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CAREER ASPIRATIONS OF THE NINTH AND TENTH GRADE STUDENTS IN THE SOUTH-WESTERN CITY SCHOOL DISTRICT

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

by

Jerry L. Wircenski, B.S., M.A.

* * * *

The Ohio State University
1972

Approved by

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Department of Education
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CHAPTER I

INTRODUCTION

An occupation is defined by the Dictionary of Education (31:373) as "the economic activity that is the lifework of an individual". This is a typical definition; but for the purposes of this research, the author shall use the concept somewhat more broadly—to mean whatever an individual does to earn a living.

In today's modern society practically every individual, surely every male, must choose an occupation. In fact, most individuals confront this problem several times in their life span.

There are also societies in which there are no individual selections of an occupation. This is the case in a true primitive society where the division of labor is based exclusively on sex or family status in the community.

In a more complex society, such as ours, the right of the individual to choose his occupational endeavor is one of that society's more outstanding characteristics. Another characteristic of a complex society is the high degree of specialization. To illustrate this degree of specialization, The Dictionary of Occupational Titles (23) published by the United States Government Printing Office, lists approximately 35,500 major job titles.
Where does the school fit into the realm of occupational selection? The purposes of education in America have been and probably will be the subject of much debate. However, many experts in the field of education would agree that one of the prime objectives of our secondary schools is to prepare our youth for a place in the "world of work". Such preparation must invariably include the overall problem of helping each individual to select and to develop his vocational choice.

Over the last fifty years, many educators have placed considerable emphasis upon the concept of vocational choice. This concept affects both the individual and the society. Many people are usually concerned with and involved in an individual's vocational choice-making. There are parents, teachers, friends, and advisors, who assist the individual in reaching a decision; and yet it must be remembered that the individual making such a choice is usually an adolescent, still developing both intellectually and emotionally. Unfortunately, he must make his selection at a time when he is to a large extent illfitted to do so. According to Ginzberg (29:5) many young people do not understand the complex nature of society. Secondly, they are undergoing deep-seated emotional experiences which obscure their basic needs and desires. Thirdly, the adolescent tends to be uncertain about his own talents and can only make a guess concerning the sorts of skills and talents which would be needed in the future. Finally, an adolescent's picture of an occupation is often clouded by stereotyped impressions gained from incompetent sources. In light of these considerations, leading educators have moved away from the concept of vocational choice as an
accident or impulse and are placing more emphasis upon Super's (90,92) developmental aspects of vocational decision making.

The developmental theory states that an individual goes through a series of vocational life stages, with each stage bringing the individual closer to his final occupation. This theory, in practice, would find an individual simply making a vocational choice and then proceeding, in a logical manner, into entering that occupation. The developmental approach stresses the importance of each stage in the vocational growth of an individual. The elementary school, the junior high school, the senior high school, the university have an important role to play in helping to guide each individual in the development of his chosen vocation. For the purpose of this study, the focus of attention was senior high school students' career aspirations and some of the related characteristics of the adolescents during this stage of their vocational growth.

Statement of the Problem

The problem of the study was to determine if significant preference differences existed between and among ninth and tenth grade students who have and have not expressed career preferences. In addition, the study sought to determine whether there were significant differences in the preferences and the factors which influenced the students' career choices, and to summarize and present for informational purposes some related characteristics of the adolescents who were tested in the study.

Some of the sub-problems of this study were:
1. To determine what percentage of the students used in the study expressed a career preference, and what percentage did not express a career preference.

2. To determine what careers were preferred in order that later follow-up studies can be made.

3. To determine if there were differences between the preferences of the ninth and tenth grade students.

4. To determine if there were differences in the preferences of the students according to schools attended.

5. To determine what forces influenced the career choices of the ninth and tenth grade students used in the study.

6. To determine if there were differences in the influencing factors among the three schools.

Hypotheses

1. There is no significant difference in the percentage of ninth grade students who have expressed a career preference and those who have not expressed a career preference within the three high schools of the South-Western City School District.

2. There is no significant difference in the percentage of tenth grade students who have expressed a career preference and those who have not expressed a career preference within the three high schools of the South-Western City School District.

3. There is no significant difference in the percentage of ninth grade students who have expressed a career preference and those who have not expressed a career preference among the three high schools of the South-Western City School District.

4. There is no significant difference in the percentage of tenth grade students who have expressed a career preference and those who have not expressed a career preference among the three high schools.
of the South-Western City School District.

5. There is no significant difference in the percentage of ninth and tenth grade students who have and have not expressed a career preference within the three high schools of the South-Western City School District.

6. There is no significant difference in the percentage of ninth and tenth grade students who have and have not expressed a career preference among the three high schools of the South-Western City School District.

7. There is no significant difference in the career aspirations indicated by the ninth grade students among the three high schools of the South-Western City School District.

8. There is no significant difference in the career aspirations indicated by the tenth grade students among the three high schools of the South-Western City School District.

9. There is no significant difference between the expressed career aspirations of the ninth and tenth grade students within the three high schools of the South-Western City School District.

10. There is no significant difference in the forces (things) which influenced the ninth grade students' career selections among the three high schools of South-Western City School District.

11. There is no significant difference in the forces (people) which influenced the ninth grade students' career selections among the three high schools of the South-Western City School District.

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14. There is no significant difference between the forces (things) which influenced the ninth and tenth grade students' career selections within the three high schools of the South-Western City School District.

15. There is no significant difference between the forces (people) which influenced the ninth and tenth grade students' career selections within the three high schools of the South-Western City School District.

**Importance of the Study**

The role of work in an individual's life and the significance of work to society express the importance of choosing a career. A person's career plays a vital part in his life style. A person's career affects his interactions with his peers and his amount of leisure time, as well as his place in society.

At present, there are no instruments developed to measure and predict exactly what career or vocation an individual will enter. There may never be such a method, yet the need to measure career aspirations is extremely important for preparing youth to enter a complex and productive society. The career choice of a high school student represents his plans for the world of work.
Definitions

Several commonly used terms will appear throughout this study. In order for the readers to be on the same level of understanding as the author, it was necessary to define the following terms:

1. **Senior High School.** For the purposes of this study, senior high school was taken to mean grades nine, ten, eleven and twelve.

2. **Vocational Aspirations, Occupational Aspiration, or Career Choice.** The job or occupation an individual desires to enter upon completion of his education. The level at which one aspires to attain upon entering the world of work.

3. **Factor or Force.** Any circumstance or condition that brings about a result, or anything that has an influence on vocational choice-making.

Administration of the Questionnaire

The questionnaire was administered in person at the schools by each student's respective homeroom teacher. There was no selectivity because of the alphabetic placement of students in homerooms at the three high schools. All ninth and tenth grade students who were enrolled at the time the questionnaire was administered were eligible to respond. Since the questionnaire was administered to the sample collectively, those students who were absent were not given the questionnaire.
Limitations

This research project was conducted in a large rural and suburban school system in Franklin County, Ohio. Since the writer was a vocational coordinator in this system, it was decided to limit the study to the high school level. The sample was further limited to include only the ninth and tenth grades.

The data for this research were collected by means of a structured questionnaire. Such instruments can have several inbred weaknesses. The question of semantics is one such limitation. Past experiences of individuals make it impossible for every word or term to convey the same meaning to each individual. Although each item was analyzed and checked, some may have emotional tones. Lack of item clarity might also cause misrepresentation or misinterpretation. Student maturity levels could cause inequities in the responses. The individual's emotional and physical condition at the time of the administration of the questionnaire might have also affected the responses. The student simply could be emotionally threatened by such an instrument, therefore, causing irrational responses.

This study might further be limited by the fact that the instrument was administered by a non-professional research administrator. There was also no guarantee that the instrument was administered uniformly, although every attempt to achieve uniformity was made through close instruction and cooperation with the author and the homeroom teachers who administered the instrument.
Format for Remainder of Thesis

The format for the remainder of the study is as follows:

Chapter II. Review of the Literature, which is subdivided into (a) Theories of Vocational (Career) Choice, (b) Review of Related Studies, and (c) Summary of the Review.

Chapter III. Methodology of the Study is broken down into the following sub-headings, (a) Selecting the Sample, (b) Procedure of the Study, (c) Collecting the Data and (d) Methods of Analyzing the Data.

Chapter IV. Contains the Statistical Interpretation of the Data along with the normative data.

Chapter V. Contains the Summary of the Study with Conclusions and Recommendations.
CHAPTER II
REVIEW OF THE LITERATURE

The review of the literature was divided into three parts: (1) Theories of Vocational (Career) Choice, (2) Chronological Review of Related Studies, and (3) A Summary of the Chapter.

Theories of Vocational (Career) Choice

An adequate vocational development theory provides comprehensive principles concerning the process of vocational development and leads to the formulation of testable hypothesis for research. A theory is one means of organizing and integrating the present knowledge regarding vocational development. A theory contains a set of definitions and usually consists of a series of relevant and pertinent assumptions relating to each other.

The theories reviewed below are offered to explain vocational development. They are sometimes called postulates, assumptions, hypotheses, and theories. Nevertheless, they are attempts to find some rational explanation for understanding what happens when a person makes an occupational choice.

"In effect, a theory serves as a model which is used to know what to look for, what to expect, and where to go". (79:305) It is a way of organizing and systematizing what is known about a phenomenon.
"A theory is more solidly supported by evidence than is hypothesis but less established than law." (79:305) Psychologists, sociologists, psychiatrists, and economists have formulated theories to vocational choice and development. One theory may seemingly be in direct or indirect conflict with another. Stefflre has commented on theory conflicts with the following statement:

Conflicting theories also may be somewhat traumatizing to the student. Closer examination, however, may in some cases indicate that theories compliment each other rather than contradict...The use of more than one theory may point to the same facts and give clarity where previously we had confusion. The analogy might be made of the use of a variety of stage lights in a theatrical production. Sometimes the red spotlight or blue will illuminate what we are looking for. (88:11)

The first theory of occupational choice holds that each individual makes decisions about the future "accidentally". (29) "Such an approach implicitly denies that it is possible to assess the multitudinous factors that affect the decision-making of specific individuals". (29:18)

The "accident" theory must receive consideration because of the frequency of such a reply and its occurrence in many different sectors of the economy. Corporate presidents, engineers, salesmen, secretaries, carpenters, truck drivers, etc., frequently respond that their occupational choice was an accident.

There is a substantial element of chance in the process of making an occupational choice, but it does not prove the "accident" theory. Research indicates that most people seem to mean that they were affected by something beyond their control--an exposure to unplanned and powerful stimuli. The point which the "accident" theory
overlooks is that in every individual's life span there are countless such occurrences, only a few of which so stimulate the individual to respond in a manner which has important consequences. A great number of stimuli pass unnoticed and never emerge from an individual's background.

The "accident" theory, for the most part, is correct to the extent that it stresses the significance and importance of external factors in an individual's occupational choice; but it is incorrect to oversimplify such factors. "In all his actions the individual must take account of external factors, but the way in which he does so depends on how he perceives and reacts to them". (29:20) In summary, the "accident" theory relies uncritically on external factors of exposure and chance circumstance and ignores and neglects a broad range of individual options.

The second general theory on the occupational choice process places its stress on the internal factors, the emotional forces of the individual. Jones (40), the British psychoanalyst is a proponent of the theory of impulse. The "impulse" theory contends that an individual chooses an occupation because of a powerful impulse which "drives" him to express his impulses through a particular occupation. The problem with the "impulse" theory is that not only can an individual find expression for a particular impulse in a large number of different occupations, but there are striking dissimilarities in emotional character of members of the same occupation. There are aggressive teachers, welders, firemen, and company presidents as well as non-aggressive people in the same occupations.
Like the "accident" theory, the "impulse" theory tends to overstress a single factor or set of factors. Both theories assume the individual to be largely passive with respect to the process of occupational choice and both hold that he cannot do anything about the situation.

In view of the limitations of the "accident" and "impulse" theories of occupational choice, researchers set out to develop and construct a more comprehensive and valid theory. The basic assumption behind this need for a new theory was that an individual never reaches the ultimate decision for choosing an occupation at a single moment in time, but through a series of decisions over a period of time.

Ginzberg and his associates (29,30) were concerned with the developmental process of making an occupational choice. Their assumption "... is based on the belief that each individual selects a particular occupation not through chance but through developing patterns of activities that are largely irreversible and take place throughout all the formative years of a child's life". (79:307) They conceived the theory as having three distinct elements: "1. occupational choice is a process; 2. the process is largely irreversible; and 3. compromise is an essential aspect of every choice". (30:492)

Concerning the first element, it can be said that the process begins at the birth of the individual and may remain open until death. We began the study of the process in individuals at about the age of eleven, which appeared to be the first time that a young person recognizes that he will eventually have to do something about choosing his future work. We found that the process of occupational decision-making could be analyzed in terms of three periods: Fantasy choices (before 11); Tentative choices (between 11 and 17); and Realistic choices (between 17 and young adulthood when a person finally determined his choice).
In the fantasy period, the child feels that he can become whatever he wishes. He merely translates his wishes and impulses into an occupational choice.

In the tentative period, the child's translation is almost exclusively in terms of subjective factors such as his interests, values and capacities. The child considers his choices tentative because they sense that they have not effectively established the reality factors into their choices. During the realistic period, the child attempts to seek a compromise between his interests, capacities, and values and the opportunities and limitations of the environment. (30:492-493)

Ginzberg and his associates further explained:

We discerned four stages within the tentative period and three stages within the period of realistic choices. The first stage in the tentative period was called the INTERESTS stage because tentative choices made at this time are based almost exclusively on interests. Next, the adolescent takes into consideration his CAPACITIES, and later, his VALUES—the next two stages—and around seventeen he is in the TRANSITION stage looking forward to college or a job. The realistic period begins with the EXPLORATION stage during which the individual seeks for the last time to acquaint himself with his alternatives. This is followed by the CRYSTALLIZATION stage when he determines his choice, and finally by the SPECIFICATION stage during which he delimits it. (30:493)

Super (89,90) developed what he considered a more adequate theory. He felt that there were limitations to Ginzberg's theory of occupational choice. Super's theory deals with "development" rather than "choice" because it comprehends the concepts of preference, choice, entry, and adjustment. He felt that the term "choice" had different meanings at different ages.

