</td>
</tr>
</tbody>
</table>

As Table I illustrates, all of the groups showed at least half of the members increasing in congruence between self perception and perception of the worker in the chosen field. This may be interpreted as
an increase in self-confidence and probably in knowledge of the requirements of the expected job.

There were 88 members in Group I who were taking only vocational training. Of these, 60 showed an increase in congruence while 20 showed a decrease. Members of Group II were participating in group counseling sessions as well as in vocational training. Half of the 14 members showed an increase in congruence. The 18 members of Group III were taking remedial academic work. Here 13 increased, four decreased, and one showed no change. Group IV had 15 members who were participating in group counseling in addition to classroom work. Thirteen of this group showed an increase in congruence while two showed a decrease.

This trend toward greater identification with the chosen areas of training seems to be a general one. When the four groups are compared, the trend is not statistically different among them.

The analysis of covariance of the data is shown in Table II. It yielded an "F" score of 1.23 for the pretest, 1.4 for the posttest, and .48 for the adjusted posttest. An "F" score of 2.68 or greater is necessary for rejection of a null hypothesis at the .05 level. Therefore, Null Hypothesis One is accepted.

ANALYSIS OF COVARIANCE FOR THE ATTITUDE SCALE: VOCATIONAL DEVELOPMENT INVENTORY

Null Hypothesis Two: There is no significant difference in growth of vocational maturity among the four groups as measured by the Attitude Scale of the Vocational Development Inventory.

This attitude scale consists of 50 true-false items which have been found to be effective in differentiating between age and grade
### TABLE II

**ANALYSIS OF COVARIANCE OF THE CHICAGO Q-SORT**

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest Mean</th>
<th>Pretest &quot;F&quot;</th>
<th>Posttest Mean</th>
<th>Posttest &quot;F&quot;</th>
<th>Adjusted Posttest Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>0.551</td>
<td>0.702</td>
<td>0.710</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group II</td>
<td>0.776</td>
<td>0.674</td>
<td>0.608</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group III</td>
<td>0.604</td>
<td>0.681</td>
<td>0.671</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group IV</td>
<td>0.478</td>
<td>0.646</td>
<td>0.677</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Covariance</td>
<td>1.23</td>
<td>0.14</td>
<td>0.48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** with df 3, 125; 5% F = 2.68; and 1% F = 3.94.
levels. The information for analysis is based upon the raw score, that is the number right scored by individuals within each group. The higher average score for each group on the posttest gives some evidence of growth in this dimension.

When the four groups are compared, there is little difference among them. The results of the analysis of covariance is shown in Table III. The analysis yielded an "F" score of 1.28 for the pretest, .81 for the posttest and .29 for the adjusted posttest. Null Hypothesis Two must be accepted because an "F" score of 2.68 or greater is necessary for rejection of a null hypothesis at the .05 level.

ANALYSIS OF COVARIANCE FOR THE MINNESOTA IMPORTANCE QUESTIONNAIRE

Null Hypothesis Three: There is no significant difference in changes of perceived vocational needs among the four groups as measured by the scales of the Minnesota Importance Questionnaire.

The Minnesota Importance Questionnaire is designed to measure the vocational needs of workers which can predict job satisfaction and its opposite, voluntary job change. A job which does not satisfy the individual's need for creativity, responsibility, or other relevant desire will be the one which the worker will leave.

This questionnaire measures twenty vocationally relevant "need" dimensions. A brief description of each scale appears in Appendix D. The phrases are items chosen as typical of the ones which comprise the scale and are taken from the administrator's manual (Weiss, Dawis and Lofquist, 1968).

The complete scale used both comparative judgment and absolute
### Table III
Analysis of Covariance of the Attitude Scale of the Vocational Development Inventory

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest Mean</th>
<th>Pretest &quot;r&quot;</th>
<th>Posttest Mean</th>
<th>Posttest &quot;r&quot;</th>
<th>Adjusted Posttest Mean</th>
<th>Adjusted Posttest &quot;r&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>35.2</td>
<td></td>
<td>35.9</td>
<td></td>
<td>35.7</td>
<td></td>
</tr>
<tr>
<td>Group II</td>
<td>35.9</td>
<td></td>
<td>36.8</td>
<td></td>
<td>36.0</td>
<td></td>
</tr>
<tr>
<td>Group III</td>
<td>32.9</td>
<td></td>
<td>34.1</td>
<td></td>
<td>35.6</td>
<td></td>
</tr>
<tr>
<td>Group IV</td>
<td>34.1</td>
<td></td>
<td>36.0</td>
<td></td>
<td>36.6</td>
<td></td>
</tr>
<tr>
<td>Covariance</td>
<td>1.28</td>
<td></td>
<td>.81</td>
<td></td>
<td>.29</td>
<td></td>
</tr>
</tbody>
</table>

Note: with df 3, 125; 5% F = 2.68; and 1% F = 3.94.
judgment to determine scale values. For purposes of group comparisons for this study, only the portion using pair comparisons has been graded.

Each of twenty statements is paired with every other statement to produce 190 pairs. The individual was asked to choose the one statement of the pair which was more important to him in his ideal job. These comparisons provide information on the relative levels of these twenty needs since the individual has an opportunity to choose between each pair of statements.

The raw score is simply the number of times a statement representing the scale is chosen. Raw scale scores can range from 0 to 20 on each of the twenty scales. It is these raw scores which form the basis for the statistical analysis in Appendix C.

Tables for each scale present the pretest mean, the posttest mean and adjusted posttest mean for each group, as determined by the analysis of covariance. This technique permits us to see whether the changes have been significantly different. If the "F" score is significant, there is also an analysis of group differences.

The adjusted posttest mean is of most interest at this point. Table IV permits a comparison of these means and their significance for all four groups on the twenty scales.

In order for a null hypothesis to be rejected, an "F" score of 2.68 or greater is necessary at the .05 level of significance. At the end of the posttest period, the four groups differed with statistical significance on five of the scales. At the one percent level the groups differed in their desire for Responsibility; at the five percent level they differed on Compensation, Creativity, Social Service, and Variety.

The analysis of group differences shows that on the Responsibility
## Table IV

**Comparison of Adjusted Posttest Means:**

**Analysis of Covariance of Minnesota Importance Questionnaire**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group I</th>
<th>Group II</th>
<th>Group III</th>
<th>Group IV</th>
<th>&quot;F&quot; Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability Utilization</td>
<td>15.6</td>
<td>14.9</td>
<td>14.2</td>
<td>15.3</td>
<td>1.46</td>
</tr>
<tr>
<td>Achievement</td>
<td>15.4</td>
<td>14.7</td>
<td>16.3</td>
<td>15.3</td>
<td>1.24</td>
</tr>
<tr>
<td>Activity</td>
<td>9.9</td>
<td>8.7</td>
<td>9.6</td>
<td>9.2</td>
<td>.73</td>
</tr>
<tr>
<td>Advancement</td>
<td>13.9</td>
<td>13.8</td>
<td>15.2</td>
<td>15.7</td>
<td>2.29</td>
</tr>
<tr>
<td>Authority</td>
<td>2.6</td>
<td>4.2</td>
<td>1.9</td>
<td>2.6</td>
<td>2.64</td>
</tr>
<tr>
<td>Company Policies &amp; Practices</td>
<td>11.4</td>
<td>12.1</td>
<td>10.9</td>
<td>12.0</td>
<td>.58*</td>
</tr>
<tr>
<td>Compensation</td>
<td>8.6</td>
<td>9.8</td>
<td>7.5</td>
<td>10.8</td>
<td>2.92*</td>
</tr>
<tr>
<td>Co-workers</td>
<td>10.3</td>
<td>10.3</td>
<td>10.7</td>
<td>9.7</td>
<td>.31</td>
</tr>
<tr>
<td>Creativity</td>
<td>8.9</td>
<td>10.5</td>
<td>10.9</td>
<td>9.9</td>
<td>2.69*</td>
</tr>
<tr>
<td>Independence</td>
<td>6.0</td>
<td>6.3</td>
<td>6.6</td>
<td>5.4</td>
<td>.43</td>
</tr>
<tr>
<td>Moral Values</td>
<td>10.0</td>
<td>11.0</td>
<td>10.7</td>
<td>8.9</td>
<td>.77</td>
</tr>
<tr>
<td>Recognition</td>
<td>10.8</td>
<td>10.0</td>
<td>10.1</td>
<td>10.9</td>
<td>.47*</td>
</tr>
<tr>
<td>Responsibility</td>
<td>8.6</td>
<td>10.5</td>
<td>12.1</td>
<td>9.3</td>
<td>4.71*</td>
</tr>
<tr>
<td>Security</td>
<td>13.8</td>
<td>13.4</td>
<td>13.0</td>
<td>14.9</td>
<td>1.23</td>
</tr>
<tr>
<td>Social Service</td>
<td>14.4</td>
<td>12.4</td>
<td>12.8</td>
<td>13.1</td>
<td>2.87*</td>
</tr>
<tr>
<td>Social Status</td>
<td>4.8</td>
<td>4.0</td>
<td>3.1</td>
<td>4.0</td>
<td>1.95</td>
</tr>
<tr>
<td>Supervision-Human Relations</td>
<td>9.5</td>
<td>8.0</td>
<td>9.2</td>
<td>10.6</td>
<td>1.59</td>
</tr>
<tr>
<td>Supervision-Technical</td>
<td>9.8</td>
<td>8.9</td>
<td>10.2</td>
<td>9.7</td>
<td>.54*</td>
</tr>
<tr>
<td>Variety</td>
<td>9.2</td>
<td>9.5</td>
<td>9.0</td>
<td>6.2</td>
<td>2.86*</td>
</tr>
<tr>
<td>Working Conditions</td>
<td>12.8</td>
<td>13.4</td>
<td>12.7</td>
<td>14.0</td>
<td>1.11</td>
</tr>
</tbody>
</table>

