The Effect of Occupational Exploratory Experiences upon the Occupational Awareness and Occupational Analysis of Junior High School Seventh and Eighth Grade Students

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THE EFFECT OF OCCUPATIONAL EXPLORATORY EXPERIENCES UPON THE OCCUPATIONAL AWARENESS AND OCCUPATIONAL ANALYSIS OF JUNIOR HIGH SCHOOL SEVENTH AND EIGHTH GRADE STUDENTS

by

Edward Lewis Pelkey

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Doctor of Education

Western Michigan University
Kalamazoo, Michigan
August 1972
ACKNOWLEDGEMENTS

My sincere respect and gratitude go to my very able, professional and highly competent committee members.

Dr. Harold W. Boles       Committee Chairman
Dr. Theodore L. Ploughman
Dr. Charles T. Brown

Let it be known that these men have unselfishly contributed many hours of encouragement and assistance. In such areas as leadership, concept formation and listening ability, their contributions have been outstanding.

To Mr. Bruce Galland, who volunteered to do the testing within the control group, a note of thanks.

To my many friends who have had to put up with my preoccupation during the past year--it's good to be back.

And foremost, to my wife, Margie, a very special thanks for her understanding and encouragement.

Edward Lewis Pelkey
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Education, vocational

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CHAPTER I

INTRODUCTION

Marland (1971), United States Commissioner of Education, has indicated that America's efforts are failing or at least are not attuned to the realities of our times. He emphasized his point by saying:

If we are to correct that failure and if education is to serve properly its national purpose, then we must bridge the gulf between man and his work. We in education must be actively concerned with the boys and girls in our charge not just until they receive a diploma but until they have made the transition from student to worker or are enrolled in postsecondary education. Our job is not done properly, in other words, until each and every one of those youngsters is capable of developing a clear sense of direction in life and is able to make a responsible career choice (p. 4).

According to Marland, it is imperative that a systematized relationship between education and work be found. Major emphasis has been given to this area by the Office of Education research staff.

A rationale for a career guidance program is also supported by Rhodes (1969). As a past governor of the State of Ohio, he made use of the statistics collected in Ohio. He said, "This year alone, 100,000 young people in Ohio will have dropped out of school or will graduate from high school with nothing more to offer the labor market than a strong back. This group will not continue their education and it is a
disgrace that they were not given occupational guidance in junior high school . . . (p. 14)."

Criticizing the educational systems for not providing preparation for work, Rhodes indicated that school age children in our society are not aware of the opportunities available to them in the world of work. He said that the educational system has been notoriously poor in providing students with guidance related to occupations in which most people are required to work.

In his book *Man, Education, and Manpower*, Venn (1970) stated, "Most people have little knowledge of the kinds of work that will be done when they become adults. The time when youngsters knew about work by casual acquaintance with it in the community is gone (p. 109)." Venn went on to say, "The basic purpose of the career-oriented approach is not to force students to make an early selection of a specific career, but rather to make all young people aware of the options available to them (p. 110)."

Vroom (1964) also supported a need for career guidance programs:

Clearly a person's choice among occupations is limited to those about which he knows something. If a person has no concept of what an ichthyologist or an epidermiologist is or does, it can have no effect on his vocational decisions. For most people the range of possible alternatives from which to choose is greatly limited by the restricted range of information which they have concerning the world of work (p. 76).
During the early fifties, in reaction to the absence of any comprehensive theoretical constructs in vocational psychology, efforts were made to investigate the character of events influencing vocational selection. Ginzberg, Ginsberg, Axelrad and Herma (1951) hypothesized that occupational choice is an irreversible process which occurs in reasonably clearly marked periods. Those periods are characterized by a series of compromises an individual makes between his wishes and his possibilities. Three major periods of the occupational choice process have been entitled the Fantasy, Tentative and Realistic periods. Ginzberg and his associates have indicated that the chief feature of the Fantasy period is the arbitrary nature of a child's choices and the lack of reality orientation reflected in the occupational preferences which are expressed. The Tentative and Realistic periods are less arbitrary in that occupational interests and compromise are involved.

Problem Statement

The problem chosen was to determine what effect a career guidance program would have upon the occupational choice process of junior high school students. Ginzberg's (1966) theory indicated that an occupational choice process takes place during an individual's elementary and secondary school years, whether or not any career guidance program has been established as a part of the school curriculum. Using a career guidance program initiated by a city school system, the task was to determine
the effect of the program upon the occupational awareness and occup-
pational analysis of junior high school seventh and eighth grade students.

Significance of the Study

The major significance of this study was in the partial investi-
gation of a theory. In Ginzberg's theory of occupational choice,
increased realism is due to chronological developmental processes
which take place within individuals during the formative school years;
the relation is between maturity and the occupational choice process.

Bottoms and Matheny questioned whether we can afford to wait
for maturity. They went on to say that, "Many youth have limited
contacts with work role models from which they might pattern their
behavior and aspirations (p. 5)."

Career development cannot be a one-shot approach
that takes place at the junior or senior high level.
Career development should be conceived of as a
pyramid offering a broad base of exploratory ex-
periences at the elementary and junior high school
levels and gradually narrowing to a decision point
as the student acquired appropriate preparation for
his next step beyond school (p. 7).

It seemed significant to discount waiting for maturity to develop a
youngster capable of making choices, but rather, to help students in-
crease their abilities to make decisions regarding their positions in a
work oriented society by exposing them to knowledge of occupations,
assisting them in evaluating their abilities and interests, and providing
them with appropriate job entry information.
Increased realism in occupational choice due to exposure to a career guidance program would imply a different relation—a relation between exposure to a wide range of occupational alternatives and experience and the occupational choice process.

Purpose of the Study

The intent of the investigator in this study was to determine whether a career guidance program would be able to reduce the age level at which the Tentative and Realistic periods of occupational choice occur by significantly increasing the knowledge of occupations available in the world of work. In summary, the investigator sought to accept or reject a portion\(^1\) of Ginzberg's theory. The continued absence of theoretical constructs in the area of vocational psychology made the attempt worthwhile.

Assumptions

This study was conducted with the major assumption being that the experimental public school system, which utilized the career guidance program, could produce those experiences necessary to cause a transition from the Fantasy period to the Realistic period of the occupational

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\(^1\)The portion of Ginzberg's theory referred to concerns the age levels at which tentative and realistic occupational choices begin to occur. Namely, the period of realistic choice which starts near the end of the seventeenth year.
choice process. Namely, that the students could increase their knowledge of occupations, increase their ability to analyze their self-interests concerning occupations and increase their knowledge concerning the requirements for specific occupations.

Limitations

This study was conducted with the major limitation being that the investigator had no control over the manipulation of the occupational exploratory experiences used in the experimental public school system groups. An attempt was made to account for the exploratory experience activities through the use of a log book maintained by the counselors and teachers.

Definitions of Terms

Theoretical Definitions

1. **Occupational Exploratory Experiences** are activities of teachers and counselors designed to expose junior high school students to the world of work with emphasis being placed on occupational awareness at the seventh grade level and occupational analysis at the eighth grade level.
2. **Occupational Awareness** is the knowledge of jobs existing in the world of work and the educational requirements and skills needed for entry.

3. **Occupational Analysis** is the junior high school student's activity of reviewing his occupational interests, occupational abilities and occupational skills needed to fulfill the requirements for selected occupations.

**Operational Definitions**

1. **Occupational Awareness** is equated to:

   (A) the number of jobs listed on the Career Development Battery, Occupational Knowledge Survey, Part II (Ploughman, 1972).

   (B) the ten item response total on the Career Development Battery, Occupational Knowledge Survey, Part I, Question 2 (Ploughman, 1972).

   (C) the score obtained from the twenty item questionnaire on the Career Development Battery, Occupational Knowledge Survey, Part III (Ploughman, 1972).

2. **Occupational Analysis** is equated to:

   (A) the grand discrepancy score (Interest HIGH minus Ability, Ability HIGH minus Interest) obtained from the Career Develop-

(B) the score obtained from the seven item response on the Career Development Battery, Occupational Interest Survey, Part II. Question 6 (Ploughman, 1972).

Organization of the Dissertation

The purpose of Chapter I has been to introduce the area of study as well as state the problem, the significance of the study, the purpose of the study, the assumptions, the limitations, the definitions of terms and the organization of the dissertation. Chapter II contains Ginzberg's Theory of Occupational Choice and related research. Chapter III, Design of the Study, contains an overview of the procedure, the hypotheses explored, the sources of data, the methods of gathering data, the instrumentation, research related to the instrumentation and the methods of analyzing data. Chapter IV contains a report of the findings and a summary. Chapter V consists of a summary of the study, discussion of the findings, conclusions drawn from the findings and a statement of implications.
CHAPTER II

THE GINZBERG THEORY OF OCCUPATIONAL CHOICE
AND SELECTED RESEARCH

This chapter consists of a review of the Ginzberg (1951) theory of occupational choice and a selected sample of research related to the theory. A review of Ginzberg's theory is presented to inform the reader of its nature and importance. A review of selected research is designed to further substantiate the importance of the study.

The Ginzberg Theory of Occupational Choice

Ginzberg, Ginsberg, Axelrad and Herma (1951) hypothesized vocational choice\(^1\) as being an irreversible process, occurring during reasonably clearly defined periods, which is identified by a series of compromises an individual makes between his wishes and his possibilities. The more recent (Ginzberg, 1966) edition of the theory has added additional clarity to the major components.