Super offers the following statements as the key to understanding his formulations:

In expressing a vocational preference, a person puts into occupational terminology his idea of the kind of person he is; that in entering an occupation, he seeks to implement a concept of himself; that in getting established in an occupation, he achieves self
actualization. The occupation thus makes possible the playing of a role appropriate to the self concept. (90:22)

After much study, Super established a dozen elements to a theory of vocational development. They are:

1. Individual differences
2. Multipotentiality
3. Occupational ability patterns
4. Identification and the role of models
5. Continuity of adjustment
6. Life stages
7. Career patterns
8. Development can be guided
9. Development the result of interaction
10. The dynamics of career patterns
11. Job satisfaction: individual differences, status, and role
12. Work is a way of life.

Super then organized these twelve elements into a summary statement of vocational development. The theory can be stated in a series of ten propositions:

1. People differ in their abilities, interests, and personalities.
2. They are qualified, by virtue of these characteristics, each for a number of occupations.
3. Each of these occupations requires a characteristic pattern of abilities, interests, and personality traits, with tolerances wide enough, however, to allow both some variety of occupations for each individual and some variety of individuals in each occupation.
4. Vocational preferences and competencies, the situations in which people live and work, and hence their self concepts, change with time and experience (although self concepts are generally fairly stable from late adolescence until late maturity), making choice and adjustment a continuous process.

5. This process may be summed up in a series of life stages characterized as those of growth, exploration, establishment, maintenance, and decline, and these stages may in turn be subdivided into (a) the fantasy, tentative, and realistic phases of the exploratory stage, and (b) the trial and stable phases of the establishment stage.

6. The nature of the career pattern (that is, the occupational level attained and the sequence, frequency, and duration of trial and stable jobs) is determined by the individual's parental socioeconomic level, mental ability, and personality characteristics, and by the opportunities to which he is exposed.

7. Development through the life stages can be guided, partly by facilitating the process of maturation of abilities and interests and partly by aiding in reality testing and in the development of the self concept.

8. The process of vocational development is essentially that of developing and implementing a self concept: It is a compromise process in which the self concept is a product of the interaction of inherited aptitudes, neural and endocrine make-up, opportunity to play various roles, and evaluations of the extent to which the results of role playing meet with the approval of superiors and fellows.

9. The process of compromise between individual and social factors, between self concept and reality, is one of role playing, whether the role is played in fantasy, in the counseling interview, or in real life activities such as school classes, clubs, part-time work, and entry jobs.
10. Work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, interests, personality traits, and values; they depend upon his establishment in a type of work, a work situation, and a way of life in which he can play the kind of role which his growth and exploratory experiences have led him to consider congenial and appropriate. (90:189-190)

Hoppock's (38) theory, like Super's, places major emphasis on the internal factors which motivate human action. He states:

Most human action is caused by feelings, by our desire to be more comfortable or less uncomfortable, more satisfied or less frustrated, in short; by our desire to feel better than we do. Human action is affected by intellect only after feelings have indicated that some kind of action is desirable and only to the extent that our intellect can convince us that a particular course of action will improve or relieve our feeling tone. Intellect gives direction to our actions when factual information or logical reasoning indicates that one course of action is more likely than another to bring us the satisfactions that we seek.

It may appear that human action is sometimes caused, not by a desire to feel better than we do, but by a desire to maintain the comfortable state that we have already attained. Certainly the latter desire can provide concern that our comfortable state may deteriorate if we do not act. We then act to relieve our concern. In relieving our concern, we feel better. Thus, we act in order to feel better. (38:112)

His theory includes ten basic propositions:

1. Occupations are chosen to meet needs.

2. The occupation that we choose is the one that we believe will best meet the needs that most concern us.

3. Needs may be intellectually perceived, or they may only be vaguely felt as attractions which draw us in certain directions. In either case, they may influence choices.
4. Occupational choice begins when we first become aware that an occupation can help to meet our needs.

5. Occupational choice improves as we become better able to anticipate how well a prospective occupation will meet our needs. Our capacity thus to anticipate depends upon our knowledge of occupations, and our ability to think clearly.

6. Information about ourselves affects occupational choice by helping us to recognize what we want, and by helping us to anticipate whether or not we will be successful in collecting what the contemplated occupation offers us.

7. Information about occupations affects occupational choice by helping us to discover the occupation that may meet our needs, and by helping us to anticipate how well satisfied we may hope to be in one occupation as compared to another.

8. Job satisfaction depends upon the extent to which the job that we hold meets the needs that we feel it should meet. The degree of satisfaction is determined by the ratio between what we have and what we want.

9. Satisfaction can result from a job which meets our needs today, or from a job that promises to meet them in the future.

10. Occupational choice is always subject to change when we believe that a change will better meet our needs. (38:111-112)

"In her speculations concerning the determinants of vocational choice, Anne Roe (71,72) emphasizes the importance of early satisfactions in the development of interests and the primarily unconscious needs that determine the nature of these interests". (79:309)

As a working formula for basic needs, Roe employs Maslow's hierarchal classification of needs, stated as follows:
1. Physiological needs
2. Safety needs
3. Need for belongingness and love
4. Need for importance, respect, self-esteem, independence
5. Need for information
6. Need for understanding
7. Need for beauty

The hierarchical arrangement is important. Maslow's theory states that higher order needs cannot appear until lower order needs are relatively well satisfied.

In connection with Maslow's needs, Roe expressed five hypotheses:

1. The hereditary bases for intelligence, special abilities, interests, attitudes, and other personality variables seem usually to be non-specific.

2. The pattern of development of special abilities is primarily determined by the directions in which the psychic energy comes to be expended involuntarily.

3. These directions are determined in the first place by the patterning of early satisfactions and frustrations.

4. The eventual pattern of psychic energies, in terms of attention-directedness, is the major determinant of the field or fields to which the person will apply himself.

5. The intensity of these (primarily) unconscious needs, as well as their organization, is the major determinant in the degree of motivation as expressed in accomplishment. (72:212-214)
Roe continues as she relates her theory to that of a child's early experience with parental attitudes. Roe states that:

Depending upon which of the home situations is experienced, there will be developed basic attitudes, interests and capacities which will be given expression in the general pattern of the adult's life, in his personal relations, in his emotional reactions, in his activities, and in his vocational choice. (71:217)

The child from a child-centered family where there is warmth, love, and affection will choose an occupation dealing with close contact with people. Likewise, a child from a home where there are cold, unloving, rejecting parents will tend to choose an occupation where he does not have to make many contacts with people.

Holland (34, 35, 36) describes his theory as a heuristic theory of personality types and environmental data. Essentially, his theory assumes that at the time of vocational choice the person is the product of the interaction of his particular heredity with a variety of cultural and personal forces including peers, parents, and influential adults, his social class, and the physical environment. He believes that individuals who are in the process of making a vocational choice "search" for situations which satisfy the "adjustive orientations". Stereotypes of occupations guide the individual's decision-making process. He visualized occupational choice as a developmental hierarchy growing out of an individual's "life style".

Holland stated that six personality types have been identified in our culture: Realistic, Intellectual, Social, Conventional, Enterprising, and Artistic. Model orientations are proposed for each type by the author and can be considered as theoretical complexes made up
of coping mechanisms, personal traits, vocational and educational goals, life histories, aptitudes, and other attributes. The model orientations for the six types are as follows:

**Realistic.** The model type is masculine, physically strong, unsociable, aggressive; has good motor coordination and skill; lacks verbal and interpersonal skills; prefers concrete to abstract problems; conceives of himself as being aggressive and masculine and as having conventional political and economic values. Laborers, machine operators, aviators, farmers, truck drivers, and carpenters resemble this type.

**Intellectual.** The model type is task oriented, intracreative, asocial; prefers to think through rather than act out problems; needs to understand; enjoys ambiguous work tasks; has unconventional values and attitudes; is anal as opposed to oral. Physicists, anthropologists, chemists, mathematicians, and biologists resemble this type.

**Social.** The model type is sociable, responsible, feminine, humanistic, religious; needs attention; has verbal and interpersonal skills; avoids intellectual problem solving, physical activity, and highly ordered activities; prefers to solve problems through feelings and interpersonal manipulations of others, is orally dependent, social workers, teachers, interviewers, vocational counselors, and therapists resemble this type.

**Conventional.** The model type prefers structured verbal and numerical activities and subordinate roles; is conforming (extra-ceptive); avoids ambiguous situations and problems involving interpersonal relationships and physical skills; is effective at well-structured tasks; identifies with power; values material possessions and status. Bank tellers, secretaries, bookkeepers, and file clerks resemble this type.

**Enterprising.** The model type has verbal skills for selling, dominating, leading; conceives of himself as a strong, masculine leader; avoids well-defined language or work situations requiring long periods of intellectual effort; is extraceptive; differs from the Conventional type in that he prefers ambiguous social tasks and has a greater concern with power, status, and leadership; is orally aggressive. Salesmen, politicians, managers, promoters, and business executives resemble this type.
Artistic. The model type is asocial; avoids problems which are highly structured or require gross physical skills; resembles the Intellectual type in being intraceptive and asocial; but differs from that type in that he has a need for individualistic expression, has less ego strength, is more feminine, and suffers more frequently from emotional disturbance; prefers dealing with environmental problems through self-expression in artistic media. Musicians, artists, poets, sculptors, and writers resemble this type. (34:232-233)

When these models are ranked by the individual according to their relative strength in a quasiserial order or hierarchy, the life style heading the list determines the major direction of choice.

Blaw, Gustad, Jessor, Parnes, and Wilcox (8) developed a conceptual framework, not a theory of occupational choice and selection, which takes into account social, psychological, and economic factors. They, like Super, envision occupational choice as a developmental process that extends over many years. "The occupational preferences that finally crystallize do not, however, directly determine occupational entry. Whether they can be realized, or must be modified or even set aside, depends on the decisions of the selectors, that is, all persons whose actions affect the candidate's chances of obtaining a position at any stage of the selection process". (8:533) Clarification of the selection process requires analysis of social and economic conditions of selection, just as study of the choice process involves analysis of personality developments.

Tiedeman (94) discussed the analysis of vocational development as it is oriented by each of several decisions with regard to school, work and life which a person makes as he matures. Each decision process is divided into two periods or aspects--a period of anticipation and a period of implementation or adjustment. The process of vocational
development was viewed by Tiedeman as being the results of a number of these decisions.

O'Hara and Tiedeman (59) explored the relationship of personality to career development, feeling that Super's career development propositions do not portray the relationship of personality and career as it is "welded" within the process of choosing. They dealt with this dimension in terms of (1) purpose; (2) authority; (3) responsibility; and (4) acceptance of the position one has evolved in life. Throughout, they stress the fact that it is the total personality that develops and later accommodates to the career.

Bordin, Nachmann and Segal (9,10) felt that there was a need for a consistent framework which would apply to all occupations. They established a series of dimensions (needs, motivations, impulses, activities) which could account for all of the major gratifications which work can offer, which in turn would make it possible to describe any occupation in terms of the relative strengths and the particular modifications of these component dimensions. They had three basic assumptions upon making these remarks:

1. A continuity in development which links the earliest work of the organism in food getting and mastery of the body and coping with the stimulations of the environment of the most highly abstract and complex of intellectual and physical activities.

2. That the complex adult activities retain the same instinctual sources of gratification as the simple infantile ones.

3. That although the relative strengths and configurations of needs are subject to continual modification throughout the life span, their
essential pattern is determined in the first six years of life. The seeking out of occupational outlets of increasingly precise appropriateness is the work of the school years, but the needs which will be the driving forces are largely set before that time. (10:110)

Tyler (96) was concerned with the psychology of individual differences and vocational choice. She states "that the core of individuality consists of a person's choices and the way he organizes them". (96:195) She views this as a lifelong process in which the choices a person makes play a crucial role in the development of the individual.

Brill (14), like Bordin, stresses internal factors in developing a theory of vocational choice. His is a psycho-analytical approach which suggests that "There is always some psychic determinant which laid the foundation for the later vocation..." (14:277) and if not interfered with the normal individual will usually sense best what activity to follow.

Caplow (18) reviewed the evidence from sociological research on occupational choice and concluded that:

1. Error and accident often play a larger part than the subject himself is willing to concede.

2. Occupational choices are made at a time when the student is still remote from the world of work. They are made in terms of school requirements, which may call for quite different abilities and tastes from those which will be related to the eventual job.

3. Occupational choices are made in the schoolroom, under the impersonal pressure of the curriculum and remote from many of the realities of the working situation.
4. Realistic choices typically involve the abandonment of old aspirations in favor of more limited objectives... Not until late in his career will the average man be able to sum up his total expectations with some degree of finality and measure them against his remaining aspirations so as to arrive at a permanent sense of frustration, a permanent glow of complacency, or an irregular oscillation from one to the other. (18:167)

He also believes that children "inherit" the occupational level of their parents and that they choose a vocation within a restricted range of occupations that is acceptable to their class.