*Note: with df 3, 125; 5% F = 2.68 and 1% F = 3.94.

*Scales on which groups are significantly different.*
scale Group III, those taking only remedial academic work, was higher than Group I and Group IV.

Similarly, although at a lower level of confidence the groups can be compared on the other scales. On the Compensation scale, Group IV, women taking remedial academic work plus group counseling, was significantly higher than Group I or Group III. Group II, engaged in both vocational training and group counseling, was significantly different from Group II but not from Group I, those taking only vocational training.

On the Creativity scale, Group II and Group III were both significantly higher than Group I although not higher than Group IV. The Social Service scale was chosen significantly more often by Group I over Group II and Group III but not significantly more often than Group IV. In the desire for Variety, Group I, Group II and Group III were all higher than Group IV in their preference.

Because the groups differed at a statistically significant level on five scales, Null Hypothesis Three cannot be accepted.

APPLICATION OF ANALYSIS OF COVARIANCE RESULTS TO THE NULL HYPOTHESES

Null Hypothesis One must be accepted because changes were not statistically significant. However, in accepting this hypothesis it should be noted that there was a strong overall trend toward increasing congruence between self-description and description of the chosen vocation. It might be noted that this trend appears to be stronger for Group I, those taking only vocational training, and Group IV, those taking academic work plus group counseling, than for the other two groups.
Null Hypothesis Two must also be accepted because changes were not statistically significant. There is some evidence of growth for all groups although there is less for those taking only vocational training.

Null Hypothesis Three cannot be accepted because there were significant differences among the groups on five of the individual scales. These were: Compensation, Creativity, Responsibility, Social Service, and Variety.

These scales are interdependent upon each other because of the test construction format. Therefore, gain on one scale may really reflect a loss on another. More careful comparisons of group differences seems to be indicated (Table V).

Consideration of the means of the pretest and posttest for the Compensation scale indicates that Group I has remained about the same in its preference for this variable. Group IV has shown considerable growth, and Group III chose this factor less frequently.

On the Creativity scale, the significant analysis of group differences is between Group I and Group II. Group I has remained constant but Group III has shown growth in this preference.

Group III has shown a similar growth in desire for Responsibility, while the other groups have remained about the same. Concerning the Social Service aspect of the job, Group I has remained about the same in its preference but Group II and Group III have shown a decrease.

Analysis of the means for Variety indicates that Groups I, II and III have remained comparatively stable in their preference for this factor. It is Group IV, showing a decrease, which has created the significant difference.
<table>
<thead>
<tr>
<th>Groups</th>
<th>Compensation</th>
<th>Creativity</th>
<th>Responsibility</th>
<th>Social Service</th>
<th>Variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>I vs. II</td>
<td>1.34</td>
<td>3.16*</td>
<td>2.79</td>
<td>4.80*</td>
<td>0.07</td>
</tr>
<tr>
<td>I vs. III</td>
<td>1.40</td>
<td>5.78*</td>
<td>12.76**</td>
<td>3.96*</td>
<td>0.08</td>
</tr>
<tr>
<td>I vs. IV</td>
<td>5.16*</td>
<td>1.24</td>
<td>0.17</td>
<td>2.37</td>
<td>8.09**</td>
</tr>
<tr>
<td>II vs. III</td>
<td>3.25*</td>
<td>0.10</td>
<td>1.53</td>
<td>0.10</td>
<td>0.18</td>
</tr>
<tr>
<td>II vs. IV</td>
<td>0.65</td>
<td>0.29</td>
<td>0.96</td>
<td>0.29</td>
<td>5.57*</td>
</tr>
<tr>
<td>III vs. IV</td>
<td>7.24**</td>
<td>0.81</td>
<td>5.26*</td>
<td>0.06</td>
<td>4.30*</td>
</tr>
</tbody>
</table>

Note: with df 1, 125; 5% F = 3.92 and 1% F = 6.84.

*statistical significance at the 5% level of confidence.
**statistical significance at the 1% level of confidence.
Table VI summarizes this analysis. It appears that members of Group I have remained consistent in their choices of work-relevant needs. Group II has shown a decrease in its desire for aspects of Social Service but point to no one area of increased preference. These two groups were taking vocational training and Group II was also participating in group counseling.

### TABLE VI

**CHART OF SIGNIFICANT GAINS AND LOSSES FOR GROUPS**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Group I</th>
<th>Group II</th>
<th>Group III</th>
<th>Group IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>Creativity</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Responsibility</td>
<td>0</td>
<td>0</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Social Service</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>0</td>
</tr>
<tr>
<td>Variety</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

Group III, the women taking only a remedial academic program, showed the greatest fluctuations in their need preferences. At the close of the training period they showed increased preferences for Creativity and Responsibility and less interest in Compensation and Social Service. An interesting comparison is that women in remedial academic work and also in group counseling, Group IV, showed only two shifts which were greater interest in Compensation and less in Variety. The greater number of changes in both groups of women not yet in vocational training presents some opportunity for pursuing a consideration of differences in training needs for the two divisions.
DISCUSSION OF SOME SECONDARY RESULTS

The general statistical analysis suggests some aspects of group characteristics which were not part of the planned research. Because these demonstrate certain consistencies in attitudes for these women, a description of the characteristics could be useful.

First, the mean score on the Attitude Scale of the Vocational Development Inventory is 34.9 pretest and 35.8 posttest (Appendix B). This is very close to the mean score of 35.07 for eighth graders in the original research on the instrument (Crites, 1965, p. 24). It is about five points lower than the mean score of 39.0 expected from high school seniors.

Table VIII in Appendix A summarizes some demographic information concerning the group. It shows that at least three-fourths of them come from family economic backgrounds that are "blue collar" level or less. About sixty percent of them also come from bilingual backgrounds. The scores, then tend to support the suggestion by Crites (1969, p. 91) that "adolescents from less favored socio-economic circumstances and/or minority ethnic and racial groups are less vocationally mature."

Other recent research cited by Crites (1969, pp. 36-51) also indicates inconclusive evidence concerning treatments that best facilitate growth in vocational maturity.

A second aspect of this study concerns the group preferences for the specific needs in the working environment as measured by the Minnesota Importance Questionnaire. Since the positive choices point to the qualities found within the job setting which would help the women become contented employees, these need to be understood by those helping women
choose areas for vocational training.

The needs which were last choice for these women in both posttest and pretest (Table VII) were: Independence, Social Status, and Authority. Most of the changes in rank order occurred within the middle group according to rank. Five of these moved to positions of greater preference: Co-workers, Moral Values, Supervision—Technical, Supervision—Human Relations, and Responsibility.