---

\(^1\)The Ginzberg (1951) edition calls the theory a vocational choice process while the Ginzberg (1966) edition calls the theory an occupational choice process. Occupational choice and vocational choice are used interchangeably herein.
First, occupational choice is a process which takes place over a minimum of six or seven years, and more typically, over ten years or more. Secondly, since each decision during adolescence is related to one's experience up to that point, and in turn has an influence on the future, the process of decision-making is basically irreversible. Finally, since occupational choice involves the balancing of a series of subjective elements with the opportunities and limitations of reality, the crystallization of occupational choice inevitably has the quality of a compromise (p. 57).

Ginzberg analyzed the process of occupational choice in terms of three periods—fantasy, tentative and realistic. The three periods could be differentiated by the way in which the individual translated his impulses and needs into an occupational choice. Ginzberg (1966) defined and differentiated these three time periods as follows:

**Fantasy**

In the fantasy period the youngster thinks about an occupation in terms of his wish to be an adult. He cannot assess his capacities or the opportunities and limitations of reality. He believes that he can be whatever he wants to be. His translations are arbitrary (p. 48).

**Tentative**

This period is characterized by the individual's recognition of the problem of deciding on a future occupation. The translation is still almost exclusively in terms of subjective factors: interests, capacities, and values (p. 48).
The Realistic Period

During the realistic period, the translation is so heavily weighted by reality considerations that a synthesis is difficult. The individual recognizes that he must work out a compromise between what he wants and the opportunities which are available to him (p. 48).

The Fantasy Period

The fantasy period occurs from ages three through ten. According to Ginzberg and his associates, the primary task children accomplish during the fantasy period of occupational choice development is a general maturational process of changing from "play-orientation" to a "work-orientation." By ages four and five, children are able to state clear vocational preferences, but the preferences reflect what Ginzberg (1951) calls "function pleasure," that is, "... to engage in the work because the particular activity is conceived to be pleasurable (p. 61)." The grandiose, spectacular and adventuresome quality of occupational choices expresses a desire for freedom and excitement in one's wishes to be an aviator, an explorer or a famous baseball player.

A study by Frank and Hetzer (1931) dealt with the occupational wishes of children between the ages of three and ten. They found that children at ages four and five would respond to questions pertaining to what they wanted to do when they grew up. Frank and Hetzer found a wide range of choices among the several hundred Viennese children they interviewed about their future occupations. All of the choices had something in common;
they were on the children's desires for "function pleasure." According to Osipow (1968), "During the Fantasy period the children ignore reality, their abilities and potentials, and the time perspective, three of the very important ingredients in the vocational choice process, according to the Ginzberg group (p. 73)." Ginzberg (1951) concluded:

The fantasy element grows out of the inability of children to introduce the relation between means and ends into their thinking about the future—that is, to engage in rational considerations, without which they cannot establish or realize appropriate goals in the future. Children of this age group make any and every type of choice and are unaware of the barriers which stand in their way (p. 63).

The Tentative Period

Occurring between the ages of approximately eleven and eighteen, Ginzberg (1951) hypothesized that, for the first time, a child begins to consider himself as an entity which is both stable and changing.

"... for the first time the growing child is able to bring into the focus of his thinking some of the broader considerations pertaining to the real world beyond his immediate circle of family and friends (p. 64)." Children become increasingly aware of reality and begin to appreciate, for instance, that flying as a pilot, although an attractive occupation, could have some serious drawbacks because of the danger involved. According to Ginzberg, although the preadolescent and early adolescent years between eleven and seventeen allow considerably more freedom in decision-

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making, young people are still not fully cognizant of the essential factors that should determine a decision about a future occupation.

As a young person continues to develop and mature greater insight is gained in the capacity to translate occupations according to true interests and values. Ginzberg divided the tentative period into three stages which differ in their vocational development tasks. "From eleven to twelve is the 'interest stage'--the preadolescent makes his choice primarily in terms of likes and interests (p. 75)." Choices begin to be considered for a potential they hold for intrinsic enjoyment. Rather than "play-orientation" of the fantasy periods, Osipow (1968) contended that, "Later, as the children grow more socialized, they seek out activities which possess potential for extrinsic rewards, such as parental approval, success and its rewards, money to buy toys with, and so on (p. 73)."

According to Ginzberg (1951), the second stage of the tentative period occurs during the ages thirteen and fourteen. It is known as the capacity stage. Individuals become increasingly aware of the necessity to introduce "realistic" elements into occupational considerations, the realistic elements being external factors such as differing occupations, differing remunerations and differing preparation and training. "Interests continue to play a very important role, but in some cases there has been a broadening of the alternatives . . . (p. 79)." Students also begin to evaluate their ability to perform well in areas of their selected occupational interest.
Ginzberg's third stage of the tentative periods, the value stage, covers the ages of approximately fifteen through sixteen "... and is characterized by the adolescent's\(^1\) attempt to find a place for himself in society (p. 75)." According to Ginzberg, the adolescent recognizes a need to synthesize many elements such as what he would like to do, capacities to do it, the reality situation\(^2\) which will allow him to do it and the rewards he will receive from society if he embarks upon a selected career. An adolescent must assess a whole range of factors that are significant in the occupational choice process and evaluate the factors in light of his own goals and values which need to be formulated and clarified. Ginzberg's conclusions of this stage are, first, that all of the elements concerning occupations, important to the decision-making process, are available for the first. Second, "The time gap between the present and the future, which seems so wide to the eleven-year olds, has narrowed considerably (p. 88)."

The fifteen and sixteen year olds recognize that the decision cannot remain open forever.

The transition stage is the fourth and final stage of the period of the period of tentative choices. It usually occurs by the age of seventeen.

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\(^{1}\) The terms adolescent, young person, individuals and students are used interchangeably to indicate the subjects being referred to within Ginzberg's theory.

\(^{2}\) Reality situation refers to the economic, sociological and educational potential and opportunity.
Ginzberg states, "Our school system determines that it is a transitional stage, for as the individual approaches the end of high school, usually at seventeen, he must look forward either to work or college (p. 75)". Since adolescents are aware that their present type of life will not continue, they approach the end of high school somewhat apprehensive about the future. Ginzberg's transition stage is characterized by individuals who must face the necessity of making immediate, concrete and realistic decisions about their chosen occupations. The amount and kind of preparation necessary for entrance into various careers is studied, cognizance of varying financial rewards is keener, and awareness of differing life circumstances of careers is sharpened.

The Realistic Period

Ginzberg has sub-divided the realistic period, taking place from approximately eighteen to twenty-two years of age, into three distinct stages—exploration, crystallization and specification. The first stage, exploration, begins during college entrance. A general indecisiveness continues due partly to interests which are still changing as well as the reality of a situation which doesn't call for a specific decision to be made.

It is during the second, or crystallization stage, that Ginzberg indicates a degree of intellectual and emotional maturity which permits an individual to recognize a possible conflict between his capacities, interests and values, and the objective conditions presented by the real world.
According to Ginzberg, most college students finally move toward positive solutions as a result of exploratory considerations.

The period of final commitment is the specification stage. Ginzberg indicates that there is closure on selection of specifics of an occupational choice after a generalized choice has been made. For some individuals, this stage never genuinely arrives.

Research on the Theory

The most extensive and elaborate study concerning Ginzberg's theory of occupational choice was conducted by O'Hara and Tiedeman (1959). They were interested in studying the relation between social class, aptitude, interest and values of Ginzberg's model and the development of a vocational self-concept. Over a thousand students from a private Catholic day school in Boston were tested on their verbal reasoning, numerical ability, mechanical reasoning, space relations and abstract reasoning through the use of the Differential Aptitude Test (1947) and the Kuder Preference Record (1948). O'Hara and Tiedeman defined the students' social classes through the use of The Home Index by Gough (1949). The students' general values were measured by the Allport-Vernon-Lindsey Study of Values (1951), and their work values by the Super Work Values Inventory (1955). Each student was also required to complete a self-estimate questionnaire, devised by O'Hara and Tiedeman, which forced each to reveal self-concept with respect to his
aptitudes, interests and values. The sample size included 160 seniors in high school, 264 juniors, 276 sophomores and 321 freshmen.

The design of the study permitted data pertaining to aptitudes, interests and values to be compared with self-estimates in these areas. Correlations between aptitudes, interests, values and self-estimates reflected increasing congruence through high school. Having inferred that increasing occupational clarity is reflected by increasing congruence of the tested variables and relevant self-estimates, O'Hara and Tiedeman concluded that the prospect of occupational clarification as a developmental process is likely.

In a pilot study conducted by O'Hara (1959), ages were examined at which values provide a focus for occupational preferences. His findings suggested that reality testing is engaged in by boys at a much earlier age than Ginzberg's theory predicted. O'Hara observed boys planning compromises as early as twelve to thirteen years of age, the tentative period occurring as early as nine years of age and rationally based fantasy choices being made as early as third grade. Although O'Hara's results contradict Ginzberg's theory, in that the periods of development occur much earlier than indicated by Ginzberg, the results support Ginzberg's theory as the periods do occur in the order expected.