Miller and Form (52) stress forces in our social structure, like Caplow, in developing a theory of vocational choice. They express the view that:

The network of interrelated social factors that have been demonstrated to be associated with occupational levels might become the basis of a social causation theory of career patterns. Such a theory would impute the origin and development of a career to those social factors that have been identified. Relationships can be demonstrated between occupation level of a worker and (1) the father's occupation, (2) the historical circumstances, (3) the father's income and education, (4) financial aid and influential contacts, (5) social and economic conditions. An accurate weighing of the facts will demonstrate that the social background of the worker is a base of opportunities and limitations. As opportunities are enlarged the possibilities of occupational mobility are increased. Personal motivation and native ability are necessary to an enlarging career pattern. However, there is good evidence that the social backgrounds of workers are the crucial determiners in the number who are able to come into various, occupational levels.

Social background, native ability, historical circumstances and acquired personality traits are the influences determining a given career pattern. These forces may be considered as intertwined and pulling upon each worker with different intensities at various times in his career. By the time a man or woman reaches 35 or 40 years of age the forces often become equilibrated, and what the
occupational history is from 35 years to 60 years is a fair index of whatever stability the worker will experience. (38:40)

Clark (22) studied the effects of earnings on vocational choice. He expressed that "proper information regarding wages, if sufficiently impressed upon people, will lead to correct choice of occupation and correct number, provided barriers to occupations have been removed" (38:86).

Forer (27) found the explanation of occupational choices largely in personality and the emotional needs of the individual, often operating unconsciously:

1. Choice of a vocation is not primarily rational or logical, but is a somewhat blind, impulsive, emotional, and automatic process and is not always subject to practical and reasonable considerations.

2. Primary reasons for selecting a particular vocation are unconscious in the sense that when the individual is pressed to elaborate beyond the superficial rationalization of economic advantage and opportunity, he is forced to admit that he does not know why; he simply has to build bridges or can't stand paper work. These activities have immediate appeal or distaste for him. We are saying that interests and references have unconscious roots.

3. Both of these factors point ultimately to the purposive nature of occupational choice. Obviously it is necessary for most persons to find gainful employment. But the economic motive is secondary. Occupational choice, the specific occupation chosen or the fact of lack of preference, is an expression of basic personality organization and can and should satisfy basic needs.

4. Selection of a vocation, like the expression of other interests, is a personal process, a culmination of the individual's unique psychological development. (28:361)

Hollingshead (37) from his research, devised a theory of vocational choice based on parental socio-economic status. He found that the pattern of vocational choices made by youth corresponds roughly
with each class in the adult work world. He, therefore, concludes that an adolescent's idea of desirable jobs is a reflection of his experiences in the class and family culture complexes. Unfortunately, this limited reflection of experiences tends to limit the scope of jobs from which he chooses his class position in society; thus, he unconsciously chooses his occupation in such a way that he occupies the same socio-economic level as his parents.

Kline and Schneck (42) stressed the relationship of vocational interests to personality organization and individual aptitudes. They expressed the belief that:

> What has not been stressed in vocational guidance is the origin of vocational interests, their relationship to personality organization and their relationship to individual aptitudes. There is evidence that changes in personality organization greatly influence not only occupational interests but the level of job adjustment, and that in fact the prescribed approach to vocational maladjustment in a great number of cases appears to be psychotherapy rather than vocational guidance. A manipulation of the expressed occupational interests of an individual does not in fact prove to effect adjustment in cases of vocational maladjustment. Psychotherapy involving distinct changes in personality organization has on the other hand been capable of altering occupational factors to the extent of effecting adjustment out of maladjustment. (42:1)

Schaffer (77) studied job satisfaction as related to need satisfaction in establishing a theory of vocational choice. His theory formally stated is:

> Overall satisfaction will vary directly with the extent to which those needs of an individual which can be satisfied in a job are actually satisfied; the stronger the need, the more closely will job satisfaction depend on its fulfillment. (77:19)
The most accurate prediction of overall job satisfaction can be made from the measure of the extent to which each person's strongest two or three needs are satisfied. (77:18)

Twelve needs were chosen:

1. **Recognition and Approbation.** The need to have one's self, one's works, and other things associated with one's self known and approved by others.

2. **Affection and Interpersonal Relationships.** The need to have a feeling of acceptance by and belongingness with other people. The need to have people with whom to form these affectional relationships.

3. **Mastery and Achievement.** The need to perform satisfactorily according to one's own standards. The need to perform well in accordance with the self-perception of one's abilities.

4. **Dominance.** The need to have power and control of others.

5. **Social Welfare.** The need to help others, and to have one's efforts result in benefits to others.

6. **Self-Expression.** The need to have one's behavior consistent with one's self-concept.

7. **Socioeconomic Status.** The need to maintain one's self and one's family in accordance with certain group standards with respect to material matters.

8. **Moral Value Scheme.** The need to have one's behavior consistent with some moral code or structure.

9. **Dependence.** The need to be controlled by others. Dislike of responsibility for one's own behavior.

10. **Creativity and Challenge.** The need for meeting new problems requiring initiative and inventiveness, and for producing new and original works.

11. **Economic Security.** The need to feel assured of a continuing income. Unwillingness to "take a chance" in any financial matters.

12. **Independence.** The need to direct one's own behavior rather than to be subject to the direction of others. (77:4-5)
Warner and Abegglen (102) analyzed the social origins and careers of 8,000 major business executives in the United States and concluded that economic and socialologic factors do limit the range of occupations to which a person has access, do direct his attention to some occupations and away from others.

Steffire (87:611-614) recognizing the problem involved in developing a theory of vocational choice applicable to different people, developed ten propositions in unifying a theory which would lead to better appreciation of the varying significances of vocational choice:

(1) "An occupation permits an expression of the individual's public personality which is a special instance of differentiation of function." Work is an expression of the person as he sees himself and an expression of that part of himself that he wants to reveal publicly on the job. The job is a person's "calling card and price tag".

(2) "The occupational persona represents the individual's choice among those masks he would like to wear and those that society will permit him to wear." Limitations of capacity and limitations of opportunity are here reflected.

(3) "An occupational role may represent avoidance as well as, or instead of, approach reaction." A person's occupational choice may be a way of saying what he does not want in his present, rather than what he does want in the future. The individual may not be so much attracted by a given job as repelled by many others.

(4) "The importance of the work aspect of the public personality--the occupational persona--varies from being psychologically
peripheral to being central." Stefflre notes that the peculiarly Western concept of work is too often thought to be universal. He quotes The Ordeal of Change by Eric Hoffer:

That free men should be willing to work day after day, even after their vital needs are satisfied, and that work should be seen as a mark of uprightness and manly worth, is not only unparalleled in history but remains more or less incomprehensible to many people outside the Occident.

(5) "The societally limiting forces that determine the occupational persona of any individual vary from the accidental to the essential." Accidental, economic, sociological, psychological and philosophical forces may limit an individual's occupational persona; it is a rare individual who can choose his occupation with complete freedom.

(6) "The expression of the public personality through an occupation--the selection of an occupational persona--must be made on incomplete information." This proposition states simply that some ignorance, both personal and social, is inevitable at the time of an occupational choice.

(7) "The stability of the choice of an occupation, after additional information about the work role becomes available, varies directly with the psychological commitment to the occupation on the part of the chooser." The more central the job is to the individual, the more apt he is to try to accommodate himself to it rather than to move to another one.

(8) "As further information about the self comes to light, it is more apt to lead to change within the occupation for those who are psychologically committed to the occupation, as opposed to change to
a different occupation for others."

(9) "The occupational personas and the self-concept have a symbiolic relationship that moves them toward congruence." If the individual stays in the occupation, he will change either himself or the conditions of his employment so that the way he behaves on the job and the way he really is tend to become more harmonious.

(10) "The selection of an occupation persona may express any of four relationships between the self and society." These are:

1. The "fitting" relationship
2. The "permitting" relationship
3. The "transforming" relationship
4. The "binding" relationship.

Chronological Review of Related Studies

A review of related studies in the area of career choice or selection of ninth and tenth grade students must out of necessity contain data regarding the career choices of high school students in general. Very few studies use just the ninth and tenth grade students; therefore, for the purpose of this phase of the research, those studies which included ninth and tenth students in part will be reviewed.

Beeson and Tope (7) in a study of 2,000 students in Grand Junction, Colorado, discovered that paternal occupation was an influencing factor varying in different grades and that there were differences in the number of students selecting a vocation for specific grades. They found that there was an increase in the percentages of vocational choices from the eleventh to twelfth grades. In addition,
they found that 14 percent of the ninth graders, as compared to 9 percent in the eleventh and twelfth grades, selected their father's vocation. The most frequent response (25 percent) for the boys was engineering. The second most frequently mentioned vocation was agriculture. The family was found to be the most influential factor in the studies of vocational choice.

Pinney (66) studied the vocational choices of 916 high school students from two Chicago suburbs, from a rural high school in Wisconsin and a small village in Wisconsin. It was discovered that a large percentage of the sampled seniors did not choose a vocation. Of the seniors in the rural Wisconsin high school, not one had made a vocational choice. Employment experiences and high school courses were found not to be significant factors in the selection of a vocation. In addition, the father's occupation was found to be of little influence on the student's vocational selection.

Menger (50) studied 9,425 boys and 9,374 girls in grades 3-16 in various eastern schools in both urban and rural communities. To the question: "When you finish school, what vocation do you expect to follow?" many regular trends were found. The boys in both elementary and high schools mentioned 70 different occupations, whereas in college only 37 were names. For the girls, 35 occupations were mentioned in the elementary school and 39 in the high school, while 40 were named at the college level. This was interpreted by Menger to mean that education to some extent widens the vocational horizons for girls, but not for boys. Little difference was found between the rural and urban groups except for higher frequencies of farming and nursing in the rural group.

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Valentine (100) reports in a study conducted among technical school boys, aged 14 to 17, that the first choice of work is usually not based on judgment of suitability but almost entirely a matter of opportunity and convenience. Reynold's (67) studies of manual workers are in agreement with Valentine's study.

Carter and Strong (21) secured data on two groups of subjects with the Strong Vocational Interest Blank. The first group consisted of 34 pairs of unlike-sexed twins from the junior and senior high school populations of four California cities. The second group consisted of 100 boys and 100 girls from the same school populations. The results showed that the girls' scores are significantly higher on the scales which involve the use of language and are more interested in work which brings them into contact with many people. Scores for most of the males are significantly higher on the scales for engineers, chemists, farmers, physicists, doctors, and purchasing agents.

Hurlock and Jansing (39) report of high school students indicated that both boys and girls gave a liking for the work as the primary reason for their preference. Boys gave money as their second reason and girls, that they were fitted for the work. Over two-thirds expected to be able to follow their first preference; the chief reason given for not expecting to follow it was impossibility. The students felt that parents were equally interested in the vocations of sons and daughters, and that when they disagreed with the son's choice, the reason was most often monetary; but when they disagreed with the daughter's it was most often on the ground that another vocation was more suitable.
Kroger and Louttit (44) found that the occupation of the father was not a strong influencing factor in a study of the boys in four high schools in Indianapolis, Indiana. Although only 7.8 percent of the fathers were engaged in professions, nearly 50 percent of the boys chose professions. While 11.4 percent of the fathers were grouped as laborers, only 1.3 percent of the boys selected this category. At least one vocational choice was expressed by about 90 percent of the boys. This study apparently revealed that a larger percentage of the boys chose occupations at a higher level than that of their fathers.

Lehman and Witty (49) administered a Vocational Attitude Quiz to 26,878 school children, aged 8.5 to 18.5. In a list of 200 occupations, the children checked those which they would be willing to engage in as a life work. They also indicated the three they would like best to follow, the one they were most likely to follow, the three they believed the best money makers, the three they believed the most respected, and the three they believed would require the least effort. Physicians, bankers, and ministers were indicated in that order as the most respected occupations. Both sexes and all ages made their choices for the following reasons in this order: money, social approval, and easy life. There were marked sex differences in kinds of preferences, as shown in Table 1. Boys more often preferred occupations involving giving commands, and their attitudes changed more with age than did those of girls. Byrns' (16) sample included 42,479 girls and 34,472 boys in Wisconsin senior high schools. His study includes data from intelligence tests as well as census comparisons. He gives median percentile rank in intelligence for those selecting each occupation (boys and girls separately); these
TABLE 1.
SEX DIFFERENCES IN TYPES OF OCCUPATIONS PREFERRED
BY BOYS AND GIRLS AGE 8.5 TO 18.5

<table>
<thead>
<tr>
<th>Nature of Occupation</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedentary</td>
<td>45</td>
<td>90</td>
</tr>
<tr>
<td>Travel or movement</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td>Personal service</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>Teaching</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>


Run from 87.9 for writing to 30.0 for dairying for the boys. The overlap is very great, but the general rank order is similar to those for persons already engaged in these occupations. Boys named more occupations than girls did, and there was over selection of professional occupations compared to the numbers employed in Wisconsin.

Peters' (71) sample included over 700 high school seniors in Missouri. The rank order of the most influential factors in their selections is given in Table 2, rank 2 through 5 are within 1 percent of each other.

Kaplan's (41) sample consisted of 282 replies to a questionnaire sent to graduates of the University of Idaho. (See Table 2.)

Endicott (25) studied 543 boys and 580 girls in high school. (See Table 2.) Trow (95) asked 161 boys and 169 girls in grades 8, 10, and 12, to indicate what vocations they considered to be for them—
### TABLE 2.

**INFLUENCES AFFECTING VOCATIONAL CHOICE; RANK ORDER**  
*(COMPILED FROM PETERS; ENDICOTT; KAPLAN)*

<table>
<thead>
<tr>
<th>Influences</th>
<th>Rank Order</th>
<th>Endicott</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Peters</td>
<td>Kaplan</td>
</tr>
<tr>
<td>Parents</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Other relatives</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Friends or other students</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Teachers</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>People in the vocation</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Books or magazines</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Own abilities</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>School subjects</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Tried and liked</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Best school marks</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>


He compared the results with the census data for Detroit (as shown in Table 3).