The eight factors which maintained their high rank in importance were: Achievement, Ability Utilization, Advancement, Social Service, Security, Working Conditions, Company Policies, and Recognition. It might be noted that these appear to be more closely related to the findings of Herzberg (1959) than to those of Whyte (1957) or Argyris (1957).

The strong emphasis upon achievement values is also similar to the findings by Sheppard and Belitsky (1966) among blue-collar workers but much higher than the emphasis found by Davis (1964) among adolescent daughters of blue-collar workers. The interest in social service and advancement does reenforce the preferences indicated by Davis (1964).

While the goals of the research are not parallel, the work of Hulin and Smith (1964), Beer (1968), Hinrichs (1968), Jurgensen (1947), and Hardin (1951) may suggest that women employed on the job express different preferences for job satisfaction from those chosen by these rather inexperienced women still in training.

SUMMARY

This chapter has presented the findings of the statistical analysis of the original data collected from 135 students. The steps
<table>
<thead>
<tr>
<th>Rank</th>
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<th>Posttest</th>
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</tr>
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<td>4</td>
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<tr>
<td>5</td>
<td>Security</td>
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<td>13.7</td>
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<td>6</td>
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<td>8</td>
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<td>10.9</td>
<td>Recognition</td>
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<td>Activity</td>
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<td>Moral Values</td>
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</tr>
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<td>10</td>
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<td>Co-workers</td>
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<td>11</td>
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<td>Activity</td>
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<tr>
<td>12</td>
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<td>9.2</td>
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<td>13</td>
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<td>9.1</td>
<td>Responsibility</td>
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<td>14</td>
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<td>Creativity</td>
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<td>Variety</td>
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<td>Authority</td>
<td>2.7</td>
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</table>
in this analysis included: (1) the application of a general statistical analysis to all the data, (2) application of the analysis of covariance to each of the four groups identified for the study, (3) results of the analysis of covariance in terms of "F" scores, were compared to a .05 level of confidence for a measure of significance, (4) results were applied to each of the stated null hypotheses, and (5) these results were interpreted in terms of overall findings.

Chapter V will summarize the study, draw certain applicable conclusions and present some recommendations.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this study was to determine if there is significant change in selected vocational attitudes after a period of skill training. It also sought to determine whether participation in group counseling affected these vocational attitudes.

SUMMARY OF THE STUDY

The research was planned to test the following null hypotheses:

$H_1$ - There is no significant difference in changes in the correlation of self-concept to chosen-vocation-concept among the four groups of students as measured by the Chicago Q-sort.

$H_2$ - There is no significant difference in growth of vocational maturity among the four groups as measured by the Attitude Scale of the Vocational Development Inventory.

$H_3$ - There is no significant difference in changes of perceived vocational needs among the four groups as measured by the scales of the Minnesota Importance Questionnaire.

In order to provide a statistical basis for comparison, the three evaluation instruments were given to all women enrolling as new students during one trimester at the Albuquerque Technical–Vocational Institute. Subjects for counseling groups were selected by random sample from those entering a vocational training major and from those entering only as remedial academic students preparing to qualify for a vocational major. Four counseling groups were formed which met once a week during the students' lunch period.

At the end of the trimester, the posttest was administered to all students whether they had participated in the counseling groups or
not. Women who completed both phases of the testing totaled 135.

Data from the three evaluation instruments were organized for statistical analysis. Computer programs for general statistics and for an analysis of covariance were applied to this data.

The major findings of this investigation can be summarized as follows:

1. The correlations between Q-sort descriptions of self and chosen-vocation showed a wide range for all groups in both pretest and posttest evaluations. Over half of the subjects demonstrated greater congruence of self-concept to chosen-vocation-concept at the end of the training period. The analysis of covariance showed no significant differences among the four groups at the end of the designated period.

2. Analysis of data concerning vocational maturity indicated no statistically significant differences in growth among the four groups studied.

3. While there were comparatively few changes in expressed preferences as measured by the Minnesota Importance Questionnaire, there were significant differences among the groups. Group I showed no significant changes for any scales. Group II became less concerned with Social Service. Group III indicated greater desire for Creativity and Responsibility in their work environment and less desire for Compensation and Social Service. Group IV increased in interest in Compensation and showed a decreased interest in Variety.

4. Groups II and IV experienced group counseling concurrent with training programs or academic programs. The pattern of change for these groups is not clear and coordinated. When Group II is compared with the control, Group I, it shows only one change as compared to none. This
lessening of interest in Social Service could represent a growth toward a broader vision of the satisfactions to be found within work but this is only speculation. When Group IV is compared to its control, Group III, it shows fewer changes from earlier concepts. The significance of greater or few changes is not easy to determine from available evidence.

CONCLUSIONS

Probably the most salient research finding of this study is the difficulty of grouping and measuring comparable groups of adults. It also reveals anew the pitfalls encountered in longitudinal studies since a large number of the original group did not complete the evaluations. Extremely wide statistical fluctuations with each variable makes concrete assessment of averages for the group of dubious value.

It appears that participating in vocational training for one four month period may strengthen the personal concepts of self and vocation but it does not change the vocational maturity, or the work preferences to any significant degree. The addition of group counseling to training may add a catalyst for some change but this study does not provide conclusive evidence.

Women who are returning to school for remedial work in preparation for vocational training showed the greatest changes in their preferences for work environment. They showed no greater changes in perceptions of self as related to vocation or in vocational maturity than the other groups. The women of this group who were also involved in group counseling did not show as many changes in work preferences. It is not evident whether the counseling depressed these changes or, perhaps, helped the individual work through early changes to more stable preferences.
Another possibility is that the type of client-controlled, permissive group counseling provided more supportive adjustment to the immediate training situation than stimulus to consider future goals. There is some evidence within the logs of the discussion periods to support this viewpoint.

Still another prospect is that the instruments selected are not sensitive to the types of changes which were occurring. It is also possible that a four month experience does not allow for the consolidation of attitude changes.

This study seems to add some descriptive data concerning students in vocational training. Women who have made a clear vocational choice, as evidenced by entrance into a training program, appear to have also reached stable decisions concerning themselves in relation to the job and to the major conditions which will make the vocation satisfactory. Admissions counselors, vocational teachers and administrators need to be aware of student expectations and alert to clarify the possibilities of these being met by the vocation under consideration. The relationship of this understanding to the expensive trial-error and drop-out experiences can be readily projected.

RECOMMENDATIONS

This rather tentative venture into the broad experimental areas touching vocational choice, vocational training and job satisfaction tends to raise more questions than it answers. Research which could provide relevant guideposts to aid individuals who are choosing, as well as those who are providing, the training could be an ongoing program within a vocational training institution.
This study found evidence of increasing identification with chosen vocation for most students whether they were in remedial academic programs or in training programs. It is recommended, then, that students who are unsure of vocational choice be encouraged to begin acquiring skills either academic but vocationally related or specific job required ones as a means of clarifying their career decisions.

Group counseling does not seem to be a decisive factor in changing vocational concepts. It does seem to be a source of encouragement while students are enrolled in a training program. It is recommended that this type of counseling be made available for the purpose of reinforcing and supporting the successive decisions encountered within a training period.

The group as a whole showed evidence of lack of vocational maturity and of some unrealistic expectations of the job environments for which they were preparing. It is recommended that additions to training curriculum be developed both for secondary schools and post-high schools, which plan for growth in these phases of job readiness.

Among the related areas which need research are the following:

1. Similar studies using larger samples and longer periods of time to verify the endurance of beginning preferences.

2. Exploration into the effect of training in a simulated work experience. This usually comes toward the end of the training period and is not reflected within the sample for this study.

3. Studies of those individuals showing greater negative correlation of self to chosen-vocation. This may be a reflection of failure within subject areas.

4. Study of similar counseling experience which reveals pretest scores as an impetus to stimulate growth in vocational maturity and attitudes.
5. Development and testing of discretely structured learning situations which personalize the areas of vocational development.

6. Use of group counseling on a shorter term basis but perhaps meeting everyday. This might have the advantage of improving attendance.