In a summary of research done by Gribbons and Lohnes (1964, 1968), findings were reported from a ten-year longitudinal study of the educational and vocational development of 111 eighth grade boys and girls conducted by
Gribbons (1960). A multi-dimensional personal interview was administered to 110\textsuperscript{1} boys and girls in the eighth grade and then again in the tenth grade. Personal interview questions used by Gribbons (1968) was designed to elicit responses to such factors as curriculum choice, occupational choice, verbalized strengths and weaknesses, accuracy of self-appraisal, evidence for self-rating, interests, values and independence of choice. Gribbons and Lohnes found that the boys and girls who had been floundering vocationally in the eighth grade, being unaware of and uniformed about careers, still were in that condition in the tenth grade. The probability of continuance was about two to one. From tenth grade to twelfth grade the probability remained about the same, and from twelfth grade until two years after graduation the probability increased to three to one. Gribbons and Lohnes (1968) expressed their concern by saying:

We are quite concerned over the narrow range of occupational preferences of the subjects in this sample. At grade eight, for example, three occupations—engineering, teaching, and nursing—accounted for almost one-third of the preferences (p. 108).

They go on to say that the introduction to the myriad occupations, both present and future, should begin very early, with the classroom

\textsuperscript{1}One student dropped out of school and was not included in the analysis due to the inappropriate nature, for his case, of most of the interview questions.
teacher, and should be part of a student's everyday experience in the classroom. Further research which supports a need to begin very early with children was conducted by Gunn (1965). In an attempt to determine when and in what manner the prestige motive is manifested, Gunn interviewed elementary children and found them beginning to attribute status to jobs based upon service criteria as early as third grade. At the seventh grade level, Gunn found that a social class hierarchy had emerged in the students' perceptions.

In a study conducted by Hutson (1962), comparisons were made of the vocational choices of students during 1930 and 1961. With the assistance of 27 high school teachers and principals, over 2,700 students were inventoried in 1930 on their vocational interests, their intelligence quotients and the reasons for their choices. The students were located among 21 schools or school systems clustered about Pittsburgh, Pennsylvania. In 1961 the study was repeated in the same area. The results shown by the data were that the professions were pre-eminently attractive. Hutson indicated that only a fraction of the students giving professions as their choices could achieve that kind of occupational affiliation. He went on to say, "The findings of these 1930 and 1961 surveys suggest to this writer that many of our high school students are remaining in the fantasy stage of vocational selection overly long (p. 222)." "Choice is indeed a developmental outcome, but the development should not be left to blind forces (p. 222)."
O'Hara (1962) in a study of fourth, fifth and sixth grade students reported that the choices made at that state of development were more closely related to interests than to capacities. O'Hara found that for 25 percent of the boys in the sample, values entered into decisions as early as fourth grade, much earlier than Ginzberg (1951) had hypothesized.

Davis, Hogan and Strouf (1962) completed a comparative frequency count of occupational preferences stemming from fantasy motives with the frequency count of occupational preferences stemming from tentative motives. The sample size consisted of 116 boys and girls, whose age range was from eleven to sixteen. Results indicated that sixth grade girls were more likely to express choices representative of the tentative period than boys and that intelligence and stage of occupational development appeared to be correlated. The more intelligent a student was, the more likely he was able to express an occupational preference which reflected more advanced thinking about his career. The authors concluded that since most of their subjects reported plans which were consistent with the tentative period, the results supported the theory of Ginzberg and his associates.

A study by Small (1953) also bears a relation to the Ginzberg theory. While observing personality factors which influence occupational choice, Small's data allowed him to hypothesize that reality factors exert an increasing influence on occupational preferences expressed by boys from age eleven on. This hypothesis is similar to O'Hara's (1962) observation.
that the age levels reflected in the Ginzberg periods may actually be set too high. Parker (1962) sampled 29,000 seventh grade boys and girls in Oklahoma and found that 67 percent of the boys and 66 percent of the girls had expressed a definiteness about their future. Crites (1965), in a study of the choice competencies and attitudes in vocational maturity in students from grades five through twelve, concluded that grade units may be equally, if not more, significant than age levels as a criteria in increments and stages of occupational maturity.

Additional studies have been done relating to both age and grade level as criteria for evaluating realism of vocational choice. Hollender (1967), having defined realism in terms of level of vocational choice, indicated realism to be related to both age and grade level. Montesano and Geist (1964) compared ninth and twelfth grade boys and found the older students concerned more about factors related to their abilities as well as occupational requirements and conditions of work. Hall (1963) observed that realistic factors in work were being used more frequently by high school seniors than with sophomores and juniors—again supporting Ginzberg's theory that occupational choice is a developmental process.
CHAPTER III

DESIGN OF THE STUDY

The purpose of this chapter is to present the hypotheses and questions explored, the sources of the data, the methods of gathering data, the instrumentation and the methods of analyzing data in a more explicit fashion.

Overview of Procedure

The participant school systems used as the experimental and control groups were selected by the investigator. Selection of the particular classes sampled at each grade level was left to the prerogative of the guidance counselors who participated in the testing. The Career Development Battery, Part I and Part II, was administered by the control group and experimental group counselors on a pre-test, post-test basis. Testing was conducted in both the control and experimental settings on the same day. The Career Development Battery, consisting of the Occupational Knowledge Survey (Part I) and the Occupational Interest Survey (Part II), allowed selected items to be used to assess each participating student's occupational awareness and occupational analysis.

Inferential models were used to make comparisons between the participating students in experimental and control group samples. The central...
statistical intent was to determine whether the mean responses of the experimental and control groups differed significantly. The data representing the dependent variables, occupational awareness and occupational analysis were analyzed through the use of t-tests. The strength of association between the occupational exploratory program and each of the dependent variables was also computed.

**Hypotheses Explored**

The intent of this study was to investigate the variables of occupational awareness and occupational analysis in relation to an occupational exploratory program. Four hypotheses were explored.

**Hypotheses**

The following research hypotheses were investigated in this study.  

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Occupational exploratory experiences contribute to increased occupational awareness of junior high school students.</td>
</tr>
<tr>
<td>H1a</td>
<td>Occupational exploratory experiences contribute more to increased occupational awareness of seventh grade junior high school students than to eighth grade junior high school students.</td>
</tr>
<tr>
<td>H2</td>
<td>Occupational exploratory experiences contribute to increased occupational analysis of junior high school students</td>
</tr>
</tbody>
</table>

1Appendix A contains a graphic illustration of the hypotheses being tested.
H2a Occupational exploratory experiences contribute more to increased occupational analysis of eighth grade junior high school students than to seventh grade junior high school students.

Sources of Data

Population

The Pontiac Public School System, Pontiac, Michigan, provided the experimental group sample which consisted originally of approximately thirty junior high school students from each of the grades—seven, eight and nine. Ninth grade was dropped from both the experimental and control groups due to the loss of research data which had been mailed. The control group sample consisted of approximately thirty students from each of grades seven and eight within the Reeths-Puffer Public School System, Muskegon, Michigan. The sample of approximately sixty junior high school students for each of the control and experimental groups was considered representative of the total populations.

Criteria for Sample Selection

As the cooperation of the particular teacher assigned to each selected grade group was necessary, the selection of each grade group was controlled.
by the counselor administering the instrument within each school setting. Cooperation of the teacher was defined as one of the major criteria for the sample selection. Additional sample group criteria were as follows:

1. One sample group must be selected from each grade level—seven and eight.

2. Each sample group must not be selected from a special situation.¹

A Description of the Sample

The total subjects involved in this study consisted of 66 junior high school students within the experimental group system and 50 junior high school students within the control group system. The anonymity of the subjects was protected by the use of numerical identification.

The Pontiac Public School System, Pontiac, Michigan, served in the capacity of the experimental group. The Pontiac K-12 school system is composed of over 22,000 students. The Pontiac schools service a highly industrialized urban area within Oakland County.

¹Special situation is defined as any student ability tracking such as slow learners, gifted children or special education class groupings.
Over 4,000 students compose the control group K-12 system of the Reeths-Puffer Public School System, Muskegon, Michigan. The Reeths-Puffer system also services a highly industrialized urban area within Muskegon County.

Methods of Gathering Data

The data were collected in two phases. The Career Development Battery (CDB—see Appendix B) was used to gather pre-test data on each junior high school control and experimental group student’s occupational knowledge and occupational interests. The second and subsequent phase consisted of a post-test administration of the CDB on the control and experimental groups.

In both the control and experimental group systems, the procedure for the administration of the instrument was identical. Initially, the researcher personally obtained permission to conduct the research in the control and experimental school systems. The nature of the study was explained to the superintendent of the control group school system. The guidance counselor, employed by the control system school, volunteered to administer the instrument in the control system. There was no need to explain the nature of the study nor to request the services of a counselor within the experimental setting. All activities were directed by the program director. The researcher had no control of the activities within the experimental system which employed the occupational exploratory program or over the selection of the subjects sampled.
Prior to the pre-test phase of data collection, the participating counselors in the control and experimental groups were requested to select one class to represent each of the junior high grades—seven and eight. Once the sample subjects had been selected, the counselors were asked to arrange for testing to take place within a social science setting such as an English class. The intent was to reduce noise and disruptions which occur in an area where classes such as shop and auto mechanics are conducted. The identification of the selected control and experimental groups is presented in Table 1.

**TABLE 1**

<table>
<thead>
<tr>
<th>Grade</th>
<th>School System</th>
<th>Group</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Reeths-Puffer</td>
<td>Control</td>
<td>26</td>
</tr>
<tr>
<td>8</td>
<td>Reeths-Puffer</td>
<td>Control</td>
<td>24</td>
</tr>
<tr>
<td>7</td>
<td>Pontiac</td>
<td>Experimental</td>
<td>36</td>
</tr>
<tr>
<td>8</td>
<td>Pontiac</td>
<td>Experimental</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>116</strong></td>
</tr>
</tbody>
</table>
After having selected the subjects and the locale for testing, the counselors were issued a list of possible testing dates which fell prior to the activation of the occupational exploratory program within the experimental system. The counselors agreed on a convenient time. Administration of the CDB instrument in the control and experimental groups was accomplished in February, 1972. A lock-step procedure for testing (see Appendix C) was issued to the counselors. The pre-test CDB (Occupational Knowledge, Part I) was administered on February 14. The CDB (Occupational Interest, Part II) was administered on February 15.