For almost 50 percent of these subjects there was no discrepancy between what they would probably do and what they would like to do, and he concluded that children on the whole are realistic in their vocational outlook and generally satisfied with their occupational
possibilities. Considerable discrepancy occurs between census data and probable choices in two classes of occupations: manufacturing and professional service.

TABLE 3.
COMPARISON OF OCCUPATIONAL CHOICES WITH 1930 CENSUS CLASSIFICATION, IN PERCENTAGE

<table>
<thead>
<tr>
<th>Classification</th>
<th>Detroit Census</th>
<th>Probable</th>
<th>Possible</th>
<th>Fantasy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Forestry, Fishing</td>
<td>0.0</td>
<td>0.0</td>
<td>0.3</td>
<td>0.0</td>
</tr>
<tr>
<td>Extraction of minerals</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>48.5</td>
<td>5.2</td>
<td>3.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Transportation, communication</td>
<td>6.9</td>
<td>2.7</td>
<td>5.4</td>
<td>6.0</td>
</tr>
<tr>
<td>Trade</td>
<td>13.9</td>
<td>12.1</td>
<td>7.0</td>
<td>5.8</td>
</tr>
<tr>
<td>Public service</td>
<td>2.4</td>
<td>1.8</td>
<td>2.7</td>
<td>3.3</td>
</tr>
<tr>
<td>Professional service</td>
<td>6.2</td>
<td>32.7</td>
<td>50.9</td>
<td>42.4</td>
</tr>
<tr>
<td>Domestic, personal service</td>
<td>10.4</td>
<td>0.9</td>
<td>2.1</td>
<td>1.3</td>
</tr>
<tr>
<td>Clerical</td>
<td>11.3</td>
<td>27.0</td>
<td>14.5</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Source: Trow, W. D., "Fantasy and Vocational Choice", Occupations, XX (1941), Table 3, p 92.

Witty, Garfield, and Brink (104) compared the vocational interests of urban white and Negro students, reporting little change
from a similar study made by Lehman and Witty (49) ten years earlier. Forty-four percent of the Negro pupils expected to go to college. They noted the usual concentration of interests in a small number of highly competitive occupations, as shown in Table 4.

**TABLE 4.**

A COMPARISON OF THE VOCATIONAL INTERESTS OF NEGRO AND WHITE HIGH SCHOOL STUDENTS*

<table>
<thead>
<tr>
<th>Occupation</th>
<th>White</th>
<th>Percent</th>
<th>Negro</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number--Boys</td>
<td>334</td>
<td>405</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineer</td>
<td>25.8</td>
<td>10.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aviator</td>
<td>21.2</td>
<td>9.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mechanic-machinist</td>
<td>11.0</td>
<td>6.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lawyer</td>
<td>5.9</td>
<td>12.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicine-surgery</td>
<td>4.7</td>
<td>13.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music</td>
<td>2.0</td>
<td>15.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postal work</td>
<td>1.1</td>
<td>21.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>White</th>
<th>Percent</th>
<th>Negro</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number--Girls</td>
<td>366</td>
<td>579</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office and Clerical</td>
<td>50.0</td>
<td>38.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td>22.6</td>
<td>27.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching</td>
<td>20.4</td>
<td>31.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designing</td>
<td>14.4</td>
<td>5.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beautician</td>
<td>11.7</td>
<td>11.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Journalism</td>
<td>10.9</td>
<td>0.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Work</td>
<td>1.9</td>
<td>10.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Occupations chosen by over 10 percent

Carter, Taylor, and Canning (20) reported on relations between the Strong Vocational Interest Blank and the expressed vocational preferences of high school boys and girls in grades 10, 11, and 12. In all of them, the students receive a significantly higher percentage of A and B ratings on scales which are appropriate to their vocational choice, the relation being somewhat higher for girls.

Canning, Taylor, and Carter (17) compared the vocational interests of a group of high school sophomore boys with their interests as high school seniors. The Strong Vocational Interest Blank for Men was used. The results of this study were in turn compared with a study made by Burham (15) and Van Dusen (101) of interests of college freshman with their interests as college seniors. The results were as follows:

1. The vocational interest scores of high school boys are less stable than are the vocational interest scores of recent college graduates.

2. For the high-school group, the greatest changes of scores and the least stability of interests are shown for the office worker, teacher, and Y.M.C.A. secretary scales; these are the scales which correlate most with interest maturity. The least change and the greatest stability are shown for ratings on the C.P.A., lawyer, and life insurance salesman scales.

3. The rank order of permanence coefficients among the occupational scales used is similar for high school boys and for college men.

4. Scores of the high school boys in this sampling increased less often in a two-year interval, and decreased more often than did scores of college seniors retested by Strong after five years.

5. The percentage (sixty-four percent) of identical letter ratings received by the high school boys retested after two years is approximately the same as the percentage (63.3 percent) of identical ratings received by Strong's college seniors retested after a five-year period.
6. Although the constancy of vocational interests of these high school boys was less than that of Strong's college senior men, comparison with studies by Burnham and Van Dusen indicates that the interests of these high school boys were about as constant as the interests of college men tested as freshmen and retested as seniors.

7. The Strong Vocational Interest Blank for Men indicates certain facts about the interests of high school boys with considerable reliability.

8. In view of the fact that the level of interest test scores of the high school boys did not rise appreciably in the two years between tests, it appears that in one respect at least this representative high school group is not becoming more like Strong's college senior group as time goes on. In the attempt to explain this finding, it may be stated as an hypothesis that differences often believed to exist between the interests of older men, and high school groups may not be due to age changes, but where so regarded may often be artifacts resulting from the use of the cross-sectional method, involving the comparison of essentially different samplings. (17:492-493)

Boynton and Woolvine (12) studied 2,361 high school girls, 13-19 years old, from the South and the Southeast. They were divided into four economic groups. The most popular occupations among all groups (including 87 percent of first preferences) were: stenography, nursing, teaching, marriage, cosmetology, clerical, music, dietetics, journalism, medicine, commercial art, dress designing, and airline stewardess. However, 84 percent of the girls in the lowest economic group gave first preference to one of the first seven of these occupations, and only 57 percent of the girls in the highest economic group did. For the last six occupations, the preferences were 4 percent and 23 percent. The authors noted a progressive increase in interest in marriage from the lowest to the highest economic class.
Roeber and Garfield (73) studied the vocational interests of high school students in urban communities ranging in size from 2,500 to over 15,000. They revealed that the choice of seniors differed only slightly from those of freshmen. A slight increase was seen in the selection of certain occupations from grades nine to twelve. The most frequently mentioned category of twelfth grade boys was agriculture, with 11.6 percent, and engineering, with 10.1 percent. Of the total groups, 26.1 percent chose the father's occupation. This would appear to reveal that a positive relationship existed between paternal occupation and son's vocational interests in agriculture, even though there was no specific data showing the exact relationship between father's occupation and son's choice.

Kopp and Tussing (43) studied 280 high school boys and 326 girls. The Kuder was used for one class and the Cleeton Vocational Interest Inventory for two others. On the Kuder, the relationship between preference and test was +0.50 for girls and +0.59 for boys; on the Cleeton, for girls in two classes it was +0.36 and +0.53 and for boys +0.44 and +0.50. According to Kopp and Tussing this is as high a relationship as can be expected in light of the numerous other factors involved.

Edmiston and Starr (24) studied 443 boys and 575 girls, grades 7-12, in country, village, and city schools in Ohio. They used a questionnaire covering 27 factors which might affect vocational choice. Each factor had three subdivisions, one of which was to be checked. This was intended to indicate the importance of that factor to the child, but it is not certain that the subdivisions are adequately
chosen for this purpose. The relative importance of these general factors for boys and girls and for both is shown in Table 5.

### TABLE 5.

**RELATIVE IMPORTANCE OF VARIOUS FACTORS INFLUENCING VOCATIONAL CHOICE**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rank Order</th>
<th>Boys</th>
<th>Girls</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Prestige</td>
<td>8.5</td>
<td>5</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>II. Economic</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>III. Effort</td>
<td>8.5</td>
<td>7</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>IV. Social</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>V. Security</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>VI. Aesthetic</td>
<td>6</td>
<td>8</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>VII. Requirements</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>VIII. Glamor</td>
<td>7</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>IX. Ability</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>


Carp (19) studied a group of 165 high school boys which made up the total male student population of a union high school in southern California. Each boy was asked to write his age and to complete the following statements: 1. My desired occupation is... 2. My probable occupation will be... 3. Most of his life my father's occupation has been... 4. Most of their lives my grandfathers' occupations have been...". The distinction between questions 1 and 2 is an important one. Failure to realize this may contribute to adult's concern over youth's vocational ambitions. The boys' answers were related as to occupational level from 1 through 7, according to the Classification of Occupations of Employed Males in the United States, which was compiled at the Uni-
versity of Minnesota from the United States Census Report. The expectations seem quite realistic, with 29 percent of the boys expecting to follow occupations at the same level as those of their fathers, 24.9 percent with occupational expectations above that level, and 15.7 percent with expectations below it.

Hollingshead (37) noted differences in job preferences associated with father’s class. It was found that preference is very much affected by father’s position. Through case study and observational methods, he found that socio-economic status played an important part in determining children’s roles in both the academic and social life of the school, in leisure-time activities of youth, and in early work careers of boys and girls.

Faw (26) studied high school boys in Chicago and pointed out that there are similarities among those who share common attitudes and values, and differences among those who participate in different groups. He stated that if Negroes were allowed unrestricted entry to occupations, the probability of their achieving job satisfaction would be much higher and the probability of the competing whites achieving satisfaction would be only slightly decreased. Faw found significant differences in different religious groups. More Protestants than Catholics and more Catholics than Jews chose skilled, semiskilled, and unskilled jobs. More Catholics were interested in managerial jobs than either Jews or Protestants, and their interest in such jobs was greater than their interest in professional jobs. More Catholics than Protestants were interested in clerical and sales jobs. The Protestants were more interested in professional than in managerial jobs.
Moser (55) studied 550 students in a Pittsburgh, California, high school. They were asked to select three occupations of interest to them, and this was related to a Henmon-Nelson Intelligence Test. It was found that with no specific guidance those students with high mental ages generally selected vocations which required advanced training while those with relatively lower mental ages selected occupations which required little or no academic training. It was concluded that undirected students do not tend to select vocations far above their mental age. But the fact that the students were to select three vocations out of a prepared list of 100 vocations could have effected the findings.

Bateman (5) analyzed responses to questions about vocational choice and the Kuder Preference Record and showed that students who do not work tend to select occupations which are more consistent with their interests than do students who are working. The girls who were not working appeared to be reliably more consistent than working girls. Bateman also concluded that working and nonworking students do not differ greatly in their interest patterns.

Lawrence (45) studied Negro boys in the tenth grade in thirteen California high schools. He found that many aspired to professional status and prestige. This was unrealistic for most, because of the paucity of job opportunities and the unavailability of training. This was not completely unrecognized by the boys, since only 50 percent indicated any real hope of attaining their goal. Table 6 shows the figures for the percentage aspiring to different occupational groups and the percentage of Negroes in the state working at those occupations.
TABLE 6.

VOCATIONAL CHOICES COMPARED WITH VOCATIONAL DISTRIBUTION OF NEGROES IN CALIFORNIA

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Aspiring</td>
</tr>
<tr>
<td>Professional, semi-professional</td>
<td>39.1</td>
</tr>
<tr>
<td>Proprietor, manager, farm owner</td>
<td>4.9</td>
</tr>
<tr>
<td>Clerical, etc.</td>
<td>19.1</td>
</tr>
<tr>
<td>Crafts</td>
<td>9.2</td>
</tr>
<tr>
<td>Operatives</td>
<td>5.5</td>
</tr>
<tr>
<td>Protective services</td>
<td>0.0</td>
</tr>
<tr>
<td>Service and domestic</td>
<td>6.4</td>
</tr>
<tr>
<td>Laborers, including farm</td>
<td>0.4</td>
</tr>
<tr>
<td>Not classified</td>
<td>15.4</td>
</tr>
</tbody>
</table>


Auten's (4) study of 450 seniors from 1947-1950 revealed the stability of professional choices over a period of three years. Indecision in vocational choice decreased from the tenth grade to the twelfth grade by 34 percent. According to the survey, only 24.9 percent selected vocations related to their assumed abilities and special skills. The two most important reasons given for vocational choice revealed that the individuals felt they had made the choice independent of family influence. In most cases, part-time employment had little effect on vocational choice.

Small (83) conducted an intensive clinical study of a group of adolescents at a Vocational Advisory Service. His foremost objective
was a comparison of the vocational choices made by adjusted adolescent boys with those of adolescents who were disturbed. His technique was an analysis of the reality-and-fantasy contents of their choices. The disturbed group were from psychiatric hospitals and clinics, and his comparison group from schools and similar sources. Subjects were matched on age, religion, race, and economic status, but not on education or intelligence. The mean IQ of the comparison group was 112.1, and of the disturbed group 102.2. His major conclusions were:

1. The vocational choices of better-adjusted boys are more realistic than those of disturbed boys.

2. The second vocational choice of better-adjusted boys is less realistic than their first choice; whereas the second choice of disturbed boys tend to be more realistic than their first choice.

3. The vocational choices of better-adjusted boys are characterized by fantasies that emphasize participation in and involvement with the environment and its inhabitants and objects. The vocational choices of disturbed boys are characterized by fantasies that emphasize removal from others and the environment, self-depreciation, and the acting out of impulses. (83:16)

Schmidt and Rothney (78) studied 347 students from four representative high schools in Wisconsin who had been counseled for their last three years in high school. It was found that 34.9 percent had the same vocational choice throughout the three years. Thirty-one and one-half percent expressed the same vocational interest for their sophomore and junior years as for their junior and senior years.