7. Exploration of techniques for personalizing the reality of work preferences in individual vocational counseling.

Vocational education appears to be entering a period of growth and expansion. All those involved are faced with the realization that the expert skill taught within a vocational classroom may be wasted if the job situation does not prove satisfying and if the individual cannot adapt to it. Counselors who work within vocational education must be prepared to assist students in decision-making processes and in surveying career-oriented problems. Research from a variety of sources can support the growth of competence in these areas.
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BIBLIOGRAPHY


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## APPENDIX A

### TABLE VIII

**CHARACTERISTICS OF PARTICIPATING STUDENTS**

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<td>Number</td>
<td>%</td>
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APPENDIX A (continued)
### Table IX

**General Statistics for Total Groups**

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| Social Status Scale |
|---------------------|-------------|-------------|---------------|--------------|------------------------|----------------------|
| Group I | 5.3         | 4.8         |               |              | 4.8                    |                      |
| Group II| 5.1         | 3.9         |               |              | 4.0                    |                      |
| Group III| 6.2        | 3.7         |               |              | 3.1                    |                      |
| Group IV| 3.9         | 3.2         |               |              | 4.0                    |                      |
| Covariance | .76         | 1.16        |               |              | 1.95                   |                      |

| Supervision-Human Relations Scale |
|-----------------------------------|-------------|-------------|---------------|--------------|------------------------|----------------------|
| Group I | 8.4         | 9.5         |               |              | 9.5                    |                      |
| Group II| 9.0         | 8.4         |               |              | 8.0                    |                      |
| Group III| 7.2        | 8.3         |               |              | 9.2                    |                      |
| Group IV| 9.5         | 11.4        |               |              | 10.6                   |                      |
| Covariance | 1.43        | 1.94        |               |              | 1.59                   |                      |

| Supervision-Technical Scale |
|-----------------------------|-------------|-------------|---------------|--------------|------------------------|----------------------|
| Group I | 9.2         | 9.8         |               |              | 9.8                    |                      |
| Group II| 9.2         | 8.9         |               |              | 8.9                    |                      |
| Group III| 8.6        | 9.9         |               |              | 10.2                   |                      |
| Group IV| 9.3         | 9.8         |               |              | 9.7                    |                      |
| Covariance | .17         | .25         |               |              | .54                    |                      |

<p>| Variety Scale |
|----------------|-------------|-------------|---------------|--------------|------------------------|----------------------|
| Group I | 9.3         | 9.4         |               |              | 9.2                    |                      |
| Group II| 8.6         | 9.2         |               |              | 9.5                    |                      |
| Group III| 9.3        | 9.1         |               |              | 9.0                    |                      |
| Group IV| 7.7         | 5.4         |               |              | 6.2                    |                      |
| Covariance | .61         | 3.17        |               |              | 2.86*                  |                      |</p>
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Note: with df 3, 125; 5% F = 2.68 and 1% F = 3.94.

*Indicates statistical significance at the 5% level.
**Indicates statistical significance at the 1% level.
## APPENDIX D

**DESCRIPTION OF SCALES OF THE MINNESOTA IMPORTANCE QUESTIONNAIRE**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Descriptive Statement</th>
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<tr>
<td>1. Ability Utilization</td>
<td>I could do something that makes use of my abilities</td>
</tr>
<tr>
<td>2. Achievement</td>
<td>The job could give me a feeling of accomplishment.</td>
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<tr>
<td>3. Activity</td>
<td>I could be busy all the time.</td>
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<tr>
<td>4. Advancement</td>
<td>The job would provide an opportunity for advancement.</td>
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<tr>
<td>5. Authority</td>
<td>I could tell people what to do.</td>
</tr>
<tr>
<td>7. Compensation</td>
<td>My pay would compare well with that of other workers.</td>
</tr>
<tr>
<td>8. Co-workers</td>
<td>My co-workers would be easy to make friends with.</td>
</tr>
<tr>
<td>9. Creativity</td>
<td>I could try out some of my own ideas.</td>
</tr>
<tr>
<td>10. Independence</td>
<td>I could work alone on the job.</td>
</tr>
<tr>
<td>11. Moral Values</td>
<td>I could do the work without feeling that it is morally wrong.</td>
</tr>
<tr>
<td>12. Recognition</td>
<td>I could get recognition for the work I do.</td>
</tr>
<tr>
<td>13. Responsibility</td>
<td>I could make decisions on my own.</td>
</tr>
<tr>
<td>14. Security</td>
<td>The job would provide steady employment.</td>
</tr>
<tr>
<td>15. Social Status</td>
<td>I could be &quot;somebody&quot; in the community.</td>
</tr>
<tr>
<td>16. Social Service</td>
<td>I could do things for other people.</td>
</tr>
<tr>
<td>17. Supervision-Human Relations</td>
<td>My boss would back up his men.</td>
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<td>Scale</td>
<td>Descriptive Statement</td>
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<tr>
<td>18. Supervision-Technical</td>
<td>My boss would train his men well.</td>
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<td>19. Variety</td>
<td>I could do something different every day.</td>
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<tr>
<td>20. Working Conditions</td>
<td>The job would have good working conditions.</td>
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APPENDIX E
LOGS OF GROUP SESSIONS

Section A:

Oct. 30: Begin with individual introductions. Discussed purpose of meeting, number of meetings and closing time. Appears to be an unusually well balanced group with varied ages, interests, and fields of study. Evidence of much curiosity about curriculum of fields that could be chosen as majors. Data processing mentioned several times. Several girls in group were from out of town and were eager to meet with group for social purposes. We discussed the structure of the meetings and some activities they might be interested in planning. Liked Wednesday as meeting day.

Nov. 6: Group was much quieter. Several new members came and there was some constraint as the others got acquainted with them. Discussed some things women looked for in choosing certain fields of work. Group suggested: good pay, meet men, nice place to work, where could dress up. Older women indicated that they were looking for work that is "fulfilling and satisfying." Some were not sure of goals, they said that they had worked in younger days but now the condition of the family budget was encouraging them to go back to work and they wanted something that was new and interesting. Some had heard of interest tests and indicated a desire to take one. Some discussion of what happened to home duties when wives worked, whether husbands should help or not.

Nov. 13: Some of the group had taken a Kuder interest check list but others in the group had not. Luncheon discussion centered around problems of scheduling classes at a school like TVI so that they would be more convenient for women with children. Some discussion of fields of study they wished could be offered: social aide work; child care. Requests for information about these fields.

Nov. 20: Discussed interest check lists and permitted those who had taken one to ask questions about their particular patterns. Group grew very involved in giving ideas to each other of work which was related to expressed for tested interests. Discussion moved to idea of aptitudes ("Could I do it, even if I don't like it?") and their relationship to interests. Asked counselor how one went about finding this out. Suggested need to know about fields of interest. Group decided to invite some women in data processing curriculum to meet with them next time. Asked counselor to tell them about social service areas some time later.
APPENDIX E (continued)

Section A:

Nov. 27: Guest speakers were two women in final term of study as data processing programmers. Main theme - family and personal adjustments inherent in such an intense study regime; work opportunities available in Albuquerque; salaries; comparison of TVI program to that of private schools; difficulties in mastering curriculum.

Dec. 4: Short session because of campus style show during part of noon hour. Principal topics: reaction to women who spoke last week; expressed doubts that training was worth the effort and sacrifice - would the jobs pay enough and be interesting enough to justify the sacrifice.

Dec. 11: Presented T-F instrument concerning women in the labor force. Not much curiosity but acceptance of the statistical facts. The stormy weather dominated the conversation. Discussed difficulties in getting to work, in good weather and bad, from various locations in town. Turned to working conditions in various companies, working for women supervisors, getting along with bosses; boring jobs; gossip in work; getting along with others; difference between work and school relations. Younger girls expressed surprise that the older women felt that difficulty in travel to a job might be a factor in accepting work and that a woman might quit because she did not like people in the office. Some argument about the cost of transportation.

Dec. 18: Evaluation session: General opinions: such discussions could be most valuable to girls who had never worked; had gotten information about some fields that they were interested in; had clarified goals; would have liked more specified programs; would have liked more help with psychology of facing problems; liked having mixed age groups (one of younger girls said that she liked her mother better since she had gotten to know older women in the group); would have liked more time to discuss the dual role (home and work) of women; had helped clarify decisions about going to work.
APPENDIX E (continued)

Section B:

Oct. 30: Explanation of purpose of meeting and selection of days to meet. Wanted to continue with Wednesdays. Individual introductions during which many gave their reasons for attending TVI; their choice of program and expectations of the training. One girl tended to dominant discussion since she knew two of the other members and had some very definite ideas. Another had recently received an engagement ring and talked about plans for supporting fiancé through college after their marriage. Another expressed her attendance in terms of pleasing father who had not liked first career choice.