On May 22 and 23 of 1972, a post-test CDB was administered. The same sample subjects were tested in the same locale employing the same lock-step testing procedures.

Instrumentation

In this study, one instrument was used to obtain the required data. During both pre-test and post-test, the Career Development Battery, Parts I and II, was administered to the subjects.

Career Development Battery

The instrument used in this study was the Career Development Battery (see Appendix B). The CDB was the instrument accepted and used for a system-wide evaluation of the occupational exploratory program
employed within the Pontiac schools, and the researcher elected to utilize the same instrument. The CDB offered a major advantage over other methods of gathering data in that it was designed specifically to measure the level of occupational knowledge and occupational interest according to the experimental program objectives.

Because it has recently been developed, neither validity nor reliability has yet been established for the CDB. The instrument was proposed and accepted for use in the Pontiac Public Schools on the merit of its face validity and reading level. Barnette and McCall (1964) indicated that before the Minnesota Vocational Interest Inventory could be used with greater validity, a simpler vocabulary and shorter form of instrument had to be developed for use in the ninth grade.

Research Related to the Instrumentation

Measured occupational interests have been used by many researchers as predictors of career development. For example, the career choices of 650 male high school seniors were assessed by Astin (1967) on the basis of their personal characteristics while they were in ninth grade. Measured interests and expressed career choice at the ninth grade level were the best predictors of career outcomes at the twelfth grade level. Cass and Tiedeman (1960) found that work interests were effective predictors of the selection of high school curriculum. The Kuder Preference Record (KPR) was administered by McCall and Moore (1965) to boys and girls early in
the ninth grade. During the following spring, the students were asked to give an estimation of their relative abilities to perform the same activities—ignoring their interests in them. McCall and Moore concluded that about one-third of an individual's KPR interest score can be explained by an estimated ability set. The blending of interests and abilities into commonality, when students respond to items on an interest inventory, as described by McCall and Moore (1965), has had a significant influence on the researcher of this study. Additional studies concerning occupational interest have been completed by Campbell (1966), Chansky (1965), Clark (1961), Crites (1963) and Roe and Siegelman (1964).

Occupational knowledge has also been used as a predictor of career development. Montesano and Geist (1964), who, in contrasting ninth and twelfth grade boys, found the older students taking into account more factors related to knowledge of occupational requirements and conditions of work. Additional research on occupational knowledge has been done by DeFleur (1963) and Gunn (1964).

Methods of Analyzing Data

The development of the hypotheses and resultant data determined the methods used to analyze the data.

Data Analysis for the Hypotheses

Through the use of a one-tailed t test, (Kerlinger, 1964), the null form
of the research hypotheses was tested by comparing the differences between the mean scores of the experimental groups and control groups.

Statistical Significance and Strength of Association

According to Kerlinger (1964), a t test of the difference between two means informs the investigator if there is a difference—usually at the .05 and .01 levels of significance. If one is interested in the degree of relationship between the dependent variable and experimental effect, then one should calculate the strength of association (E^2). The E^2 is used to estimate the percentage of variance accounted for. Hays (1963) indicates a better decision may be made from data by using both the level of significance and strength of association. The strength of association, E^2, was computed and reported for each statistical comparison. The report of the findings, utilizing the described methods of analyzing data, is presented in Chapter IV.
CHAPTER IV

REPORT OF THE FINDINGS

The data analyses results are presented in the summary tables of each group comparison where the \( t \) test was used. Included in the tables are the mean score, (mean); the degrees of freedom, (df); the computed \( t \) value, \( (t) \); the level of statistical significance, \( (p) \); and the strength of association, \( (E^2) \).

One-tailed \( t \) tests were computed for all statistical versions of the research hypotheses. All probability levels were reported at their specific value. The researcher considered the probability of .05 as being significant.

The following operational definitions are repeated to provide a ready reference.

**Operational Definitions**

1. **Occupational Awareness** is equated to:

   (A) the number of jobs listed on the Career Development Battery, Occupational Knowledge Survey, Part II (Ploughman, 1972).
(B) the ten item response total on the Career Development Battery, Occupational Knowledge Survey, Part I, Question 2 (Ploughman, 1972).

(C) the score obtained from the twenty item questionnaire on the Career Development Battery, Occupational Knowledge Survey, Part III (Ploughman, 1972).

2. **Occupational Analysis** is equated to:

   (A) the grand discrepancy score (Interest HIGH minus Ability, Ability HIGH minus Interest) obtained from the Career Development Battery, Occupational Interest Survey, Part I (Ploughman, 1972).

   (B) the total score obtained from the seven item response on the Career Development Battery, Occupational Interest Survey, Part II, Question 6 (Ploughman, 1972).

Research Hypotheses

**Hypothesis 1.** Occupational exploratory experiences contribute to increased occupational awareness of junior high school students.
Occupational Awareness (A)

Table 2 contains a summary of the results of one-tailed $t$ tests on the occupational awareness (A) pre-post test gain score differences between the experimental and control groups used to determine the effect of occupational exploratory experiences upon occupational awareness.

TABLE 2

Relation Between Occupational Exploratory Experiences and Occupational Awareness (A)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>$t$</th>
<th>$p$</th>
<th>$E^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>2.67</td>
<td>60</td>
<td>.80</td>
<td>.21</td>
<td>.00</td>
</tr>
<tr>
<td>Control</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>5.40</td>
<td>52</td>
<td>5.32</td>
<td>.010</td>
<td>.34</td>
</tr>
<tr>
<td>Control</td>
<td>-2.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Mean = Mean score for the criterion variable  
$df$ = Degrees of freedom  
$t$ = $t$ test value  
$p$ = Probability level of statistical significance  
$E^2$ = Strength of association

These definitions will remain consistent for all tables.
The results of the analyses indicate that a relation exists between occupational exploratory experiences and occupational awareness (A) at the eighth grade level. Occupational awareness (A) is the number of occupations the students were able to list. The experimental eighth grade group was able to list an average of five more occupations than the control eighth grade group. The difference between the gain scores of the eighth grade experimental and control groups could have occurred by chance only one time in one hundred. The strength of association, $E^2$, revealed that occupational exploratory experiences accounted for 34 percent of the variance in the occupational awareness (A) scores. The seventh grade failed to meet the .05 level of significance required by the researcher.

Table 3 presents a summary of the results of one-tailed $t$ tests used to determine whether the difference between the pre-test occupational awareness (A) raw score and post-test occupational awareness (A) raw score for both the experimental and control groups was significant.

The probability level for the eighth grade experimental group was significant at the .05 level. The strength of association, $E^2$, revealed that for the experimental eighth grade group, occupational exploratory experiences accounted for 23 percent of the variance in the occupational awareness (A) scores. The seventh grade experimental group and the seventh and eighth grade control groups failed to meet the .05 level of significance.
TABLE 3

Occupational Awareness (A) Raw Score
Pre-Post Test Difference for the Experimental and Control Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>t</th>
<th>p</th>
<th>E²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>31.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>34.28</td>
<td></td>
<td>.75</td>
<td>.23</td>
<td>.00</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>33.58</td>
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<tr>
<td>Post</td>
<td>34.31</td>
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<td>.20</td>
<td>.42</td>
<td>.00</td>
</tr>
<tr>
<td>Experimental</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>31.77</td>
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<td></td>
</tr>
<tr>
<td>Post</td>
<td>47.17</td>
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<td>4.37</td>
<td>.0001</td>
<td>.23</td>
</tr>
<tr>
<td>Control</td>
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<td>Eighth Grade</td>
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<td></td>
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<tr>
<td>Pre</td>
<td>33.62</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>31.33</td>
<td></td>
<td>.68</td>
<td>.25</td>
<td>.00</td>
</tr>
</tbody>
</table>
Occupational Awareness (B)

Table 4 contains a summary of the results of one-tailed $t$ tests on the occupational awareness (B) pre-post test gain score differences between the experimental and control groups used to determine the effect of occupational exploratory experiences upon occupational awareness.

**TABLE 4**

Relation Between Occupational Exploratory Experiences and Occupational Awareness (B)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>$t$</th>
<th>$p$</th>
<th>$E^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>2.89</td>
<td>60</td>
<td>2.34</td>
<td>.01</td>
<td>.07</td>
</tr>
<tr>
<td>Control</td>
<td>0.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>1.67</td>
<td>52</td>
<td>1.46</td>
<td>.07</td>
<td>.02</td>
</tr>
<tr>
<td>Control</td>
<td>0.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

An inspection of the results of the analyses indicate that a relation exists between occupational exploratory experiences and occupational awareness (B) at the seventh grade level. Occupational awareness (B) is
the ten item response total on occupational knowledge. The response total score represented the number of responses in the none, some and much columns of occupational knowledge. The experimental seventh grade group was able to increase its ten item response gain score total from some knowledge to half way between some knowledge and much knowledge of occupations. The control seventh grade group did not increase its ten item response gain score total. The difference between the gain scores of the seventh grade experimental and control groups could have occurred by chance only one time in one hundred. The strength of association, $E^2$, revealed that occupational exploratory experiences accounted for seven percent of the variance in the occupational awareness scores. The eighth grade failed to meet the .05 level of significance required.