Singer and Steffler (81) in their study demonstrated differences between adolescent and adult males on preferences toward job values. They suggested that adolescents exhibit certain culturally
determined stereotypes toward jobs that change with the acquisition of stable adult work experiences.

Pihlblad and Gregory (64) correlated test scores from school records with occupations, later followed by the subjects. The studies indicate a rather close relationship between occupations and test scores, with highest scores appearing among those in the professional and clerical occupations and the lowest scores among unskilled workers and farmers. Pihlblad and Gregory concluded from their study that: While parental occupation seems to have more influence on occupation choice than does intelligence, yet intelligence is also independent of occupation in its influence on choice of calling. Brighter individuals from all walks do find their way into the upper status occupations with more than chance frequency.

Rosenberg (74) attempts to show the relationship between occupational preferences and various internal characteristics, such as values, attitudes, and other personality characteristics. Rosenberg views the occupational decision process "as a series of progressive delimitations of alternatives". A person begins life with an infinite number of occupational possibilities, and these are gradually eliminated as the various internal factors come into play.

Hill and Hohe (33) did an unusual study on the similarity of interest patterns of parents and children. They wondered if parents of tenth grade students would be able to respond to the Kuder Preference Record in such a way as to produce interest patterns similar to those of their children. The results were not conclusive; some parents could, and some parents could not.
Rothney (75) describes a longitudinal study of vocational choice, covering a period from the tenth grade to five years after graduation which clearly illustrates the variability of occupational choices or preferences.

Shoemaker (80) presented evidence for the rejection of several vocational interest areas by high school students. Shoemaker's Missouri sample of 913 white boys rejected the Persuasive, Musical and Social Service areas of the Kuder Preference Record-Vocational Form CM. There was also noted a tendency for these boys to reject the Scientific and Clerical areas. Shoemaker also reported differences between grade levels as patterns of growing acceptance or rejection over the four years. It was suggested that it may be more appropriate to develop grade level norms rather than to combine grades 9-12 in a single norm group.

O'Hara (60) made a comparison of the data found in his study of a private Catholic school in Boston (59) with the findings in the Shoemaker (80) study.

He discovered that there was a discernible direction of change in occupational decision-making with age. The older boys used interest less, abilities more, and cite occupational variables to a significantly greater degree than younger boys. Interest is a potent consideration in vocational decision making of both older boys and younger boys, but the older boys tend to qualify their interests. The findings suggest that tentative reliance may be placed upon the possibility of identifying steps in vocational development, but that attention must also be given to qualitative and intensity factors.
Montesano and Geist (54) administered the Geist Picture Interest Inventory, Male to sixty high school boys along with a form used to collect statements about reasons for choice. Responses were assigned to vocationally relevant categories using criteria provided by expert judges.

Lee and King (46) studied the mean differences between the levels of the occupational preferences and expectancies of 179 ninth grade girls in a low socio-economic community and the level of their parents' occupations. The occupational suggestions of the parents for the girls revealed many statistically significant differences. The mean level of girls' occupational preferences was higher than the mean level of the parents' actual occupations. The parents suggested occupations at a higher level than the girls' occupational preferences and expectancies. The level of the girls' occupational expectancies was lower than the level of their occupational preferences. Statistical significance was reported at the 0.01 level of confidence.

Pine (65) studied 683 adolescents in grades nine through twelve to determine the significance of the relationships between occupational and educational aspirations and delinquent behavior. Information regarding delinquent behavior and occupational and educational aspirations was collected through the use of anonymous questionnaires. Significant relationships were found to exist between educational aspirations and ten of the fifteen delinquency variables. The results of this study seem to indicate that delinquent behavior is significantly related to educational aspirations.
Hanson (32) studied 142 ninth grade girls from a rural midwestern community. The following results were obtained:

1. Pupils' preferences were significantly higher than their fathers' vocations.
2. Pupils' preferences were significantly higher than their mothers' vocations.
3. The fathers' suggested vocations were significantly higher than the fathers' vocations.
4. Mothers' suggested vocations were significantly higher than the fathers' vocations.
5. There was no significant difference between fathers' and mothers' vocations when both were employed.
6. Fathers' and mothers' suggestions were not significantly different from daughters' preferences.

Winefordner (103) reported on a questionnaire that was administered to all tenth and eleventh grade students in 142 schools (44,429 students) for the 1964-1965 survey. The purpose of the questionnaire was to obtain an estimate of (1) students' plans for employment or further schooling after high school, (2) vocations which students think they might like to enter, and (3) the number of students who would have desired specific vocational courses had they been offered as part of their high school curriculum. Some findings of the questionnaire were--

(1) 32,357 students (72.6 percent) desired high school vocational education, (2) 20,262 (45.6 percent) planned to attend college, (3) 16,642 (37.5 percent) indicated plans for further training or education after high school other than college, and (4) 5,809 (13.1 percent) indicated a desire for high school vocational training and had no plans to attend college or to get further education after high school. Students were asked to make first and second-choice selections for vocational
courses they felt would meet their educational needs.

Ricco (69) studied migrant adolescents from the Appalachian South whose parents settled in a lower-middle-class suburb of a large city rather than in the inner-city itself to determine whether they differed significantly from non-Appalachians in the same suburb with respect to level of occupational aspirations, role models and for cultural conformity. It was found that the Migrants in this study did not differ significantly in terms of occupational aspiration, role models, or cultural conformity from other non-Appalachian lower-middle-class youth.

Slocum (82) reported the educational and occupational aspirations of rural high school students as studied in relation to social, cultural, and economic factors. Questionnaires were administered to and completed by 3,535 rural high school students. Supplemental information was gathered by personal interviews with 992 students. Counselors, administrators, and teachers rated a sample of 400 students on academic ability and occupational suitability. Parents provided information on income, educational values, and aspirations. Contrary to expectation, the study did not confirm previous findings concerning the aspirations of farm boys and girls. More farm boys than nonfarm boys aspired to attend college, but Slocum felt the aspirations are unrealistic in the light of college expense and the influence of high school grades on college success.

Anderson and Heimann (2) assessed the effects of short-term, individual, vocational counseling with eighth grade girls on their vocational maturity, knowledge of occupational information and the
ability to do self-estimates. The measurement of these criteria was made as the girls were in the ninth grade, approximately eighteen weeks after the termination of counseling. An experimental design, which was basically one involving differential treatment of equivalent groups, was employed. Collection and treatment of data showed a significant difference between scores of the experimental and control groups on one of three criteria, the VMS. This indicated that the experimental treatment, counseling, did have a significant effect on measured vocational maturity.

Astin (3) studied the changes in career plans occurring between the ninth grade and one year after high school. These changes were examined in a sample of 7,061 girls from the Project Talent Data Bank. Longitudinal changes for five career groups (Natural Sciences, Professions, Teaching, Office Work, and Housewife) were examined as a function of selected aptitude and interest measures. Girls who change differ from girls who maintain the same plans over time in each career group on most of the measures employed. A tendency is still present for the brighter girls to change from initial careers in Office Work and Housewife more frequently than the less-able girls, whereas those who shift out of the career-oriented groups, Sciences, Professions, and Teaching, are scholastically less capable than those who maintain these same plans over a period of time.

Summary

This chapter has presented a review of the literature pertinent to this study. This review was divided into two major parts: (1)
Theories of Vocational (Career) Choice, and (2) Chronological Review of Related Studies. In Chapter III the methodology for this study will be presented.
CHAPTER III
METHODOLOGY

The methodology followed in the study will be discussed in greater detail in the text of this chapter. The discussion was subdivided into five segments: (1) Selecting the Sample, (2) Procedure of the Study, (3) Collecting the Data, (4) Methods of Analyzing the Data, and (5) Summary of the Chapter.

Selecting the Sample

Data Regarding School District

The South-Western City School District is located in the southwestern section of Franklin County, Ohio. The district was established by a vote of the electorate in 1955. The first Board of Education was appointed to serve commencing January 1, 1956.

The population of the school district experienced its greatest period of growth during the decade 1950-1960. The present figures released by the 1970 Census Bureau indicate a population of 66,000 in the district.

The school district is composed of eighteen elementary schools (1-5), five middle schools (6-8), three senior high schools (9-12), and one vocational center (11-12).
Data Regarding High Schools

Since the school system used in this study consisted of three high schools of somewhat different socio-economic attendance areas, it was the decision of the author to include the populations of all three schools in the study. Background information pertinent to each school and its respective community is shown in Table 7.

**TABLE 7.**

BACKGROUND INFORMATION REGARDING THE THREE SCHOOLS AND THEIR RESPECTIVE COMMUNITIES

<table>
<thead>
<tr>
<th></th>
<th>Franklin Heights High School (A)</th>
<th>Grove City High School (B)</th>
<th>Westland High School (C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Enrollment</td>
<td>1128</td>
<td>1938</td>
<td>1718</td>
</tr>
<tr>
<td>Ninth Grade Enrollment</td>
<td>346</td>
<td>546</td>
<td>466</td>
</tr>
<tr>
<td>Tenth Grade Enrollment</td>
<td>291</td>
<td>491</td>
<td>469</td>
</tr>
<tr>
<td>Number of Negro Students (98)*</td>
<td>29</td>
<td>98</td>
<td>4</td>
</tr>
<tr>
<td>Number Attending Vocational Center</td>
<td>97</td>
<td>150</td>
<td>66</td>
</tr>
<tr>
<td>Percentage of Withdrawals</td>
<td>29 (56)*</td>
<td>4.2 (58)*</td>
<td>13.2 (57)*</td>
</tr>
<tr>
<td>Reasons for Withdrawals</td>
<td>14 (56)*</td>
<td>2 (58)*</td>
<td>10 (57)*</td>
</tr>
<tr>
<td>Transferred to Another School</td>
<td>8</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Poor Scholarship</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of Interest in School</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miscellaneous (marriage, employment expulsion, etc.)</td>
<td>3</td>
<td>2.2</td>
<td>3.2</td>
</tr>
<tr>
<td>Parents' Education Level</td>
<td>10.9 years (56)*</td>
<td>12 yrs (58)*</td>
<td>12+ yrs (57)*</td>
</tr>
<tr>
<td>Number of Guidance Counselors</td>
<td>3</td>
<td>4-1/2</td>
<td>4-1/2</td>
</tr>
</tbody>
</table>

* This number corresponds to the biographical source.

An examination of the table reveals that there are distinct differences as well as similarities among the three schools used in the sample.
Franklin Heights High School (School A) is a four high school located at 1001 Demorest Road, Columbus, Ohio.

The Franklin Heights High School community is one which is cut up by the western portion of the City of Columbus. In respect to the other two schools, Franklin Heights has been characterized by family mobility and instability. (56:41) For the most part, the families in the area come from Appalachia and are blue-collar industrial workers. (56:41) In addition, the parents have a relatively low educational level and are not educationally or culturally oriented in respect to the other two schools. (56:41)

The community's instability is reflected in the school's withdrawal statistics, as shown in Table 7. The statistics show that 29 percent (of the total school enrollment) of the students withdrew in the 1965-1966 school year. Of this percentage, 15 percent did not complete their high school training. This dropout figure is 6.5 percent below the dropout rate for the State of Ohio. (86)

The students' attitudes at Franklin Heights High School also seem to echo the tone of instability in that there have been instances of student unrest. This has been attributed, for the most part, to the area's close proximity to Columbus West High School which has been a center of student unrest during the last three to four years.

The guidance department personnel, based on the author's experiences with numerous school officials, is reported to have a very good reputation in the district. Several Franklin Heights' teachers have characterized the three counselors in this manner: one is primarily "college-oriented", one is "vocationally-oriented", and one is character-
ized as holding a "middle-of-the-road" philosophy between a need for a college education and vocational training.

Grove City High School (School B) is a four-year high school located at 4171 Hoover Road, Grove City, Ohio.

The City of Grove City is a suburb of Columbus. The majority of the working populous commute to Columbus for employment. The vast majority of the students are third and fourth generation Americans. Because of the community's close proximity to Columbus, most of the mobility of residents is into this area instead of away.

The city is primarily residential in nature with very little industry. That industry which is located in the city is considered service oriented.

The average citizen of Grove City is a high school graduate and a homeowner with a family income of $9,789.(58:12)

The guidance department personnel have been characterized by persons in Grove City High School as apparently being "college-oriented".

Statistics for school withdrawals, as shown in Table 7, show that 4.2 percent (of the total school enrollment) of the students left before graduation, with 2 percent of these withdrawals transferring to another school.(58:30) This is 19.3 percent below the dropout rate for the State of Ohio.(86)

Westland High School (School C) is a four-year high school located at 146 Galloway Road, Galloway, Ohio.

The Westland attendance area includes more than half of the South-Western City School District's land area. This area is typified by large industrial wealth and rapid suburban development. Within
Westland's attendance area are located the "heavy" industrial complexes of the General Motors Corporation and Westinghouse. In addition, this area is rapidly expanding in the service-distribution industries. For example, a new Sears warehouse center is nearing completion and is expected to employ an additional 3,500 people. Many of the major oil companies also have their distribution centers in this area.

If industrial growth has not taken center stage in the area; suburban development has. There are numerous residential and apartment subdivisions under construction. A 1,200-home Cherry Creek development, a 450-townhouse condominium tract, and a 1,200-unit apartment complex are but a few of these new suburban developments.

The major portion of the population of the Westland area is located in the Lincoln Village, Lincoln Park West, and New Rome areas.

The socio-economic level, estimated by long-time school officials, is "upper-middle" class with most of the parents being high school graduates, with a small percentage of college graduates.