Nov. 6: Two older women joined the group. Lively discussion concerning expectancies of younger women from a job: money, glamour and marriage prospects. Were surprised to find that older women who had worked before were looking for fringe benefits, i.e. insurance, sick leave, retirement, etc. Discussion of whether women should stay home and care for children instead of working. Discussion of parents’ reaction to children leaving home, planning marriage, etc. Much solicitation of older woman's opinion and feelings about children when this happens. Engaged girl contributed observations of her parents' reactions.

Nov. 13: A very lively session. Conversation had started before reaching conference room. Much exchanging of and solicitation of opinions. Gaining and losing weight became big topic, one girl belongs to TOPS. Introduction by counselor of short quiz concerning women in the labor force. Quick poll of number T and F answers and reactions when told that all were true according to government figures. Request for clarification of items where personal opinions differed i.e. "I thought my age would be against me." and "I wouldn't work for a woman supervisor." Some of the older women who had worked in past did most of the explaining, little counselor participation. Discussion of volunteer activities among better educated and more affluent women.

Nov. 20: Interest tests made available to those who wanted to take them. All did and evidenced curiosity about how activity preferences could tell vocational interests. During lunch discussed the change from high school in having older students in class with younger. Mentioned idiosyncrasies of some and difficulties in learning to get along with viewpoints diverse from their peer group.
APPENDIX E (continued)

Section B:

Nov. 27: Some needed to complete interest test. Others discussed value of night school courses in preparation for work. Differences in jobs available to those with just skill improvement courses and those with full program. Discussion of how to impress prospective employer regardless of training.

Dec. 4: Short session because group wanted to go to style show on campus. Some wondering about why school bothered with such activities. Wondering whether employers really look at the way you dress. One girl overweight felt that this had kept her from getting a job; others did not think it should matter if you had the skill. Others said maybe it should not but it did.

Dec. 11: One older woman with teen-aged children wanted to talk about problems with them. Younger girls spent much time trying to tell her how she, as a parent, seemed to the children. Also explained how parents had given them so many things at home and now that they were thinking about working the expense of many things became important. Talked of insurance, vacations, days off. Younger girls were not sure they would take a job that did not have all the extras they wanted. Some defensive argument by older women as to why they would. Later shifted to review of interest test results. Most of this group felt that they already knew most of this about themselves.

Dec. 18: Evaluation session: had really enjoyed the group meetings and the sociability, requested continuing the group next term; much appreciation of personal closeness which had grown from the group; discussion of two "factions," older and younger women, both felt they had some new viewpoints as result of their discussions. Younger women were especially clear about how different working seemed to them after talking with these who had worked. Wanted chance to continue.
APPENDIX E (continued)

Section C:

Nov.  7:  Poor attendance. Notices had not reached all the classes. Some general discussion of purpose of meeting. Questions about ways to find out about job openings in town. Decided that would like to meet on Mondays and to have sessions terminate at Christmas vacation. Some doubt on part of many that they could come all the time because the lunch hour was a good study period for them.

Nov. 11:  Larger group present; review of general purposes and organization. Individual introductions including telling majors and reasons for choice. Discussion became centered upon places individuals preferred to live and it's affect upon their choice of jobs. Discussion of husband's being transferred and what it did to wife's job. Lengthy discussion of working conditions in the telephone company because one girl had worked there and another was thinking of applying.

Nov. 18:  Presentation of T-F test about women in the labor force. Group tended to personalize the information: "That's the way it is for me." etc. More interchange among members about why women go to work: need for money, getting away from children; boredom with house and with previous job.

Nov. 25:  A number of absences and many with colds although at school. Those present worked on interest test. Very little conversation except how did you get to school when the children were ill. Counselor mentioned that it was even harder when you had a job and lost wages - silent agreement.

Dec.  2:  Heavy snow storm. Many absent from school. Those present used time for personal counseling about family and health problems.

Dec.  9:  Better attendance. Continued work on interest questionnaire. Discussion about catching up on work after absences, teacher attitude and grades. Right now work and jobs seemed far away from their concerns.

Dec. 16:  Most active discussion of this series - principal subject: "What supervisors do that makes one quit work." Also discussed taking a job you really did not like and why, evaluation sheets used in some companies, what happens when you take more responsibility, advantages certain jobs have for married women. This was last planned meeting so counselor asked for evaluation. Group expressed concern that more of invited group had not come to meetings, that there had been so many absences, and that best discussion had been the last one. Would have liked more rigid structure but general feeling that had learned a lot from each other.
APPENDIX E (continued)

Section D:

Nov. 7: Poor attendance but some curiosity about meetings. Several expressed idea that such meetings would not be much help because they had already chosen major subject. Suggested that meet next week to see whether more could be present. Group spent remainder of time in getting acquainted with others; seemed warmer about anticipating next meeting when they left. Chose to meet on Mondays.

Nov. 11: Nearly all of invited group were present. Counselor presented brief orientation to the purpose of the meetings. Asked each member to introduce themselves and tell something about their choice of major field of study. A number of personal opinions about what a job in chosen field would offer. One woman had had quite a variety of jobs and was very verbal about disadvantages of certain working situations. Some of group took issue with her opinions.

Nov. 18: Counselor suggested that group organize plans for future meetings. Group did not seem to want a structure but had liked previous discussion. Several indicated that they were not really pleased with program choice but appeared resigned to it. Some argument about whether you should study something you did not like. Finally agreed upon meeting days and wanted to stop at Christmas vacation since other groups had chosen this.

Nov. 25: Part of group came in late – had had trouble buying lunch. Several wanted to take interest test and were curious about what it would tell them about themselves. Some worry about grades was manifest; some were wondering whether they would do well enough to continue next trimester. A few asked for personal appointments with counselor to discuss problem. Discussion among members about why they chose major.

Dec. 2: Heavy snow storm, many were absent. One woman who had been grocery checker told many details about her previous work and training. General enthusiastic discussion about problems of checkers, handling the public. Wanted to put off discussion of interest records until more were present.

Dec. 9: Discussion of style show from last week, snow and its affect on attendance. More worry about passing courses, likes and dislikes about teachers, little concrete relating of study and courses training experience. Discussion of interest surveys and how these might affect liking of course of study as well as job. Much personal reaction to results of interest surveys but few suggestions for each other.
APPENDIX E (continued)

Section D:

Dec. 16: Not much interest in talking about jobs or vocations. Conversation centered around holiday, social events and more worry about grades, problems of current school attendance because of illnesses. Gave T-F check list about working conditions for women in labor force. Some discussion of chances of finding the job each wanted, most wanted special job with their specifications of duties and salary, several mentioned moral aspects of work, unfair working conditions. Brief evaluation session at end of hour. Felt that group had not all been together enough times. Some discussion of continuing group after Christmas but majority felt would need study time to catch up on work for grades.
APPENDIX E (continued)

ANTICIPATED EMPHASIS IN GROUP COUNSELING

Session Number

1. Introduction of purposes of group meeting and group choice of goals, meeting times, etc.

2. Personal introductions and sharing of previous work experiences.

3. Administration of T-F checklist on women in labor force. Discussion of job areas employing most women.

4. Career aspirations and reasons for training choices.

5. Administration of an interest inventory - probably the Kuder.

6. Grading and discussion of interest inventory. Presentation of relation of interest to aptitudes and aptitude testing.

7. Discussion of satisfactions found within jobs.

8. Resource guest from areas chosen by group.


10. Evaluation session.
### APPENDIX E (continued)

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Note: x indicates absence   Dr. indicates dropped from school.  
*Dropped after Christmas holidays and not available for final evaluation.
APPENDIX F

INVITATION TO PARTICIPATE IN THE WORK SURVEY

Counselors are constantly interested in finding better ways to help students select training programs leading to vocations which they will enjoy and in which they can be successful. We are now considering the special problems of women in finding work they like. A good way to study these is to ask for the opinions of students now enrolled in vocational programs.