Table 5 presents a summary of the results of one-tailed $t$ tests used to determine whether the difference between the pre-test occupational awareness (B) raw score and post-test occupational awareness (B) raw score for both the experimental and control groups was significant.
TABLE 5

Occupational Awareness (B) Raw Score Pre-Post Test Difference for the Experimental and Control Groups

<table>
<thead>
<tr>
<th>Group, Grade</th>
<th>Mean</th>
<th>df</th>
<th>t</th>
<th>p</th>
<th>E²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>15.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>18.64</td>
<td>34</td>
<td>2.38</td>
<td>.01</td>
<td>.06</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>19.81</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Post</td>
<td>19.85</td>
<td>24</td>
<td>.38</td>
<td>.35</td>
<td>.00</td>
</tr>
<tr>
<td>Experimental</td>
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<td></td>
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<tr>
<td>Eighth Grade</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>19.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>21.17</td>
<td>28</td>
<td>1.60</td>
<td>.06</td>
<td>.02</td>
</tr>
<tr>
<td>Control</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>20.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>20.88</td>
<td>22</td>
<td>.21</td>
<td>.42</td>
<td>.00</td>
</tr>
</tbody>
</table>

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The probability level for the seventh grade experimental group was significant at the .05 level. The strength of association, $E^2$, revealed that for the experimental seventh grade group, occupational exploratory experiences accounted for six percent of the variance in the occupational awareness (B) scores. The seventh grade experimental group and the seventh and eighth grade control groups failed to meet the .05 level of significance.

**Occupational Awareness (C)**

Table 6 contains a summary of the results of one-tailed $t$ tests on the occupational awareness (C) pre-post test gain score differences between the experimental and control groups used to determine the effect of occupational exploratory experiences upon occupational awareness.

**TABLE 6**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>$t$</th>
<th>p</th>
<th>$E^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>1.31</td>
<td></td>
<td>1.48</td>
<td>.07</td>
<td>.02</td>
</tr>
<tr>
<td>Control</td>
<td>.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>1.90</td>
<td></td>
<td>2.46</td>
<td>.01</td>
<td>.09</td>
</tr>
<tr>
<td>Control</td>
<td>-.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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An examination of the results of the analyses indicates that a relation exists between occupational exploratory experiences and occupational awareness (C) at the eighth grade level. Occupational awareness (C) is the score obtained from the twenty item questionnaire. The experimental eighth grade group was able to increase their average number of correct answers by two more than the control eighth grade group. The difference between the gain scores of the eighth grade experimental and control groups could have occurred by chance only one time in one hundred. The strength of association, $E^2$, revealed that occupational exploratory experiences accounted for nine percent of the variance in the occupational awareness scores. The seventh grade failed to meet the .05 level of significance.

Presented in Table 7 is a summary of the results of one-tailed $t$ tests used to determine whether the difference between the pre-test occupational awareness (C) raw score and post-test occupational awareness (C) raw score for both the experimental and control groups was significant.

The probability level for the eighth grade experimental group was significant at the .05 level. The strength of association, $E^2$, revealed that for the experimental eighth grade group, occupational exploratory experiences accounted for five percent of the variance in the occupational awareness (C) scores. The seventh grade experimental group and the seventh and eighth grade control groups failed to meet the .05 level of significance.
TABLE 7

Occupational Awareness (C) Raw Score
Pre-Post Test Difference for the
Experimental and Control Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>t</th>
<th>p</th>
<th>$E^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>10.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>12.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>12.54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>12.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>12.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>13.93</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>15.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post</td>
<td>14.83</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Hypothesis 1a. Occupational exploratory experiences contribute more to increased occupational awareness of seventh grade junior high school students than to eighth grade junior high school students.

**Occupational Awareness (A)**

Exhibited in Table 8 is a summary of the findings of a one-tailed t test used to determine whether the difference between the occupational awareness (A) pre-post test gain scores of the experimental seventh and eighth grade groups was significant.

**TABLE 8**

| Occupational Awareness (A) Pre-Post Test Gain Score Differences for the Experimental Seventh and Eighth Grades |
|---|---|---|---|---|
| Group          | Mean | df | t    | p    |
| Seventh Grade  | 2.67 | 64 | -4.82| neg. |
| Experimental Eighth Grade | 15.40 |    |       |      |

neg. a negative t was obtained

The results indicate that the difference between the seventh and eighth grade experimental groups on occupational awareness (A) was not significant since, contrary to anticipated results, greater growth occurred at the eighth grade level.
Occupational Awareness (B)

Table 9 presents a summary of the findings of a one-tailed $t$ test used to determine whether the difference between the occupational awareness (B) pre-post test gain scores of the experimental seventh and eighth grade groups was significant.

**TABLE 9**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>$t$</th>
<th>$p$</th>
<th>$E^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Grade</td>
<td>2.89</td>
<td>64</td>
<td>1.01</td>
<td>.16</td>
<td>.00</td>
</tr>
<tr>
<td>Eighth Grade</td>
<td>1.67</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results indicate that the difference between the seventh and eighth grade experimental groups on occupational awareness (B) was not significant at the .05 level required by the researcher.

Occupational Awareness (C)

Table 10 contains a summary of the findings of a one-tailed $t$ test used to determine whether the difference between the occupational awareness (C)
pre-post test gain scores of the experimental seventh and eighth grade groups was significant.

TABLE 10

Occupational Awareness (C) Pre-Post Test
Gain Score Difference for the Experimental Seventh and Eighth Grades

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>t</th>
<th>p</th>
<th>E²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Grade</td>
<td>1.31</td>
<td>64</td>
<td>-.74</td>
<td>neg.</td>
<td>.00</td>
</tr>
<tr>
<td>Eighth Grade</td>
<td>1.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

neg. a negative t was obtained

The results indicate that the difference between the seventh and eighth grade experimental groups on occupational awareness (C) was not significant since, contrary to anticipated results, greater growth occurred at the eighth grade level.

Hypothesis 2. Occupational exploratory experiences contribute to increased occupational analysis of junior high school students.

Occupational Analysis (A)

Table 11 contains a summary of the results of one-tailed t tests on the occupational analysis (A) pre-post test gain score difference between
the experimental and control groups used to determine the effect of occupational exploratory experiences upon occupational analysis. The lower value mean score indicates growth for all occupational analysis (A) interpretations.

### TABLE 11

<table>
<thead>
<tr>
<th></th>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>t</th>
<th>p</th>
<th>E²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Grade</td>
<td>Experimental</td>
<td>-1.50</td>
<td>60</td>
<td>2.37</td>
<td>.01</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td>Experimental</td>
<td>.13</td>
<td>52</td>
<td>-.89</td>
<td>neg.</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>-.63</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

neg. a negative t was obtained

The results indicate that a relation exists between occupational exploratory experiences and occupational analysis (A) at the seventh grade level. Occupational analysis (A) is the grand discrepancy score obtained on the interest and ability questions. The questions call for a low, medium, or high interest and ability rating in occupational areas.
such as, science, government, agriculture, sales and manufacturing.
An average discrepancy score decrease, or shift from low and medium
to congruent high interest and ability scores in the occupational areas,
was the desired outcome. The experimental seventh grade group grand
discrepancy score between interest and ability decreased significantly.
No grand discrepancy score decrease was evident for the control seventh
grade group. The difference between the gain scores of the seventh grade
experimental and control groups could have occurred by chance only one
time in one hundred. The strength of association, $E^2$, revealed that
occupational exploratory experiences accounted for seven percent of
the variance in the occupational analysis (A) scores. The difference
between the eighth grade experimental and control groups on occupational
analysis (A) was not significant since, contrary to anticipated results,
greater growth occurred in the eighth grade control group.

Table 12 presents a summary of the results of one-tailed $t$ tests used
to determine whether the difference between the pre-test occupational
analysis (A) raw score and post-test occupational analysis (A) raw score
for both the experimental and control groups was significant.
## TABLE 12

Occupational Analysis (A) Raw Score  
Pre-Post Test Difference for the  
Experimental and Control Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>t</th>
<th>p</th>
<th>E²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td>4.86</td>
<td>34</td>
<td>2.20</td>
<td>.01</td>
<td>.05</td>
</tr>
<tr>
<td>Post</td>
<td>3.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td>2.69</td>
<td>24</td>
<td>-.87</td>
<td>neg.</td>
<td>.00</td>
</tr>
<tr>
<td>Post</td>
<td>3.46</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td>3.37</td>
<td>28</td>
<td>-.15</td>
<td>neg.</td>
<td>.00</td>
</tr>
<tr>
<td>Post</td>
<td>3.50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td>3.50</td>
<td>22</td>
<td>.80</td>
<td>.22</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a negative t was obtained
The probability level for the seventh grade experimental group was significant at the .05 level. The strength of association, \( E^2 \), revealed that for the experimental seventh grade group, occupational exploratory experiences accounted for five percent of the variance in the occupational analysis (A) scores. The eighth grade experimental group and the seventh and eighth grade control groups failed to meet the .05 level of significance.

**Occupational Analysis (B)**

Table 13 offers a summary of the results of one-tailed \( t \) tests on the occupational analysis (B) pre-post test gain score difference between the experimental and control groups used to determine the effect of occupational exploratory experiences upon occupational analysis.