Unemployment in the area is very low and a very small percentage of the parents are receiving welfare or aid to dependent children.

One outstanding trait of this area is its large expanse of rural farm land in the county's southwest portion. Located in this rural area is the estate of millionaire John W. Galbraith.

The statistics for the 1969-1970 school year, as shown in Table 7, show that 13.2 percent (of the total school enrollment) of the students withdrew from Westland High School. (57) Of these withdrawals, 10 percent transferred to another school. (57) The reason for this relatively high percentage is the area class mobility. Most of the
families were transferred to new locations in and outside the State of Ohio. The area has been characterized by school officials as a "stepping stone" community. Of this percentage, 3.2 percent left school before graduation. This is 18.3 percent below the dropout rate for the State of Ohio. (86)

The guidance personnel have been characterized by several Westland High School teachers as being somewhat mixed between "college-oriented" and "vocationally oriented".

**Procedure of the Study**

Contact was made by the writer with the district's superintendent in order to discuss the study and to obtain administrative approval. Following the discussion with the superintendent, the district's director in charge of federal legislation and research was contacted to discuss the study in more detail and to finalize plans for administration of the instrument.

It was the decision of the writer to sample the entire ninth and tenth grade student populations in the district's three high schools. The ninth and tenth grade populations were chosen because this is the age and grade level at which most students must choose a career if they are to utilize their high school education for career preparation. Although the college preparatory curriculum enrollment begins at the ninth grade level, almost all of the programs of vocational education begin at the eleventh grade level. There are a few orientation type pre-vocational programs which do begin as early as the tenth grade level. When a student makes a career choice, it is imperative that well organized
academic planning and scheduling take place during the first two years of high school. This is true regardless of whether a college preparatory curriculum or vocational education curriculum is pursued.

The sample included both males and females from each of the three schools who were in attendance on the day the instrument was administered. The sample finally included 1,057 ninth graders and 1,024 tenth graders of which a total of 1,006 and 1,002 respectively, were useable questionnaires.

Collecting the Data

The questionnaire used in this research (see Appendix B) was developed by the writer with several revisions made by Dr. Louise Vetters of the Center for Vocational and Technical Education and Dr. Charles Weaver of the State of Ohio, Department of Education, Division of Guidance and Testing as well as the writer's advisor and reading committee. In addition, a pilot study was run by the writer on his twelfth grade class to determine the individual item's clarity and total readability of the instrument in general.

The twenty-two occupational categories used on the questionnaire were taken from the Ohio Vocational Interest Survey developed by the State Department of Education, Division of Guidance and Testing, and the U. S. Office of Education's Career Education categories. At the suggestion of Dr. Robert M. Reese, some of the categories were combined to form new ones; and some were changed with new title headings for added clarity. A few of the title heading descriptions were altered by the writer, with the approval of Robert M. Reese, his advisor, in order
to better interpret and describe the type of activity which would fall into that category.

After an inter-district memo was sent to the three building principals involved in the research, an appointment was made by the writer to explain the study and the administration of the questionnaire. Each building principal was asked to send an office memo or notice to the teachers involved about the administration of a questionnaire. It was emphasized to the principals that they ask the teachers to treat the administration of the instrument in a highly "professional" manner. Following this discussion, a date was agreed upon with each principal for the administration of the questionnaire. It was the consensus of the writer and the building principals that the homeroom period needed to be extended by approximately ten to twelve minutes.

The questionnaires were packaged according to homerooms with each homeroom teacher's name and enrollment clearly printed on the attached sheet of directions (see Appendix A). It was suggested by the writer that the instrument be distributed either to the students as they entered their homeroom or placed on their seats prior to their arrival in order to better alleviate the problem of too little time.

The questionnaires were delivered to the respective schools on the day prior to their administration and in turn were distributed to the homeroom teachers by way of the school office mailboxes. Immediately upon completion of the homeroom period, the teachers were asked to return the questionnaires to the school office.
Methods of Analyzing Data

The analysis of the data was performed in such a manner as to best facilitate answering the questions posed in the problem statement as well as testing the null hypotheses. Therefore, the analysis of the data must be divided into two segments: (a) Analysis for significant difference and (b) Analysis of normative data collected on the instrument.

Analysis for Significant Difference

The statistical analysis approach used in this research was determined after consulting William Bargar of the Research Department, College of Education, and the staff of the Statistics Laboratory, both at The Ohio State University. The statistical test selected was the confidence interval at the 95 percent level used on null hypothesis one and two.

The statistical formula as presented by Freund (28:10-13) was used:

\[
\left( \frac{H}{M} - (1.96 \sqrt{\frac{H}{M} \left(1 - \frac{H}{M}\right) + \frac{1}{2M}}} \right), \quad \frac{H}{M} + (1.96 \sqrt{\frac{H}{M} \left(1 - \frac{H}{M}\right) + \frac{1}{2M}})
\]

H - Number of students who have made a career choice
M - Total number of students.

The statistical test used on the null hypothesis three through fifteen was the chi-square test of significance at the 0.05 level. The statistical formula as presented by Freund (28:12-14) was used:
\[
\sum_{i=1}^{k} \sum_{j=1}^{k} \frac{(f_{ij} - e_{ij})^2}{e_{ij}}
\]

\(f_{ij}\) - is observed frequency
\(e_{ij}\) - is estimated (assuming null hypothesis) expected frequency
\(k\) - categories.

Analysis of Normative Data

The data collected on the questionnaire were analyzed to show the number and percentage of students who have and have not expressed a career preference. It was upon this basis that the sample was divided into two groups. In addition, this same data were further broken down by sex.

For those students who had made a career choice, an alphabetical listing, with frequencies, of the occupational categories preferred was presented. An attempt was also made to show some reasons why some students had not made a career choice. The frequencies by school, grade level, and sex of each possible response was tabulated for analysis and discussion.

For those students who had expressed a career preference on the data gathering instrument, an attempt was made to show which factors had been considered by the sample as having the most influence upon making their choice. These factors were subdivided into two groups: (1) things, (Magazines and Books, Radio and T.V., Hobbies, etc.), which influenced, and (2) people (Parents, Teachers, Friends, and etc.), which influenced the six possible responses under each factor. These were
tabulated and the frequencies by school, grade level, and sex were given.

In addition, the number of visits each student made with his assigned guidance counselor and the reasons for each visit were tabulated for each school and grade level.

Finally, the student's career preference and their parent's vocation were tabulated under The Dictionary of Occupational Title's major occupational groups with the frequencies given by school and grade level.

Summary

In this chapter, the methodology of the study was discussed. This discussion was subdivided into four major segments: (1) Selecting the Sample, (2) Procedure of the Study, (3) Collecting the Data, and (4) Methods of Analyzing the Data. The first segment, Selecting the Sample, was further subdivided into two parts: (a) Data Regarding School District, and (b) Data Regarding High Schools. Also, the fourth segment, Methods of Analyzing the Data was further subdivided into two parts: (a) Analysis for Significant Difference and (b) Analysis of Normative Data. In Chapter IV, the statistical interpretation of the data is presented.
CHAPTER IV

STATISTICAL INTERPRETATION OF THE DATA

In this chapter, the Statistical Interpretation of the Data will be presented. The data for this study were gathered from the ninth and tenth grade students in the three high schools of the South-Western City School District. The data were arranged in order to be analyzed and tested for significant difference. The hypotheses were tested for significance at the 0.95 confidence interval or with the chi-square test.

The 0.95 confidence interval was used to test null hypothesis one and two; and the chi-square test was used to test null hypothesis three through fifteen. The level of significance for the chi-square test was the 0.05 level of confidence. Table 8 shows the frequencies and percentages, by school and grade level, of the students who have and have not made an initial career choice.

By examining Table 8 it was revealed that 81.8 percent of the ninth grade students responded to the questionnaire. The percentage of respondents ranged from 80.0 to 83.0 among the three schools. The tenth grade students had an 83.7 percent response; with the range among the three schools from 80.0 percent at School C to 86.6 percent at School B. Further examination of the table revealed that 48.9 percent of the ninth graders, as compared to 56.6 percent of the tenth graders, had made a
TABLE 8.
FREQUENCIES AND PERCENTAGES, OF THOSE STUDENTS WHO
HAVE AND HAVE NOT DECIDED UPON AN INITIAL CAREER CHOICE

<table>
<thead>
<tr>
<th>School</th>
<th>T.P.</th>
<th>Sample</th>
<th>Response</th>
<th>% of Sample</th>
<th>Have</th>
<th>Have Not</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>A</td>
<td>308</td>
<td>261</td>
<td>253</td>
<td>82.1</td>
<td>128</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>49.4</td>
</tr>
<tr>
<td>B</td>
<td>499</td>
<td>443</td>
<td>414</td>
<td>83.0</td>
<td>218</td>
<td>196</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>52.7</td>
</tr>
<tr>
<td>C</td>
<td>423</td>
<td>353</td>
<td>339</td>
<td>80.1</td>
<td>146</td>
<td>193</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43.1</td>
</tr>
<tr>
<td>Totals</td>
<td>1230</td>
<td>1057</td>
<td>1006</td>
<td>81.8</td>
<td>492</td>
<td>514</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>51.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School</th>
<th>T.P.</th>
<th>Sample</th>
<th>Response</th>
<th>% of Sample</th>
<th>Have</th>
<th>Have Not</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>A</td>
<td>259</td>
<td>228</td>
<td>221</td>
<td>85.3</td>
<td>126</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>57.0</td>
</tr>
<tr>
<td>B</td>
<td>462</td>
<td>409</td>
<td>400</td>
<td>86.6</td>
<td>244</td>
<td>156</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>61.0</td>
</tr>
<tr>
<td>C</td>
<td>476</td>
<td>387</td>
<td>381</td>
<td>80.0</td>
<td>197</td>
<td>184</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>51.7</td>
</tr>
<tr>
<td>Totals</td>
<td>1197</td>
<td>1024</td>
<td>1002</td>
<td>83.7</td>
<td>567</td>
<td>435</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>56.6</td>
</tr>
</tbody>
</table>

T.P. - Total Population

career choice at the time the questionnaire was administered. The ninth
grade students' responses to having made a career choice ranged from
43.1 percent to 52.7 percent, while the tenth graders' affirmative
responses ranged from 51.7 percent to 61.0 percent. This might be
interpreted to mean that more education will serve to increase career
selection.

To better facilitate the testing of the null hypothesis, it
was the decision of the author to examine some of the reasons why some
students did not indicate a career choice on the questionnaire.

Table 9 reports the frequencies by school, grade level, and sex of the reasons given by students for not having made an initial career choice.

It is interesting to note that the frequencies were generally well distributed among the six reasons. Two responses, "Haven't found a career I like yet" and "Haven't had enough information to make a choice" had the greatest number of frequency. The author feels that this was an important point. Although each school had a staff of guidance counselors, it might be assumed that some students were either not meeting with their counselor or they were not receiving enough information from which to make a career choice. Another assumption which might be drawn from the data is that more years of education increase career selection, since the number of tenth grade students who have not chosen a career was fewer than the number of ninth grade students. This is in agreement with the findings in Menger's (50) study. Some of the reasons and frequencies given in the "Others" category were: "Just can't decide", 26, "Can't state reason", 3; "God hasn't told me yet", 4; and "Don't want a career", 1.

Tests for Significance Within and Among Schools

Hypothesis one was: There is no significant difference in the percentage of ninth grade students who have expressed a career preference and those who have not expressed a career preference within the three high schools of the South-Western City School District. The test for significance at the 0.95 confidence interval revealed that there
### TABLE 9.

THE FREQUENCIES, BY SCHOOL, GRADE LEVEL, AND SEX, OF THE REASONS GIVEN BY THOSE WHO HAVE NOT MADE A CAREER CHOICE

<table>
<thead>
<tr>
<th>Reasons</th>
<th>School A</th>
<th></th>
<th>School B</th>
<th></th>
<th>School C</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ninth</td>
<td>Tenth</td>
<td>Ninth</td>
<td>Tenth</td>
<td>Ninth</td>
<td>Tenth</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>N=68</td>
<td>N=57</td>
<td>N=97</td>
<td>N=99</td>
<td>N=105</td>
<td>N=88</td>
</tr>
<tr>
<td>A. Haven't given it much thought</td>
<td>12</td>
<td>5</td>
<td>34</td>
<td>15</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>5</td>
<td>18</td>
<td>9</td>
</tr>
<tr>
<td>B. There's no rush. I have plenty of time to decide.</td>
<td>4</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>C. Haven't found a career that I like yet.</td>
<td>14</td>
<td>20</td>
<td>15</td>
<td>14</td>
<td>25</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24</td>
<td>22</td>
</tr>
<tr>
<td>D. Haven't had enough information to make a choice.</td>
<td>29</td>
<td>16</td>
<td>17</td>
<td>17</td>
<td>24</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28</td>
<td>27</td>
</tr>
<tr>
<td>E. Others</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>F. No response</td>
<td>8</td>
<td>5</td>
<td>9</td>
<td>1</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
<td>68</td>
<td>47</td>
<td>57</td>
<td>38</td>
<td>97</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>115</td>
<td>95</td>
<td>196</td>
<td>128</td>
<td>193</td>
<td>184</td>
</tr>
</tbody>
</table>
were no significant differences in the percentage of ninth grade students who have expressed a career preference and those who have not expressed a career preference within schools A and B, but there was a significant difference within school C as shown in Table 10. As a matter of explanation—if in fact there was no difference in career choice, then 50 percent of the sample will have made a career choice and 50 percent will not have made a career choice. The statistical approach was to compute a confidence interval of the proportions at the 0.95 level of significance. If the hypothesized percentage of 50 percent was included within this computed confidence interval, it was concluded that the differences in proportions were not great enough to be statistically significant. Hypothesis one was rejected for School C, but was not rejected for Schools A and B.