You are invited to participate in this confidential survey. We plan to ask for your opinions now, and again at the end of the trimester. Results of the questionnaires and other materials will be compiled to help us understand the preferences of the group. Individual opinions will not be made public, although interested persons here and at the University may study the group report. If there is any reason that you would prefer that your opinions not be included in the group report, please notify the person giving out the materials.

________________________________________________________________________

I would like to participate in the survey concerning women and the work they prefer. I understand that the results of the study will be reported only as group preferences and that no individuals will be identified.

________________________________________________________________________

Your signature ___________________________ Date ____________________________

If you could prepare for any kind of job, what would you choose?

Why would you like this kind of work?

What were your reasons for choosing the program of study in which you are now enrolled? (Please check any that apply to you and add other reasons.)

1. Employment opportunities in the community.
2. I've always wanted to do this work.
3. The kind of people I will be working with.
4. The salary paid for these jobs.
5. Others.
APPENDIX G

ADJECTIVE REFERENCE LIST

1. ACTIVE—moving rather quickly most of the time.
2. ADVENTUROUS—fond of adventures; ready to take risks.
3. AGGRESSIVE—active, energetic; can mean taking the first step in a quarrel.
4. ALOOF—keeping apart, usually from a group.
5. APPRECIATIVE—able to value or enjoy.
6. CALM—quiet; peaceful; not stirred up.
7. CAUTIOUS—very careful; never taking chances.
8. CLEAR THINKING—able to see problems with fairness.
9. CLEVER—bright; showing skill or intelligence.
10. DARING—boldness; courage to take risks.
11. DEPENDABLE—reliable; trustworthy.
12. DEPENDENT—trusting another person or thing for support.
13. DISCREET—careful in speech and action.
14. DOMINANT—ruling; controlling.
15. EASY GOING—taking matters easily; not worrying.
16. EMOTIONAL—appealing to strong deep feelings.
17. EXCITABLE—feelings become stirred up easily.
18. FORCEFUL—effective; vigorous.
19. FORESIGHTED—careful to plan for the future; looks ahead to see results.
20. GENTLE—kindly; friendly; polite.
21. HASTY—quick; hurried; plans not well thought out.
22. HIGH STRUNG—very sensitive; very nervous.
23. HURRIED—moving with more than natural speed; eager to do things quickly.
24. IMAGINATIVE—able to create new things or ideas from pictures in the mind.
25. IMMATURE—not full grown, especially in attitudes and emotions.
26. INDEPENDENT—needing, wishing, or getting no help from others; acting according to one’s own ideas.
27. INSENSITIVE—lacking in feeling.
28. JEALOUS—fearful that someone you like may prefer someone else to you.
29. MODERATE—keeping within proper bounds; not extreme.
30. NERVOUS—restless; uneasy; easily excited or upset.
31. ORIGINAL—inventive; able to do, make, or think something new.
32. OUTspoken—frank; not reserved.
33. PERSEVERING—continuing steadily in doing something hard; to keep trying.
34. QUICK—lively; active.
35. RESOURCEFUL—good at thinking of ways to do things.
36. RESPONSIBLE—trustworthy; reliable.
37. SATIRICAL—making fun of a person to hurt his feelings; sneering; bitterly cutting.
38. SECRETIVE—not open and frank; having the habit of secrecy.
39. SELF CONTROLLED—able to restrain one's actions and feelings.
40. SENSITIVE—receiving impressions easily; easily influenced, hurt, or offended.
41. SHREW'D—sharp; keen; clever.
42. SO'FT HE'ARTED—gentle; kind; tender.
43. STUB'BOR'N—fixed in purpose or opinion; not giving in to arguments or requests.
44. SUBMISSIVE—yielding to power, control, or authority.
45. SUSPICIOUS—tending to arouse doubt or distrust.
46. TALKATIVE—fond of talking a great deal.
47. UNSELFISH—caring for others; generous.
48. WARM HEARTED—marked by affectionate feeling.
49. WITTY—humerous; making clever comments.
50. WORRYING—feeling anxious and uneasy; troubled.

Vocational Development Inventory

Attitude Scale

JOHN O. CRITES, Ph.D.
THE UNIVERSITY OF IOWA

DIRECTIONS:

There are a number of statements about occupational choice and work listed in this booklet. Occupational choice means the kind of job or work that you think you will probably be doing when you finish all of your schooling.

If you agree or mostly agree with the statement, use your pencil to blacken the circle in the column headed T on the separate answer sheet. If you disagree or mostly disagree with the statement, blacken the circle in the column headed F on the answer sheet. Be sure your marks are heavy and black. Erase completely any answer you wish to change.

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Part I

1. Once you choose a job, you can't choose another one.
2. In order to choose a job, you need to know what kind of person you are.
3. I plan to follow the line of work my parents suggest.
4. I guess everybody has to go to work sooner or later, but I don't look forward to it.
5. A person can do any kind of work he wants as long as he tries hard.
6. I'm not going to worry about choosing an occupation until I'm out of school.
7. Your job is important because it determines how much you can earn.
8. Work is worthwhile mainly because it lets you buy the things you want.
9. The greatest appeal of a job to me is the opportunity it provides for getting ahead.
10. I often daydream about what I want to be, but I really haven't chosen a line of work yet.
11. Knowing what you are good at is more important than knowing what you like in choosing an occupation.
12. Your parents probably know better than anybody which occupation you should enter.
13. If I can just help others in my work, I'll be happy.
14. Work is dull and unpleasant.
15. Everyone seems to tell me something different, until now I don't know which kind of work to choose.
16. I don't know how to go about getting into the kind of work I want to do.
17. Why try to decide upon a job when the future is so uncertain.
18. I spend a lot of time wishing I could do work that I know I cannot ever possibly do.
19. I don't know what courses I should take in school.
20. It's probably just as easy to be successful in one occupation as it is in another.
21. By the time you are 15, you should have your mind pretty well made up about the occupation you intend to enter.
22. There are so many things to consider in choosing an occupation, it is hard to make a decision.
23. I seldom think about the job I want to enter.
24. It doesn't matter which job you choose as long as it pays well.
25. You can’t go very far wrong by following your parents’ advice about which job to choose.
26. Working is much like going to school.
27. I am having difficulty in preparing myself for the work I want to do.
28. I know very little about the requirements of jobs.
29. The job I choose has to give me plenty of freedom to do what I want.
30. The best thing to do is to try out several jobs, and then choose the one you like best.
31. There is only one occupation for each person.
32. Whether you are interested in a particular kind of work is not as important as whether you can do it.
33. I can’t understand how some people can be so set about what they want to do.
34. As long as I can remember I’ve known what kind of work I want to do.
35. I want to really accomplish something in my work—to make a great discovery or earn lots of money or help a great number of people.
36. You get into an occupation mostly by chance.
37. It’s who you know, not what you know, that’s important in a job.
38. When it comes to choosing a job, I’ll make up my own mind.
39. Choose an occupation which gives you a chance to help others.
40. When I am trying to study, I often find myself daydreaming about what it will be like when I start working.
41. I have little or no idea of what working will be like.
42. Choose an occupation, then plan how to enter it.
43. I really can’t find any work that has much appeal to me.
44. Choose a job in which you can someday become famous.
45. If you have some doubts about what you want to do, ask your parents or friends for advice and suggestions.
46. Choose a job which allows you to do what you believe in.
47. The most important part of work is the pleasure which comes from doing it.
48. I keep changing my occupational choice.
49. As far as choosing an occupation is concerned, something will come along sooner or later.
50. Why worry about choosing a job when you don’t have anything to say about it anyway.
minnesota importance questionnaire

1967 Revision

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Work Adjustment Project
Industrial Relations Center
University of Minnesota
Directions

The purpose of this questionnaire is to find out what you consider important in your ideal job, the of job you would most like to have.

On the following pages you will find pairs of statements about work.

—Read each pair of statements carefully.

—Decide which statement of the pair is more important to you in your ideal job.

—For each pair mark your choice on the answer sheet. Do not mark this booklet. (Direction how to mark the answer sheet are given below.)

Do this for all pairs of statements. Work as rapidly as you can. Read each pair of statements, mark choice, then move on to the next pair. Be sure to make a choice for every pair. Do not go back to check your answers to any pairs.

Remember: You are to decide which statement of the pair is more important to you in your ideal Mark your choice on the answer sheet, not on this booklet.