**TABLE 13**

| Relation Between Occupational Exploratory Experiences and Occupational Analysis (B) |
|---------------------------------|-----|---|----|     |
| Group                          | Mean | df |  \( t \)  |  p  |
| Seventh Grade                  |     |   |     |     |
| Experimental                   | -.1 | 60 | -.21 | neg. .00 |
| Control                        |     |   |     |     |
| Eighth Grade                   |     |   |     |     |
| Experimental                   | 1.6 | 52 | 3.00 | .001 .13 |
| Control                        | -.5 |   |     |     |

neg. a negative \( t \) was obtained
The results indicate that a relation exists between occupational exploratory experiences and occupational analysis (B) at the eighth grade level. Occupational analysis (B) is the seven item response total on personal characteristics. The students were asked to consider such personal characteristics as work habits, job aspiration, belief in self and work ability. The seven items allowed an optional low, average or high self-rating. A shift from low and average to high self-ratings was the desired outcome. The experimental eighth grade group was able to increase its seven item response gain score total from average to half way between average and high. The control eighth grade group did not increase its seven item response gain score total. The difference between the gain scores of the eighth grade experimental and control groups could have occurred by chance only one time in one thousand.

The strength of association, $E^2$, revealed that occupational exploratory experiences accounted for 13 percent of the variance in the occupational analysis (B) scores. The seventh grade failed to meet the .05 level of significance required by the researcher.

Table 14 presents a summary of the results of one-tailed $t$ tests used to determine whether the difference between the pre-test occupational analysis (B) raw score and post-test occupational analysis (B) raw score for both the experimental and control groups was significant.

The probability level for the eighth grade experimental group was significant at the .05 level. The strength of association, $E^2$, revealed
that for the experimental eighth grade group, occupational exploratory experience accounted for eight percent of the variance in the occupational analysis (B) scores. The seventh grade experimental group and the seventh and eighth grade control groups failed to meet the .05 level of significance.

**TABLE 14**

*Occupational Analysis (B) Raw Score Pre-Post Test Difference for the Experimental and Control Groups*

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>t</th>
<th>p</th>
<th>E²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>15.37</td>
<td>34</td>
<td>- .22</td>
<td>neg.</td>
<td>.00</td>
</tr>
<tr>
<td>Post</td>
<td>15.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seventh Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>16.02</td>
<td>24</td>
<td>- .41</td>
<td>neg.</td>
<td>.00</td>
</tr>
<tr>
<td>Post</td>
<td>15.79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>15.63</td>
<td>28</td>
<td>2.55</td>
<td>.008</td>
<td>.08</td>
</tr>
<tr>
<td>Post</td>
<td>17.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>16.90</td>
<td>22</td>
<td>- .74</td>
<td>neg.</td>
<td>.00</td>
</tr>
<tr>
<td>Post</td>
<td>16.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Hypothesis 2a. Occupational exploratory experiences contribute more to increased occupational analysis of eighth grade junior high school students than to seventh grade junior high school students.

**Occupational Analysis (A)**

Exhibited in Table 15 is a summary of the findings of a one-tailed \( t \) test used to determine whether the difference between the occupational analysis (A) pre-post test gain scores of the experimental seventh and eighth grade groups was significant. The lower value mean score indicates growth for occupational analysis (A) interpretations.

**TABLE 15**

Occational Analysis (A) Pre-Post Test Gain Score Differences for the Experimental Seventh and Eighth Grades

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>df</th>
<th>( t )</th>
<th>( p )</th>
<th>( E^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seventh Grade</td>
<td>-1.5</td>
<td>64</td>
<td>2.19</td>
<td>.01</td>
<td>.05</td>
</tr>
<tr>
<td>Experimental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eighth Grade</td>
<td>0.13</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The results indicate that the difference between the seventh and eighth grade experimental groups on occupational analysis (A) was not significant since, contrary to anticipated results, greater growth occurred at the seventh grade level.

**Occupational Analysis (B)**

Table 16 presents a summary of the results of a one-tailed *t* test used to determine whether the difference between the occupational analysis (B) pre-post test gain scores of the experimental seventh and eighth grade groups was significant.

**TABLE 16**

<table>
<thead>
<tr>
<th>Occupational Analysis (B) Pre-Post Test</th>
<th>Gain Score Differences for the Experimental Seventh and Eighth Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group</td>
</tr>
<tr>
<td></td>
<td>Seventh Grade</td>
</tr>
<tr>
<td></td>
<td>Eighth Grade</td>
</tr>
</tbody>
</table>

The results indicate the difference between the seventh and eighth grade experimental groups on occupational analysis (B) was significant.
at the .05 level. The difference between the gain scores of the experimental seventh and eighth grade groups could have occurred by chance only two times in one thousand.

Summary

A relation was found between occupational exploratory experiences and occupational awareness (A) at the eighth grade level. The experimental eighth grade group was able to list an average of five more occupations than the control eighth grade group.

A relation between occupational exploratory experiences and occupational awareness (B) was found at the seventh grade level. The experimental seventh grade group was able to increase their ten item response gain score total from some knowledge to half way between some knowledge and much knowledge of occupations.

A relation between occupational exploratory experiences and occupational awareness (C) was found at the eighth grade level. The experimental eighth grade group was able to increase its average number of correct answers by two more than the control eighth grade group.

A relation between occupational exploratory experiences and occupational awareness (A), (B), and (C) at the experimental seventh grade level was not evident.

A relation was found between occupational exploratory experiences and occupational analysis (A) at the seventh grade level. The experimental
seventh grade group grand discrepancy score between interest and ability decreased significantly.

A relation between occupational exploratory experiences and occupational analysis (B) was found at the eighth grade level. The experimental eighth grade group was able to increase its seven response gain score total on personal characteristics from average to half way between average and high.

A relation between occupational exploratory experiences and occupational analysis (A) and (B) at the experimental eighth grade level was not evident.
CHAPTER V

SUMMARY, DISCUSSION OF FINDINGS, CONCLUSIONS AND IMPLICATIONS

This chapter will provide a brief description of the purposes and design of the study, discuss the findings in relation to the occupational choice theory, present the conclusions derived from the findings and present a brief discussion of the implications of the findings.

Summary

During the early fifties, Ginzberg, Ginsberg, Axelrad and Herma (1951) made efforts to investigate the character of events influencing occupational selection. Ginzberg and his associates hypothesized that occupational choice is an irreversible process which occurs in reasonably clearly marked periods. Those periods, entitled the Fantasy, Tentative and Realistic periods are characterized by a series of compromises an individual makes between his wishes and his possibilities. The chief feature of the Fantasy period is the arbitrary nature of a child's choices. The Tentative and Realistic periods are less arbitrary in that occupational interests and compromises are involved.

The intent of this study was the partial investigation of a theory. In Ginzberg's theory of occupational choice, increased realism is due to
chronological developmental processes which take place within individuals during the formative school years; the relation is between maturity and the occupational choice process.

The purpose of the investigator in this study was to determine whether a career guidance program would be able to reduce the age level at which the Tentative and Realistic periods of occupational choice occurs by significantly increasing the knowledge of occupations available in the world of work. In summary, the investigator sought to accept or reject a portion of Ginzberg's theory.

Two Michigan public school systems provided the experimental and control group samples which consisted of approximately thirty junior high school students from each of the grades seven and eight. This study was designed to make pre-post test comparisons between the experimental and control group samples. A pre-test of the experimental and control groups was accomplished to establish base line data. The Career Development Battery was the instrument utilized to measure the occupational awareness and occupational analysis of the seventh and eighth grade experimental and control groups. A career guidance program, consisting of occupational exploratory experiences, was then activated within the

---

1The portion of Ginzberg's theory referred to concerns the age levels at which tentative and realistic occupational choices begin to occur. Namely, the period of realistic choice which starts near the end of the seventeenth year.

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experimental setting. A post-test was administered after a period of approximately four months.

Through the use of a one-tailed $t$ test, the null form of the research hypotheses was tested by comparing the differences between the mean scores of the experimental groups and control groups. The level of significance and strength of association were reported for all comparisons.

The following operational definitions are repeated to provide a ready reference.

**Operational Definitions**

1. **Occupational Awareness** is equated to:

   (A) the number of jobs listed on the Career Development Battery, Occupational Knowledge Survey, Part II (Ploughman, 1972).

   (B) the ten item response total on the Career Development Battery, Occupational Knowledge Survey, Part I, Question 2 (Ploughman, 1972).

   (C) the score obtained from the twenty item questionnaire on the Career Development Battery. Occupational Knowledge Survey, Part III (Ploughman, 1972).

2. **Occupational Analysis** is equated to:

   (A) the grand discrepancy score (Interest HIGH minus Ability, Ability HIGH minus Interest) obtained from the

(B) the total score obtained from the seven item response on the Career Development Battery, Occupational Interest Survey, Part II, Question 6 (Ploughman, 1972).

Discussion of Findings

This study found a positive relation between occupational exploratory experiences and occupational awareness (A), (B) and (C) for seventh and eighth grade students.

Emphasis of the occupational exploratory experiences was placed on occupational awareness for the seventh grade experimental group. Contrary to expected results, the growth of the seventh grade group was not significantly greater than the eighth grade group.

This study found a positive relation between occupational exploratory experiences and occupational analysis (A) and (B) for the seventh and eighth grade students.

Emphasis of the occupational exploratory experiences was placed on occupational analysis for the eighth grade experimental group. Contrary to expected results, the growth of the eighth grade group was not significantly greater than the seventh grade group.
Conclusions

1. Occupational exploratory experiences contribute to an increased occupational awareness of junior high school seventh and eighth grade students.