TABLE 10.
AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES OF THOSE NINTH GRADE STUDENTS WHO HAVE AND HAVE NOT DECIDED UPON AN INITIAL CAREER CHOICE WITHIN SCHOOLS

<table>
<thead>
<tr>
<th>School</th>
<th>Confidence Intervals</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.4424 - 0.5696</td>
<td>No</td>
</tr>
<tr>
<td>B</td>
<td>0.4777 - 0.5763</td>
<td>No</td>
</tr>
<tr>
<td>C</td>
<td>0.3768 - 0.4852</td>
<td>Yes*</td>
</tr>
</tbody>
</table>

* This significance is the result of a fewer number of students making a career choice.
The significance within School C might be interpreted as a lack of career information available to students within School C, or an over abundance of career information resources making it difficult for the students to narrow-down a selection.

Hypothesis two was: There is no significant difference in the percentage of tenth grade students who have expressed a career preference and those who have not expressed a career preference within the three high school of the South-Western City School District. The test for significance at the 0.95 confidence interval revealed that there was a significant difference in the percentage of tenth grade students who have expressed a career preference and those who have not expressed a career preference within School B, but there was no significant difference within Schools A and C, as shown in Table 11. Hypothesis two was rejected for School B, but was not rejected for Schools A and C.

**TABLE 11.**

<table>
<thead>
<tr>
<th>School</th>
<th>Confidence Intervals</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.5024 - 0.6376</td>
<td>No</td>
</tr>
<tr>
<td>B</td>
<td>0.5610 - 0.6590</td>
<td>Yes*</td>
</tr>
<tr>
<td>C</td>
<td>0.4655 - 0.5685</td>
<td>No</td>
</tr>
</tbody>
</table>

*This significance is the result of a larger number of students making a career choice.*
The significance within School B might possibly reflect a greater degree of exposure to guidance personnel and career information resources.

Hypothesis three was: There is no significant difference in the percentage of ninth grade students who have expressed a career preference and those who have not expressed a career preference among the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions. There were significant differences in the percentage of ninth grade students who have expressed a career preference and those who have not expressed a career preference among the three schools, as shown in Table 12. Hypothesis three was rejected.

<table>
<thead>
<tr>
<th>Response</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have</td>
<td>0.148281</td>
<td>1.195019*</td>
<td>2.35824*</td>
</tr>
<tr>
<td>Have not</td>
<td>0.141898</td>
<td>1.143570</td>
<td>2.256504*</td>
</tr>
</tbody>
</table>

* Major contributors to significance

\[ X^2 \text{ total } 7.243296 \]

Significant at 0.05 level.

Hypothesis four was: There is no significant difference in the percentage of tenth grade students who have expressed a career pre-
ference and those who have not expressed a career preference among the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions. There were significant differences in the percentage of tenth grade students who have expressed a career preference and those who have not expressed a career preference among the three schools, as shown in Table 13. Hypothesis four was rejected.

TABLE 13.

AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES OF THOSE TENTH GRADE STUDENTS WHO HAVE AND HAVE NOT DECIDED UPON A CAREER PREFERENCE AMONG THE THREE SCHOOLS

<table>
<thead>
<tr>
<th>Response</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have</td>
<td>0.006675</td>
<td>1.368197*</td>
<td>1.612239*</td>
</tr>
<tr>
<td>Have not</td>
<td>0.008705</td>
<td>1.784331*</td>
<td>2.102598*</td>
</tr>
</tbody>
</table>

* Major contributors to significance.

$X^2$ total 6.882745

Significant at 0.05 level

Again, as in Table 12, the greatest contributor to the significance was the data from School B and C.

Hypothesis five was: There is no significant difference in the percentage of ninth and tenth grade students who have expressed a career preference within the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency
distributions. There were significant differences in the percentage of ninth and tenth grade students who have and have not expressed a career preference within Schools B and C, but not within School A, as shown in Table 14. Hypothesis five was rejected for Schools B and C, but not rejected for School A.

**TABLE 14.**

**AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES OF THOSE NINTH AND TENTH GRADE STUDENTS WHO HAVE AND HAVE NOT EXPRESSED A CAREER PREFERENCE WITHIN EACH SCHOOL**

<table>
<thead>
<tr>
<th>Response</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ninth</td>
<td>Tenth</td>
<td>Ninth</td>
</tr>
<tr>
<td>Have</td>
<td>0.426833</td>
<td>0.480448</td>
<td>1.137198*</td>
</tr>
<tr>
<td>Have not</td>
<td>0.493065</td>
<td>0.555000</td>
<td>1.483075*</td>
</tr>
<tr>
<td>X² total</td>
<td>1.955346</td>
<td>X² total</td>
<td>5.772801</td>
</tr>
<tr>
<td>Not significant at the 0.05 level</td>
<td>0.05 level</td>
<td>Significant at the 0.05 level</td>
<td>Significant at the 0.05 level</td>
</tr>
</tbody>
</table>

* Major contributors to significance.

It is evident from Table 14, that the hypothesis was rejected in Schools B and C by an "additive effect" in the data; no grade level or response was primarily dominate. Each contributed to the rejection nearly equally.

Hypothesis six was: There is no significant difference in the percentage of ninth and tenth grade students who have expressed a career preference among the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency
distributions. There were significant differences in the percentage of ninth and tenth grade students who have and have not expressed a career preference among the three schools, as seen in Table 15. Hypothesis six was rejected.

TABLE 15.

AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES OF THOSE NINTH AND TENTH GRADE STUDENTS WHO HAVE AND HAVE NOT EXPRESSED A CAREER PREFERENCE AMONG SCHOOLS

<table>
<thead>
<tr>
<th>Response</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have</td>
<td>0.070685</td>
<td>2.541976*</td>
<td>3.499562*</td>
</tr>
<tr>
<td>Have not</td>
<td>0.078754</td>
<td>2.832181*</td>
<td>4.359975*</td>
</tr>
</tbody>
</table>

* Major contributor to significance

\(X^2\) total 13.383133

Significant at 0.05 level.

Sample Analyzed by Sex

The data contained in Table 8, page 66 were analyzed by a third variable, sex, as shown in Table 16.

It was interesting to note that the females have made a career choice more often than their male counterparts, except for the ninth graders in School B, which differs by only 0.01 percent. This was in keeping with many psychologists who feel that females at this grade and age level are generally more mature than the males. To agree with this premise, one must believe that maturity is reflected in an early career selection. This was also contrary to the findings in Byrn's (16) study of high school students.
### Table 16.

Frequencies and Percentages, by School, Grade Level, and Sex of Those Students Who Have Decided, and Have Not Decided Upon an Initial Choice of a Career

<table>
<thead>
<tr>
<th>School</th>
<th>Sex</th>
<th>N</th>
<th>Have</th>
<th>Have Not</th>
<th>Tenth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>A</td>
<td>Male</td>
<td>133</td>
<td>65</td>
<td>48.9</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>120</td>
<td>63</td>
<td>52.5</td>
<td>57</td>
</tr>
<tr>
<td>B</td>
<td>Male</td>
<td>205</td>
<td>108</td>
<td>52.7</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>209</td>
<td>110</td>
<td>52.6</td>
<td>99</td>
</tr>
<tr>
<td>C</td>
<td>Male</td>
<td>167</td>
<td>62</td>
<td>37.1</td>
<td>105</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>172</td>
<td>84</td>
<td>48.8</td>
<td>88</td>
</tr>
<tr>
<td>Totals</td>
<td>Male</td>
<td>505</td>
<td>235</td>
<td>46.5</td>
<td>270</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>501</td>
<td>257</td>
<td>51.3</td>
<td>244</td>
</tr>
</tbody>
</table>
Tests for Significance with Data Divided According to Sex Within Schools

The data were also analyzed according to sex in order to discover whether there were any significant differences between the percentage of ninth grade males and females who have expressed a career preference and those who have not expressed a career preference within each school. Likewise, the data were analyzed at the tenth grade level. Furthermore, the data were analyzed with both sexes combined at each grade level to test for significance differences within each school.

When the data were analyzed according to sex, there were no significant differences in the percentage of ninth grade males who have and have not expressed a career preference within Schools A and B; but there was a significant difference within School C. The results of the test for significance at the 0.95 confidence interval are reported in Table 17.

**TABLE 17.**

AN INDICATION OF SIGNIFICANCE OF THOSE NINTH GRADE MALES WHO HAVE AND HAVE NOT DECIDED UPON AN INITIAL CAREER CHOICE

<table>
<thead>
<tr>
<th>School</th>
<th>Confidence Intervals</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.4003 - 0.5777</td>
<td>No</td>
</tr>
<tr>
<td>B</td>
<td>0.4564 - 0.5976</td>
<td>No</td>
</tr>
<tr>
<td>C</td>
<td>0.2947 - 0.4473</td>
<td>Yes*</td>
</tr>
</tbody>
</table>

* This significance is the result of fewer males making a career choice.
When the data were analyzed according to sex, there were no significant differences in the percentage of ninth grade females who have and have not expressed a career preference within Schools A, B, and C. The results of the test for significance at the 0.95 confidence interval are shown in Table 18.

**Table 18.**

**An indication of significance of those ninth grade females who have and have not decided upon an initial career choice**

<table>
<thead>
<tr>
<th>School</th>
<th>Confidence Level</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.431 - 0.619</td>
<td>No</td>
</tr>
<tr>
<td>B</td>
<td>0.455 - 0.595</td>
<td>No</td>
</tr>
<tr>
<td>C</td>
<td>0.410 - 0.566</td>
<td>No</td>
</tr>
</tbody>
</table>

When the data were analyzed according to sex, there were no significant differences in the percentage of tenth grade males who have and have not expressed a career preference within Schools B and C; but there was a significant difference within School A. The results of the test for significance at 0.95 confidence interval are shown in Table 19.

When the data were analyzed according to sex, there were significant differences in the percentage of tenth grade females who have and have not expressed a career preference within Schools A and B; but there was no significant difference within School C. The results of the test for significance at the 0.95 confidence interval are shown.
When the data were analyzed according to sex, there was no significant difference between those ninth grade males and females who have and have not expressed a career preference within School A, but...
there was a significant difference between the tenth grade males and females within School A. The chi-square test, at the 0.05 level of confidence, was used to test for differences within frequency distributions. The results of the chi-square tests are shown in Table 21.

**TABLE 21.**

AN INDICATION OF SIGNIFICANCE BETWEEN MALES AND FEMALES WHO HAVE AND HAVE NOT EXPRESSED A CAREER PREFERENCE AT THE NINTH AND TENTH GRADE LEVELS WITHIN SCHOOL A

<table>
<thead>
<tr>
<th>Responses</th>
<th>Ninth</th>
<th>Tenth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
</tr>
<tr>
<td>Have</td>
<td>0.078471</td>
<td>0.085606</td>
</tr>
<tr>
<td>Have Not</td>
<td>0.080378</td>
<td>0.087685</td>
</tr>
<tr>
<td></td>
<td>$X^2_{total} = 0.332140$</td>
<td>$X^2_{total} = 20.794642$</td>
</tr>
<tr>
<td></td>
<td>Not significant at 0.05 level</td>
<td>Significant at 0.05 level</td>
</tr>
</tbody>
</table>

* Major contributors to significance.

When the data were analyzed according to sex, there was no significant differences between those ninth grade males and females who have and have not expressed a career preference within School B, but there was a significant difference between the tenth grade males and females within School B. The chi-square test, at the 0.05 level of confidence, was used to test for differences within frequency distributions. The results of the chi-square tests are shown in Table 22.

When the data were analyzed according to sex, there was a significant difference between those ninth grade males and females who


### Table 22.

**An indication of significance between males and females who have and have not expressed a career preference at the ninth and tenth grade levels within School B**

<table>
<thead>
<tr>
<th>Response</th>
<th>Ninth Males</th>
<th>Ninth Females</th>
<th>Tenth Males</th>
<th>Tenth Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have</td>
<td>0.000009</td>
<td>0.000181</td>
<td>0.918130</td>
<td>0.927358</td>
</tr>
<tr>
<td>Have Not</td>
<td>0.000010</td>
<td>0.000202</td>
<td>1.43605*</td>
<td>1.450483*</td>
</tr>
</tbody>
</table>

\[ X^2 \text{ total } 0.000502 \]

Not significant at 0.05 level

* Major contributors to significance.

have and have not expressed a career preference within School C, but there was no significant difference between the tenth grade males and females within School C. The chi-square test, at the 0.05 level of confidence, was used to test for differences within frequency distributions. The results of the chi-square tests are shown in Table 23.

### Table 23.

**An indication of significance between males and females who have and have not expressed a career preference at the ninth and tenth grade levels within School C**

<table>
<thead>
<tr>
<th>Response</th>
<th>Ninth Males</th>
<th>Ninth Females</th>
<th>Tenth Males</th>
<th>Tenth Females</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have</td>
<td>1.382955*</td>
<td>1.313562*</td>
<td>0.460573</td>
<td>0.496425</td>
</tr>
<tr>
<td>Have Not</td>
<td>1.047546*</td>
<td>0.994983*</td>
<td>0.492995</td>
<td>0.531370</td>
</tr>
</tbody>
</table>

\[ X^2 \text{ total } 5.734129 \]

Not significant at 0.05 level

* Major contributors to significance

\[ X^2 \text{ total } 1.981363 \]

Significant at 0.5 level

80
Career Preferences

Those students who had indicated a career preference were asked to circle one of the occupational categories which best described the kind or type of career they preferred. An alphabetical listing by school, grade level, and sex, of the twenty-one occupational categories indicated by those students who have made an initial career choice, is shown in Table 24.