How to Mark the Answer Sheet

First of all

Print your name in the space provided, and fill in the other information requested.

To fill in the answer sheet

Start where it is marked “Page 1.”

There is a box for each pair of statements. The number in the middle of the box is the number that pair. “a” and “b” in the box stand for the two statements of the pair.

If you think statement “a” is more important to you than statement “b”, mark an “X” over the “a” the answer sheet, as shown in the example below:

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However, if you think statement “b” is more important to you than statement “a”, mark an “X” the “b” on the answer sheet, as shown in the example below:

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Mark Only One Answer for Each Pair of Statements.

Mark either “a” or “b” for each pair. Do this for all pairs of statements. Remember, do mark your answer on this booklet. Use the answer sheet.
Ask yourself: Which is more important to me in my ideal job?

a. I could be busy all the time.
   1. OR
   b. The job would provide an opportunity for advancement.

   a. I could try out some of my own ideas.
   2. OR
   b. My co-workers would be easy to make friends with.

   a. The job could give me a feeling of accomplishment.
   3. OR
   b. I could do something that makes use of my abilities.

   a. The company would administer its policies fairly.
   4. OR
   b. I could be busy all the time.

   a. I could try out some of my own ideas.
   5. OR
   b. I could be “somebody” in the community.

   a. The job would provide an opportunity for advancement.
   6. OR
   b. My co-workers would be easy to make friends with.

   a. I could tell people what to do.
   7. OR
   b. I could work alone on the job.

   a. I could get recognition for the work I do.
   8. OR
   b. The company would administer its policies fairly.

   a. My co-workers would be easy to make friends with.
   9. OR
   b. The job would provide for steady employment.

   a. The job could give me a feeling of accomplishment.
   10. OR
   b. The job would provide an opportunity for advancement.

   a. My boss would train his men well.
   11. OR
   b. I could work alone on the job.

   a. I could do the work without feeling that is is morally wrong.
   12. OR
   b. The job would have good working conditions.
Ask yourself: Which is more important to me in my ideal job?

a. I could be busy all the time.
   OR
b. The job could give me a feeling of accomplishment.

a. I could do something that makes use of my abilities.
   OR
b. The job would provide an opportunity for advancement.

a. I could tell people what to do.
   OR
b. The company would administer its policies fairly.

a. My co-workers would be easy to make friends with.
   OR
b. My pay would compare well with that of other workers.

a. I could try out some of my own ideas.
   OR
b. I could work alone on the job.

a. I could get recognition for the work I do.
   OR
b. I could do the work without feeling that it is morally wrong.

a. The job would provide for steady employment.
   OR
b. I could make decisions on my own.

a. I could do things for other people.
   OR
b. I could be “somebody” in the community.

a. My boss would back up his men (with top management).
   OR
b. My boss would train his men well.

a. The job would have good working conditions.
   OR
b. I could do something different every day.

a. I could do something that makes use of my abilities.
   OR
b. I could be busy all the time.

a. The job could give me a feeling of accomplishment.
   OR
b. I could tell people what to do.
Ask yourself: Which is **more important** to me in my **ideal** job?

25. a. The company would administer its policies fairly.  
    OR  
    b. The job would provide an opportunity for advancement.

26. a. I could do something that makes use of my abilities.  
    OR  
    b. My co-workers would be easy to make friends with.

27. a. I could try out some of my own ideas.  
    OR  
    b. The job could give me a feeling of accomplishment.

28. a. I could be busy all the time.  
    OR  
    b. I could work alone on the job.

29. a. The job would provide an opportunity for advancement.  
    OR  
    b. I could do the work without feeling that it is morally wrong.

30. a. I could tell people what to do.  
    OR  
    b. I could get recognition for the work I do.

31. a. The company would administer its policies fairly.  
    OR  
    b. I could make decisions on my own.

32. a. The job would provide for steady employment.  
    OR  
    b. My pay would compare well with that of other workers.

33. a. I could do things for other people.  
    OR  
    b. My co-workers would be easy to make friends with.

34. a. My boss would back up his men (with top management).  
    OR  
    b. I could work alone on the job.

35. a. I could do the work without feeling that it is morally wrong.  
    OR  
    b. My boss would train his men well.

36. a. I could do something different every day.  
    OR  
    b. I could get recognition for the work I do.
Ask yourself: Which is more important to me in my ideal job?

a. I could make decisions on my own.
37. OR
b. The job would have good working conditions.

a. I could do something that makes use of my abilities.
38. OR
b. I could tell people what to do.

a. The company would administer its policies fairly.
39. OR
b. The job could give me a feeling of accomplishment.

a. I could be busy all the time.
40. OR
b. My pay would compare well with that of other workers.

a. I could try out some of my own ideas.
41. OR
b. I could tell people what to do.

a. I could get recognition for the work I do.
42. OR
b. My co-workers would be easy to make friends with.

a. The company would administer its policies fairly.
43. OR
b. I could work alone on the job.

a. I could do the work without feeling that is is morally wrong.
44. OR
b. My pay would compare well with that of other workers.

a. I could make decisions on my own.
45. OR
b. I could try out some of my own ideas.

a. The job would provide for steady employment.
46. OR
b. I could work alone on the job.

a. I could do things for other people.
47. OR
b. I could do the work without feeling that it is morally wrong.

a. I could get recognition for the work I do.
48. OR
b. I could be "somebody" in the community.
Ask yourself: Which is more important to me in my ideal job?

a. I could make decisions on my own.
   OR
b. My boss would back up his men (with top management).

a. The job would provide for steady employment.
   OR
b. My boss would train his men well.

a. I could do something different every day.
   OR
b. I could do things for other people.

a. The job would have good working conditions.
   OR
b. I could be "somebody" in the community.

a. I could tell people what to do.
   OR
b. I could be busy all the time.

a. The job would provide an opportunity for advancement.
   OR
b. My pay would compare well with that of other workers.

a. I could do something that makes use of my abilities.
   OR
b. The company would administer its policies fairly.

a. I could be busy all the time.
   OR
b. My co-workers would be easy to make friends with.

a. The job could give me a feeling of accomplishment.
   OR
b. My pay would compare well with that of other workers.

a. I could try out some of my own ideas.
   OR
b. The job would provide an opportunity for advancement.

a. The company would administer its policies fairly.
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b. I could do the work without feeling that it is morally wrong.

a. I could get recognition for the work I do.
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a. My co-workers would be easy to make friends with.

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   b. I could make decisions on my own.

   a. The job would provide for steady employment.

62. OR
   b. I could try out some of my own ideas.

   a. I could work alone on the job.

63. OR
   b. I could do things for other people.

   a. I could be "somebody" in the community.

64. OR
   b. I could do the work without feeling that is is morally wrong.

   a. The job would provide an opportunity for advancement.

65. OR
   b. I could tell people what to do.

   a. My boss would train his men well.

66. OR
   b. I could make decisions on my own.

   a. The job would provide for steady employment.

67. OR
   b. I could do something different every day.

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68. OR
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   a. My boss would back up his men (with top management).

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   a. My co-workers would be easy to make friends with.

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   b. I could tell people what to do.

   a. The company would administer its policies fairly.

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   b. I could try out some of my own ideas.

   a. My pay would compare well with that of other workers.

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Ask yourself: Which is *more important* to me in my *ideal* job?

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    b. My co-workers would be easy to make friends with.

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80. a. My boss would train his men well.
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81. a. I could do something different every day.
    OR
    b. I could be "somebody" in the community.

82. a. I could get recognition for the work I do.
    OR
    b. I could try out some of my own ideas.

83. a. My pay would compare well with that of other workers.
    OR
    b. I could tell people what to do.

84. a. I could do something that makes use of my abilities.
    OR
    b. The job would have good working conditions.
Ask yourself: Which is more important to me in my ideal job?

85. a. I could do something different every day.
   OR
   b. The job could give me a feeling of accomplishment.

86. a. My boss would train his men well.
   OR
   b. I could be busy all the time.

87. a. My co-workers would be easy to make friends with.
   OR
   b. The company would administer its policies fairly.

88. a. My pay would compare well with that of other workers.
   OR
   b. I could try out some of my own ideas.

89. a. I could do something that makes use of my abilities.
   OR
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93. a. I could get recognition for the work I do.
   OR
   b. The job would provide for steady employment.