2. Greater emphasis of occupational exploratory experiences placed on occupational awareness at the experimental seventh grade level did not cause greater growth than at the experimental eighth grade level. The data indicated to the contrary. On the measure of occupational awareness (A), the number of occupations listed, and occupational awareness (B), the twenty item questionnaire, the experimental eighth grade group had greater growth than the experimental seventh grade group.

3. Occupational exploratory experiences contribute to increased occupational analysis of junior high school seventh and eighth grade students.

4. Greater emphasis of occupational exploratory experiences placed on occupational analysis at the experimental eighth grade level did not cause greater growth than at the experimental seventh grade level. The data indicated to the contrary. On the measure of occupational analysis (A), the interest and ability grand discrepancy score, the experimental seventh grade group had greater growth than the experimental eighth grade group.
Implications

Due to the fact that (1) the researcher had no control over the development and coordination of the occupational exploratory experience activities within the experimental setting, and (2) the occupational listing section of the instrument used for data collection was administered under a time limit which may have produced soft data, caution in interpreting the results must be advised.

In a most pragmatic sense, the findings appear to indicate that an organized attempt to provide occupational exploratory experiences will produce results earlier in adolescents than those which could be expected to occur due to mental and chronological maturity. Those types of occupational exploratory experiences viewed by the researcher as being effective are world of work oriented field trips, role models and multimedia materials such as film strips, slides, movies, books and games designed to expose students to the activities and requirements of the world of work. Anticipated job changes which may occur two, three or five times during the career of an individual, point to a need for an awareness of the myriad career areas such as medicine, manufacturing, science, public services, construction, law and education.

This study has caused the researcher to extend or modify a portion of Ginzberg's theory of occupational choice by suggesting that occupational exploratory experiences contribute to a reduced age level at which

---

1 A difference of one minute in the amount of time allotted could cause a pre-post test gain score difference.
realistic occupational choices may occur. The results imply that a school-wide career guidance program can stimulate junior high school seventh and eighth grade students to analyze and synthesize information about themselves and about the world of work.
REFERENCES


Astin, H. S. Career development during the high school years. *Journal of Counseling Psychology*, 1967, 14, 94-98.


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APPENDIX A

Graphic Illustration of Hypotheses
Occupational Analysis

Occupational Awareness

 Seventh Grade

 Eighth Grade

H1. Total experimental group vs total control group on awareness scores

\[ \text{LAG} = \text{LAG} \]

H1a. Seventh grade experimental group vs eighth grade experimental group on awareness scores

\[ \text{LAG} = \text{LAG} \]

H2. Total experimental group vs total control group on analysis scores

\[ \text{LAG} = \text{LAG} \]

H2a. Eighth grade experimental group vs seventh grade experimental group on analysis scores

\[ \text{LAG} = \text{LAG} \]
APPENDIX B

Instrumentation

Career Development Battery
CELL REPRESENTATION OF HYPOTHESES
GROUP MEANS TO BE COMPARED

H1. Total experimental group vs total control group on awareness scores

\[
\begin{align*}
\text{null} & \quad \text{LAG vs LAG} \\
\text{t 1 1} & \quad \text{t 1 2}
\end{align*}
\]

H1a. Seventh grade experimental group vs eighth grade experimental group on awareness scores

\[
\begin{align*}
\text{null} & \quad \text{LAG vs LAG} \\
1 1 1 & \quad 2 1 1
\end{align*}
\]

H2. Total experimental group vs total control group on analysis scores

\[
\begin{align*}
\text{null} & \quad \text{LAG vs LAG} \\
\text{t 2 1} & \quad \text{t 2 2}
\end{align*}
\]

H2a. Eighth grade experimental group vs seventh grade experimental group on analysis scores

\[
\begin{align*}
\text{null} & \quad \text{LAG vs LAG} \\
2 2 1 & \quad 1 2 1
\end{align*}
\]
APPENDIX B

Instrumentation

Career Development Battery
CAREER DEVELOPMENT BATTERY

Grades 6-9

Components

OCCUPATIONAL KNOWLEDGE SURVEY

My Choice of an Occupation
Occupational Awareness
Occupational Knowledge

OCCUPATIONAL INTEREST SURVEY

Students: "This Battery concerns your knowledge of the many occupations or jobs that presently exist in the World of Work."

"Listen carefully to all directions. Provide honest answers."

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Part I. MY CHOICE OF AN OCCUPATION

1. The first full-time job that I plan to enter following school is:

   *(Specify job name)*

   (check one)

   ( ) I feel sure that my mind is made up.
   ( ) I'm not sure that my mind is made up.
   ( ) My mind is not made up.

2. For your job choice, mark your KNOWLEDGE about what that job is like.

   KNOWLEDGE OF:

   LEVEL OF KNOWLEDGE
   None  Some  Much
   1     2     3

   Work expected on the job.
   Money job pays.
   Working hours and vacations.
   Working conditions.
   Education and training required.
   Job importance—prestige.
   Future of job.
   How to get the job.
   Freedom on the job.
   Competition to hold the job.

3. The training and education I expect to get for my job is:

   (check one)

   ( ) On-the-job training.
   ( ) High school education.
   ( ) Apprenticeship.
   ( ) Vocational school.
   ( ) College education.
   ( ) Other, specify ____________________________

4. In ten years I expect to have the following job:

   *(Specify job name)*

5. My (Father's, Mother's) usual job is:

   Father  Mother

   *(Specify job names)*

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Part II. OCCUPATIONAL AWARENESS

Directions:
1. List under OCCUPATIONS all those jobs that you can identify.

For example: Write in -- teacher --
(Do not mark under TRAINING AND EDUCATION at this time)

<table>
<thead>
<tr>
<th>OCCUPATIONS</th>
<th>TRAINING AND EDUCATION REQUIRED TO ENTER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On-the-Job Training</td>
</tr>
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<tr>
<td>OCCUPATIONS</td>
<td>On-the-job Training</td>
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</tbody>
</table>
2. Now go back and check-mark the TRAINING AND EDUCATION REQUIRED TO ENTER for each job you listed.

   For example: check mark ✓ under College for the job Teacher.

3. From your list write three jobs that you would most like to enter.

   (1) ___________________________
   (2) ___________________________
   (3) ___________________________
CAREER DEVELOPMENT BATTERY: OCCUPATIONAL KNOWLEDGE SURVEY

Part III. OCCUPATIONAL KNOWLEDGE

Directions: This is a review to find out how much you know about jobs. Circle the letter which you think answers the question best.

Circle one letter for each question answer.

1. Most jobs require at least how much school?
   a. eighth grade  
   b. two years of high school  
   c. completed high school  
   d. some college

2. Of the following occupations, which one could we call professional?
   a. machinist  
   b. doctor  
   c. truck driver  
   d. apprentice

3. Of the following occupations, which one could we call skilled?
   a. apprentice  
   b. tool and die maker  
   c. salesman  
   d. farmer

4. Of the following, which one could we call professional?
   a. teacher  
   b. shipping clerk  
   c. custodian  
   d. barber

5. Which one of the following occupations requires the greatest amount of ability to work with the hands?
   a. salesman  
   b. lawyer  
   c. carpenter  
   d. policeman

6. A poor speller would probably not be very successful as a:
   a. artist  
   b. farmer  
   c. carpenter  
   d. secretary

7. Which occupation requires the most education or training?
   a. fireman  
   b. doctor  
   c. actor  
   d. secretary

8. Pick the skilled occupation:
   a. mechanic  
   b. truck driver  
   c. tomato picker  
   d. policeman

9. Of the following classes of jobs, which one requires more formal education?
   a. skilled  
   b. semi-skilled  
   c. professional  
   d. unskilled
10. The ability to speak before groups is probably needed most by a:
   a. pilot  
   b. lawyer  
   c. secretary  
   d. mechanic

11. The technical worker is usually classified as:
   a. skilled  
   b. semi-skilled  
   c. professional  
   d. managerial

12. A Social Worker is a:
   a. hostess for banquets  
   b. person who helps others  
   c. person in politics  
   d. private secretary

13. A foreman would probably be classified as:
   a. professional  
   b. skilled  
   c. managerial  
   d. semi-skilled

14. Of the following jobs which requires the most education?
   a. nurse  
   b. butcher  
   c. psychiatrist  
   d. newspaper reporter

15. Whether or not to go to college should probably be decided by:
   a. the student  
   b. the parents  
   c. the teachers  
   d. the student, with help as needed

16. In the next twenty-five years occupations will probably change:
   a. not at all  
   b. some  
   c. very much  
   d. unpredictably

17. The number of occupations which have broken up into a number of specialized occupations in the last twenty-five years is:
   a. very few  
   b. some  
   c. very many  
   d. there is no way of knowing

18. There are jobs for women:
   a. in almost all fields  
   b. only in teaching, nursing, and office work  
   c. only in jobs where men don't work  
   d. only in jobs in which you "help people"

19. The number of occupations in which a person could be happy is probably:
   a. one  
   b. few  
   c. many  
   d. depends upon abilities and interests

20. Apprentice training is conducted:
   a. under a skilled craftsman  
   b. in all factories  
   c. in colleges and universities  
   d. by the U.S. Government

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OCCUPATIONAL INTEREST SURVEY

This Survey concerns your interest in the many Occupations or Jobs that presently exist in the World of Work.

This is a survey. There are no right or wrong answers.

Definitions:

1. An Occupational Area represents a group of jobs in which one engages full-time or regularly for wages or salary. Each Occupational Area listed is for both Boys and Girls.

2. Your Job Interest may relate to:
   - Work expected on the job
   - Money job pays
   - Working hours and vacations
   - Working conditions
   - Education and training required
   - Job importance--prestige
   - Future of job
   - How to get the job
   - Freedom on the job
   - Competition to hold the job

3. Your Ability to Perform may relate to:
   - Intelligence--How smart you are
   - Motivation--How much you want to perform
   - Attitude--How you feel about yourself
   - Physical ability--How well you can perform
   - Aptitude--Your ability to learn
   - Personality--How you behave with others

MY INTEREST

1. Would not like this job.  
2. This job is okay.  
3. Would like this job.  
✓ I don't know.

MY ABILITY

1. Would not do a good job.  
2. Would be able to do job.  
3. Would do a very good job.  
✓ I don't know.

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**CAREER DEVELOPMENT BATTERY -**  
**OCCUPATIONAL INTEREST SURVEY**

**Part I**

Directions: Twenty different Occupational Areas are listed below:

1. Put an X through one face for your job INTEREST in each area.

<table>
<thead>
<tr>
<th>MY INTEREST</th>
<th>OCCUPATIONAL AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>HAIRSTYLING--CLOTHING DESIGN</td>
</tr>
<tr>
<td>Medium</td>
<td>RECREATION</td>
</tr>
<tr>
<td>High</td>
<td>AGRICULTURE</td>
</tr>
<tr>
<td></td>
<td>MILITARY SERVICE</td>
</tr>
<tr>
<td></td>
<td>SCIENTIFIC EXPLORATION</td>
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<tr>
<td></td>
<td>ENTERTAINMENT</td>
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<td></td>
<td>SALES</td>
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<tr>
<td></td>
<td>CONSTRUCTION</td>
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<td>COMPUTERS</td>
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<td></td>
<td>FAMILY SOCIAL SERVICE</td>
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<td>MANUFACTURING</td>
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<td>GOVERNMENT</td>
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<td></td>
<td>SECRETARIAL</td>
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<td>EDUCATION</td>
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<td>BUSINESS MANAGEMENT</td>
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<td>FOOD SERVICE</td>
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<td>ART--MUSIC</td>
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<td>TRANSPORTATION</td>
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<td></td>
<td>INSTALLATION--REPAIRING</td>
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<tr>
<td></td>
<td>MEDICAL SERVICE</td>
</tr>
</tbody>
</table>

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2. Put an X through a face for your ABILITY to do each job listed.

<table>
<thead>
<tr>
<th>MY ABILITY</th>
<th>OCCUPATIONAL AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
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</table>
OCCUPATIONAL INTEREST SURVEY

Part II

Directions: Each item requires different kinds of responses. Read the directions for each response carefully.

1. For the job of my choice, I would Like to Be:

   (check one in each column)

<table>
<thead>
<tr>
<th>Most Like to Be</th>
<th>Least Like to Be</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner or Director</td>
<td></td>
</tr>
<tr>
<td>Officer or Executive</td>
<td></td>
</tr>
<tr>
<td>Manager or Supervisor</td>
<td></td>
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<tr>
<td>Skilled Employee</td>
<td></td>
</tr>
<tr>
<td>Semi-skilled Employee</td>
<td></td>
</tr>
<tr>
<td>Unskilled Employee</td>
<td></td>
</tr>
</tbody>
</table>

2. I think my chances of success in the job I choose are:

   (check all that are True)

<table>
<thead>
<tr>
<th>TRUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Good</td>
</tr>
<tr>
<td>Higher than Others Expect</td>
</tr>
<tr>
<td>Good</td>
</tr>
<tr>
<td>Not as Good as Others Expect</td>
</tr>
<tr>
<td>Not Good</td>
</tr>
</tbody>
</table>

3. I think my ability to work with People, Objects (equipment, materials), or Numbers and Words is:

   (check ability for each item)

<table>
<thead>
<tr>
<th>ABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
</tr>
<tr>
<td>Average</td>
</tr>
<tr>
<td>High</td>
</tr>
<tr>
<td>Working with People</td>
</tr>
<tr>
<td>Working with Objects</td>
</tr>
<tr>
<td>Working with Numbers and words</td>
</tr>
</tbody>
</table>

4. For the job of my choice, I am:

   (check one in each column)

<table>
<thead>
<tr>
<th>I Am -</th>
<th>I Am Not -</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Like Me</td>
<td></td>
</tr>
<tr>
<td>Least Like Me</td>
<td></td>
</tr>
<tr>
<td>Owner or Director</td>
<td></td>
</tr>
<tr>
<td>Officer or Executive</td>
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<tr>
<td>Manager or Supervisor</td>
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<tr>
<td>Skilled Employee</td>
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<tr>
<td>Semi-skilled Employee</td>
<td></td>
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<tr>
<td>Unskilled Employee</td>
<td></td>
</tr>
</tbody>
</table>

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**Occupational Interest Survey**

1. What the job I have ten years from now to be: (check level)
   - Equal to my Ability
   - What Others Expect of me
   - The job I really want

<table>
<thead>
<tr>
<th></th>
<th>Below</th>
<th>Equal</th>
<th>Above</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

2. I consider myself to have the following characteristics: (check level)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Low</th>
<th>Average</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Habits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Aspiration</td>
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<td></td>
<td></td>
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<tr>
<td>Knowledge of Self</td>
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<tr>
<td>Work Ability</td>
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<td></td>
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<tr>
<td>Belief in Self</td>
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<tr>
<td>Decision-making Ability</td>
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<tr>
<td>Attitude towards Self</td>
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</tbody>
</table>

3. For the job of my choice, I think Others see Me as:
   (check one in each column)

<table>
<thead>
<tr>
<th></th>
<th>Most Like Me</th>
<th>Least Like Me</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner or Director</td>
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<td>Officer or Executive</td>
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<tr>
<td>Semi-skilled Employee</td>
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<tr>
<td>Unskilled Employee</td>
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</table>

4. Mark the two items you think are most important to consider when selecting our job.
   (check two)

- How much fun the job is
- How important the job is
- Deciding what kind of job I want
- Being able to work with my friends
- How much money the job pays
- Growing my ability to do that kind of job

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3. Circle the figure below which best answers each question.

Definitions:
- Owner - The top boss
- Supervisor - The number two boss
- Foreman - The group leader
- Worker - The person who works for someone else

Owner - [ ] [ ] [ ]
Supervisor - [ ] [ ] [ ]
Foreman - [ ] [ ] [ ]
Worker - [ ] [ ] [ ]

Owner - [ ] [ ] [ ]
Supervisor - [ ] [ ] [ ]
Foreman - [ ] [ ] [ ]
Worker - [ ] [ ] [ ]

Owner - [ ] [ ] [ ]
Supervisor - [ ] [ ] [ ]
Foreman - [ ] [ ] [ ]
Worker - [ ] [ ] [ ]

Owner - [ ] [ ] [ ]
Supervisor - [ ] [ ] [ ]
Foreman - [ ] [ ] [ ]
Worker - [ ] [ ] [ ]

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Supervisor - [ ] [ ] [ ]
Foreman - [ ] [ ] [ ]
Worker - [ ] [ ] [ ]

Owner - [ ] [ ] [ ]
Supervisor - [ ] [ ] [ ]
Foreman - [ ] [ ] [ ]
Worker - [ ] [ ] [ ]

Owner - [ ] [ ] [ ]
Supervisor - [ ] [ ] [ ]
Foreman - [ ] [ ] [ ]
Worker - [ ] [ ] [ ]

Owner - [ ] [ ] [ ]
Supervisor - [ ] [ ] [ ]
Foreman - [ ] [ ] [ ]
Worker - [ ] [ ] [ ]

Owner - [ ] [ ] [ ]
Supervisor - [ ] [ ] [ ]
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APPENDIX C

Testing Method

Lock-Step Procedure for Testing
PROCEDURES (Pre-test)

General Instructions:

1. This battery provides several indices of Occupational Awareness, Interest and Self-concept.

2. Provide assistance according to the following instructions. Should additional assistance be required, attempt to provide help without introducing a performance bias in the results. Part of the data analysis procedures includes growth in the students ability to read the items and make appropriate responses.

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Specific Routine:

A. Distribution

1. Provide each student with either (one) of the sections of the battery - OCCUPATIONAL KNOWLEDGE or OCCUPATIONAL INTEREST.

2. Check that all have something to write with - pencil preferred.

B. Activity

1. Counselor - Read Comments and definitions on the cover page.

2. Proceed through the instruments as follows:

OCCUPATIONAL KNOWLEDGE

(1) Page 1-2: Read each item and each sub-item, asking the student to respond after the item is read. (e.g. follow a lock-step routine)

(2) Page 1-3: Read the directions. Provide the example - "teacher" (College preparation) Set the time - Provide 10 minutes to list their occupations. Note: Added pages of 1-3 or 1-4 are provided.
(1) Page 2-2: Read the directions. Read each Occupational Area and ask the student to respond after each Area is read.

(2) Page 2-3: Same procedure as page 2-2.

(3) Page 2-4: Read the directions. Ask for response after you read each item. Translate Owner = Top Boss, Supervisor = Number two Boss, Foreman = Group Leader, Worker = Person working for someone else.
PROCEDURES (Post-test)

**TOPIC I**

Please test the same classroom pre-tested. Try to establish conditions as much like the pre-test as possible.

**TOPIC II**

Use one section of the Battery in one sitting. (preferable to test morning, afternoon or in two days)

Use the Occupational Knowledge part first.

**TOPIC III**

Read each direction on each page and have students proceed in a lock-step routine.

**TOPIC IV**

Junior High Counselors provide EXACTLY ten (10) minutes to list occupations.