94. a. My boss would train his men well.
   OR
   b. I could do something that makes use of my abilities.

95. a. I could be busy all the time.
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   OR
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Ask yourself: Which is *more important* to me in my *ideal* job?

**97.**
a. The job would provide for steady employment.  
OR  
b. I could be "somebody" in the community.

**98.**
a. I could work alone on the job.  
OR  
b. I could get recognition for the work I do.

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a. I could do things for other people.  
OR  
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**100.**
a. I could make decisions on my own.  
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b. I could do the work without feeling that it is morally wrong.

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a. The job would have good working conditions.  
OR  
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**107.**
a. My pay would compare well with that of other workers.  
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**108.**
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110. a. My boss would back up his men (with top management). OR
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111. a. The job would provide for steady employment. OR
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112. a. The job could give me a feeling of accomplishment. OR
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115. a. I could do something that makes use of my abilities. OR
    b. I could be "somebody" in the community.

116. a. My boss would back up his men (with top management). OR
    b. The job could give me a feeling of accomplishment.

117. a. The job would provide an opportunity for advancement. OR
    b. I could do something different every day.

118. a. I could tell people what to do. OR
    b. The job would have good working conditions.

119. a. I could do the work without feeling that it is morally wrong. OR
    b. My boss would back up his men (with top management).

120. a. My pay would compare well with that of other workers. OR
    b. I could make decisions on my own.
Ask yourself: Which is *more important* to me in my *ideal* job?

a. I could be "somebody" in the community.
   OR
b. I could work alone on the job.

a. My boss would train his men well.
   OR
b. I could get recognition for the work I do.

a. I could make decisions on my own.
   OR
b. I could do something different every day.

a. The job would have good working conditions.
   OR
b. The job would provide for steady employment.

a. My pay would compare well with that of other workers.
   OR
b. I could do something that makes use of my abilities.

a. I could do something different every day.
   OR
b. I could tell people what to do.

a. My boss would back up his men (with top management).
   OR
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a. I could try out some of my own ideas.
   OR
b. I could be busy all the time.

a. I could work alone on the job.
   OR
b. The job would provide an opportunity for advancement.

a. I could tell people what to do.
   OR
b. I could do the work without feeling that it is morally wrong.

a. The job would have good working conditions.
   OR
b. The company would administer its policies fairly.

a. My boss would train his men well.
   OR
b. The job would provide an opportunity for advancement.
Ask yourself: Which is more important to me in my ideal job?

133. My boss would back up his men (with top management).
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   OR
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135. I could do something that makes use of my abilities.
   OR
   b. I could do things for other people.

136. I could do the work without feeling that it is morally wrong.
   OR
   b. I could do something different every day.

137. The job would have good working conditions.
   OR
   b. I could get recognition for the work I do.

138. My pay would compare well with that of other workers.
   OR
   b. I could do things for other people.

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   OR
   b. My co-workers would be easy to make friends with.

140. I could try out some of my own ideas.
   OR
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141. The job could give me a feeling of accomplishment.
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142. I could do the work without feeling that it is morally wrong.
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Ask yourself: Which is *more important* to me in my *ideal* job?

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148. a. I could do something different every day.
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    b. The job would provide an opportunity for advancement.

151. a. I could be busy all the time.
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152. a. I could do things for other people.
    OR
    b. The job could give me a feeling of accomplishment.

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    OR
    b. The job would provide for steady employment.

154. a. I could do something different every day.
    OR
    b. I could work alone on the job.

155. a. I could try out some of my own ideas.
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Ask yourself: Which is more important to me in my ideal job?

157. a. I could be "somebody" in the community.
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159. a. The job would provide for steady employment.
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160. a. The job would provide an opportunity for advancement.
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161. a. I could be busy all the time.
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162. a. I could do the work without feeling that it is morally wrong.
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     b. The job could give me a feeling of accomplishment.

163. a. I could work alone on the job.
     OR
     b. I could do something that makes use of my abilities.

164. a. The job would have good working conditions.
     OR
     b. My co-workers would be easy to make friends with.

165. a. I could do something different every day.
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166. a. My boss would train his men well.
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     b. The company would administer its policies fairly.

167. a. I could tell people what to do.
     OR
     b. My boss would back up his men (with top management).

168. a. The job would provide an opportunity for advancement.
     OR
     b. I could be "somebody" in the community.
Ask yourself: Which is more important to me in my ideal job?

169. a. I could do things for other people.  
     OR  
     b. I could be busy all the time.

a. The job could give me a feeling of accomplishment.  
OR  
170.  
  b. The job would provide for steady employment.

a. I could make decisions on my own.  
OR  
171.  
  b. I could do something that makes use of my abilities.

a. I could work alone on the job.  
OR  
172.  
  b. The job would have good working conditions.

a. I could do something different every day.  
OR  
173.  
  b. I could try out some of my own ideas.

a. My co-workers would be easy to make friends with.  
OR  
174.  
  b. My boss would train his men well.

a. My boss would back up his men (with top management).  
OR  
175.  
  b. My pay would compare well with that of other workers.

a. I could be "somebody" in the community.  
OR  
176.  
  b. The company would administer its policies fairly.

a. I could tell people what to do.  
OR  
177.  
  b. I could do things for other people.

a. The job would provide an opportunity for advancement.  
OR  
178.  
  b. The job would provide for steady employment.

a. I could be busy all the time.  
OR  
179.  
  b. I could make decisions on my own.

a. I could get recognition for the work I do.  
OR  
180.  
  b. The job could give me a feeling of accomplishment.
Ask yourself: Which is *more important* to me in my *ideal* job?

181. a. I could do something that makes use of my abilities.
    OR
    b. I could do the work without feeling that it is morally wrong.

182. a. The job would have good working conditions.
    OR
    b. I could try out some of my own ideas.

183. a. My co-workers would be easy to make friends with.
    OR
    b. I could do something different every day.

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    OR
    b. My pay would compare well with that of other workers.

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187. a. The job would provide an opportunity for advancement.
    OR
    b. I could do things for other people.

188. a. I could be busy all the time.
    OR
    b. The job would provide for steady employment.

189. a. I could make decisions on my own.
    OR
    b. The job could give me a feeling of accomplishment.

190. a. I could get recognition for the work I do.
    OR
    b. I could do something that makes use of my abilities.
This page consider each statement and decide whether or not it is important to have in your ideal job.

—If you think that the statement is important for your ideal job, mark an X in the "Yes" box on your answer sheet.

—If you think that the statement is not important for your ideal job, mark an X in the "No" box on your answer sheet.

On my ideal job it is important that . . .

191. I could do something that makes use of my abilities.
192. the job could give me a feeling of accomplishment.
193. I could be busy all the time.
194. the job would provide an opportunity for advancement.
195. I could tell people what to do.
196. the company would administer its policies fairly.
197. my pay would compare well with that of other workers.
198. my co-workers would be easy to make friends with.
199. I could try out some of my own ideas.
200. I could work alone on the job.
201. I could do the work without feeling that it is morally wrong.
202. I could get recognition for the work I do.
203. I could make decisions on my own.
204. the job would provide for steady employment.
205. I could do things for other people.
206. I could be "somebody" in the community.
207. my boss would back up his men (with top management).
208. my boss would train his men well.
209. I could do something different every day.
210. the job would have good working conditions.

Please check your answer sheet to see that you have marked only one choice in each of the 210 boxes.
VITAE

Royce Balch Martin was born in Tucumcari, New Mexico on January 24, 1927. She attended public elementary and secondary schools in New Mexico and graduated from Albuquerque High School in 1945. Majoring in English and business administration, she received a Bachelor of Arts degree from Baylor University in Waco, Texas in 1949.

Returning to New Mexico, she was employed as a high school teacher in Lordsburg and in Albuquerque. She received a Master of Business Administration degree from the University of New Mexico in 1955. Post-master's training included study at University of New Mexico, University of Pennsylvania, Stanford University, Arizona State University, College of William and Mary, San Francisco State College, and Colorado State University.

From 1959 through 1966, she served as counselor in the Albuquerque Public Schools. After the completion of residence work and course requirements at the University of New Mexico, she was employed as a counselor at the Albuquerque Technical-Vocational Institute where she is currently assigned.