One hundred percent of those students who had made an initial career choice indicated which occupational category best fit their choice. An "Other" category was listed just in case some students could not decide which category best described their initial career choice. When a student specified his choice in the "Other" category, the author plugged it into one of the appropriate occupational categories.

Except for the category of Appraisal, there was at least one response in each of the twenty-one occupational categories. The categories of Customer Services, Inspecting and Testing, Manufacturing Work, Sales Representative, Semi-Skilled Personal Service, and Unskilled Manual Work had very few frequencies throughout each of the three schools. On the other hand, the categories of Agriculture, Clerical Services, Construction, Medical, Public and Legal Services, Skilled Personal Service and Teaching showed a high number of frequencies.

Students' Career Preferences by D.O.T. Classification

When a student indicated a career preference, the preference was assigned a number which corresponded to the Dictionary of Occupational Title's classification of major occupation groups. There are
### TABLE 24.

AN ALPHABETICAL LISTING OF THE 21 OCCUPATIONAL CATEGORIES USED IN THE CHOICE OF A CAREER AND THE FREQUENCIES TABULATED BY GRADE LEVEL, SCHOOL, AND SEX

<table>
<thead>
<tr>
<th>Occupational Categories*</th>
<th>Ninth Grade</th>
<th>Tenth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>School A</td>
<td>School B</td>
</tr>
<tr>
<td></td>
<td>Male N=65</td>
<td>Male N=63</td>
</tr>
<tr>
<td>1. Advertising &amp; Communication</td>
<td>0 0 2 0</td>
<td>1 1 1 1</td>
</tr>
<tr>
<td>2. Agriculture</td>
<td>6 6 17 5</td>
<td>8 10 1 6</td>
</tr>
<tr>
<td>3. Applied Technology</td>
<td>6 1 8 2</td>
<td>6 1 4 1</td>
</tr>
<tr>
<td>4. Appraisal</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>5. Artistic</td>
<td>1 5 3 9</td>
<td>1 8 0 8</td>
</tr>
<tr>
<td>6. Clerical Services</td>
<td>2 17 0 23</td>
<td>0 24 0 29</td>
</tr>
<tr>
<td>7. Construction, Crafts</td>
<td>19 0 26 1</td>
<td>14 0 12 2</td>
</tr>
<tr>
<td>8. Customer Services</td>
<td>0 0 0 1</td>
<td>0 0 0 2</td>
</tr>
<tr>
<td>9. Inspecting and Testing</td>
<td>0 0 1 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>10. Management &amp; Supervision</td>
<td>1 0 1 0</td>
<td>2 0 1 0</td>
</tr>
<tr>
<td>11. Manufacturing Work</td>
<td>1 0 2 0</td>
<td>1 0 0 0</td>
</tr>
<tr>
<td>12. Medical &amp; Related Technical Services</td>
<td>3 16 10 33</td>
<td>2 15 7 9</td>
</tr>
<tr>
<td>13. Military Service</td>
<td>11 0 14 0</td>
<td>9 0 0 4</td>
</tr>
<tr>
<td>14. Numerical</td>
<td>2 1 3 3</td>
<td>0 1 0 6</td>
</tr>
<tr>
<td>15. Public &amp; Legal Services</td>
<td>5 3 4 1</td>
<td>6 5 4 1</td>
</tr>
<tr>
<td>16. Sales Representative</td>
<td>0 0 1 0</td>
<td>0 1 0 0</td>
</tr>
<tr>
<td>17. Semi-Skilled Personal Services</td>
<td>0 2 0 1</td>
<td>0 8 0 9</td>
</tr>
<tr>
<td>18. Skilled Personal Services</td>
<td>5 7 3 8</td>
<td>3 4 1 4</td>
</tr>
<tr>
<td>19. Teaching and Counseling</td>
<td>2 5 2 24</td>
<td>6 6 1 7</td>
</tr>
<tr>
<td>20. Transportation</td>
<td>1 0 8 1</td>
<td>1 1 5 0</td>
</tr>
<tr>
<td>21. Unskilled, Semi-Skilled Manual Work</td>
<td>0 0 1 0</td>
<td>1 0 0 0</td>
</tr>
</tbody>
</table>

* See Appendix B for a complete description of each category.
seven D.O.T. major occupation groups. They are: (classification numbers in preferences) (0) Professional and Managerial Occupations; (1) Clerical and Sales Occupations; (2) Service Occupations; (3) Agricultural, Fishery, Forestry, and Kinded Occupations; (4 and 5) Skilled Occupations; (6 and 7) Semi-skilled Occupations; (8 and 9) Unskilled Occupations. An eighth category (No Classification) was added by the author to include those occupations indicated that did not fit into one of the C.O.T. classifications. (This No-Classification category was composed entirely of those students' frequencies which indicated Military Service as their career preference.)

The frequencies by school, grade level, and D.O.T. classifications of those ninth and tenth grade students who indicated a career preference are shown in Table 25.

Tests for Significance of Career Preferences Among and Within Schools

Hypothesis seven was: There is no significant differences in the career aspirations indicated by the ninth grade students among the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions. There were no significant differences in the career aspirations indicated by the ninth grade students among the three high schools of the South-Western City School District, as shown in Table 26. Hypothesis seven was not rejected.

Due to the fact that there were small cell sizes (a low number of frequencies in a given category) it was necessary for the author to combine two categories, as in Table 26. There are only six categories in the chi-square tables for the test of significant differences. This combining of categories
TABLE 25.

THE FREQUENCIES BY SCHOOL, GRADE LEVEL, AND D.O.T. CLASSIFICATION OF THOSE NINTH AND TENTH GRADE STUDENTS WHO INDICATED A CAREER PREFERENCE

<table>
<thead>
<tr>
<th>D.O.T. Classification</th>
<th>School A N = 128</th>
<th>School B N = 218</th>
<th>School C N = 146</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ninth Grade</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(0) Professional and Managerial</td>
<td>45</td>
<td>87</td>
<td>64</td>
</tr>
<tr>
<td>(1) Clerical and Sales</td>
<td>21</td>
<td>33</td>
<td>25</td>
</tr>
<tr>
<td>(2) Service Occupations</td>
<td>4</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>(3) Agricultural Kindered</td>
<td>7</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>(4 &amp; 5) Skilled Occupations</td>
<td>34</td>
<td>59</td>
<td>23</td>
</tr>
<tr>
<td>(6 &amp; 7) Semi-Skilled</td>
<td>5</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>(8 &amp; 9) Unskilled</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>No Classification</td>
<td>11</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td><strong>Tenth Grade</strong></td>
<td>N = 126</td>
<td>N = 244</td>
<td>N = 197</td>
</tr>
<tr>
<td>(0) Professional and Managerial</td>
<td>34</td>
<td>78</td>
<td>82</td>
</tr>
<tr>
<td>(1) Clerical and Sales</td>
<td>28</td>
<td>43</td>
<td>25</td>
</tr>
<tr>
<td>(2) Agricultural Kindered</td>
<td>6</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>(3) Agricultural Kindered</td>
<td>5</td>
<td>8</td>
<td>19</td>
</tr>
<tr>
<td>(4 &amp; 5) Skilled Occupations</td>
<td>30</td>
<td>75</td>
<td>52</td>
</tr>
<tr>
<td>(6 &amp; 7) Semi-Skilled</td>
<td>11</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>(8 &amp; 9) Unskilled</td>
<td>8</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>No Classification</td>
<td>4</td>
<td>14</td>
<td>8</td>
</tr>
</tbody>
</table>
was done under the suggestion of the staff at the Statistics Laboratory at The Ohio State University.

TABLE 26.

AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCE OF THOSE NINTH GRADE STUDENTS WHO HAVE INDICATED A CAREER CHOICE AMONG THE THREE SCHOOLS

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional and Managerial</td>
<td>0.693500</td>
<td>0.006419</td>
<td>0.597439</td>
</tr>
<tr>
<td>Clerical, Sales and Services</td>
<td>0.073564</td>
<td>0.464889</td>
<td>0.330988</td>
</tr>
<tr>
<td>Agricultural and Kindered</td>
<td>0.002272</td>
<td>0.085070</td>
<td>0.132129</td>
</tr>
<tr>
<td>Skilled</td>
<td>0.475999</td>
<td>1.108556</td>
<td>3.808915</td>
</tr>
<tr>
<td>Semi-Skilled and Unskilled</td>
<td>0.230126</td>
<td>3.323112</td>
<td>2.629656</td>
</tr>
<tr>
<td>No Classification</td>
<td>0.532155</td>
<td>1.076519</td>
<td>0.113353</td>
</tr>
</tbody>
</table>

$X^2$ total - 15.684761
Not significant at 0.05 level

Hypothesis eight was: There is no significant difference in the career aspirations indicated by the tenth grade students among the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significance differences within the frequency distributions. There were significant differences in the career aspirations indicated by the tenth grade students among the three high schools of the South-Western District as shown in Table 27. Hypothesis eight was rejected.
AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES OF THOSE TENTH GRADE STUDENTS WHO HAVE INDICATED A CAREER CHOICE AMONG THE THREE SCHOOLS

<table>
<thead>
<tr>
<th>Category</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional and Managerial</td>
<td>1.918314*</td>
<td>0.355682</td>
<td>3.175112*</td>
</tr>
<tr>
<td>Clerical Sales and Service</td>
<td>2.970781*</td>
<td>0.078011</td>
<td>2.835972*</td>
</tr>
<tr>
<td>Agricultural and Kindered</td>
<td>0.599064</td>
<td>2.347848*</td>
<td>5.754985*</td>
</tr>
<tr>
<td>Skilled</td>
<td>0.688499</td>
<td>0.812836*</td>
<td>0.120947</td>
</tr>
<tr>
<td>Semi-Skilled and Unskilled</td>
<td>8.910843*</td>
<td>0.033053</td>
<td>4.399301*</td>
</tr>
<tr>
<td>No Classification</td>
<td>0.556590</td>
<td>0.686564</td>
<td>0.124475</td>
</tr>
</tbody>
</table>

\[ X^2 \text{ total } = 36.368877 \]

Significant at 0.05 level

* Major contributors to significance.

Hypothesis nine was: There is no significant difference between the expressed career aspirations of the ninth and tenth grade students within the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions. There were significant differences between the expressed career aspirations of the ninth and tenth grade students within Schools A and C, but there was no significant difference within School B as shown in Table 28. Hypothesis eight was rejected within School A and C, but was not rejected within School B.
TABLE 28.  
AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES BETWEEN THE EXPRESSED CAREER ASPIRATIONS OF THE NINTH AND TENTH GRADE STUDENTS WITHIN SCHOOLS

<table>
<thead>
<tr>
<th>Categories</th>
<th>1.1643*</th>
<th>0.8474</th>
<th>1.0814</th>
<th>0.923</th>
<th>0.6128</th>
<th>0.0355</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional and Managerial</td>
<td>0.5792</td>
<td>0.6643</td>
<td>0.5572</td>
<td>0.6266</td>
<td>0.8313</td>
<td>0.8127</td>
</tr>
<tr>
<td>Clerical, Sales and Service</td>
<td>0.1962</td>
<td>0.1715</td>
<td>1.0373</td>
<td>0.8087</td>
<td>1.4249*</td>
<td>1.2082*</td>
</tr>
<tr>
<td>Agricultural Occupations</td>
<td>0.4157</td>
<td>0.1409</td>
<td>0.2817</td>
<td>0.2541</td>
<td>2.4486*</td>
<td>1.9088*</td>
</tr>
<tr>
<td>Skilled Occupations</td>
<td>3.1675*</td>
<td>12.6704*</td>
<td>0.9418</td>
<td>1.2039</td>
<td>2.6297*</td>
<td>1.5927*</td>
</tr>
<tr>
<td>Semi-Skilled and Unskilled Occupations</td>
<td>1.7110*</td>
<td>1.6425*</td>
<td>0.0647</td>
<td>0.0280</td>
<td>2.4764</td>
<td>0.2830</td>
</tr>
<tr>
<td>No Classification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$X^2$ total = 23.3709

Significant at 0.05 level

$X^2$ total = 7.8377

Not significant at 0.05 level

$X^2$ total = 14.5646

Significant at 0.05 level

* Major contributors to significance.
Students’ Career Preferences Compared with Parents’ Career Choice

The students were asked to indicate which occupational category given in the questionnaire best described their fathers', guardians', or head of the households' chosen occupation. The frequencies, by school and grade level, of the twenty-one occupational categories indicated by the students who made a career choice and their parents' chosen occupation are shown in Table 29.

An examination of Table 29 revealed that the parents are represented in each category in one of the three schools. There were some striking differences between the parents' chosen occupations and the students' career preferences. The occupational category of Agriculture was one example. In each school, at both grade levels, the students preferred careers in Agriculturally related fields much more often than there were parents working in that field. This might relate to the present social interest in the field of ecology, since most of the students wanted a career as a conservationist, forest ranger, game warden, or government hunter. This could also be linked with the large number of television programs depicting the "great outdoors". There were also a large number of preferences for becoming a veterinarian, which caused too large a number of responses to appear in this category.

Other examples of differences between students' career preferences and parents' chosen occupation were the categories titled Artistic, Clerical, Managerial, Medical, Sales, Teaching, and Unskilled work.

The frequencies in the category of "No Response" might be attributed to either the students not knowing their parents' occupation,
**TABLE 29.**

A COMPARISON OF THE FREQUENCIES, BY SCHOOL AND GRADE LEVEL, OF THE 21 OCCUPATIONAL CATEGORIES INDICATED BY THE STUDENTS WHO HAVE MADE A CHOICE OF A CAREER AND THEIR PARENTS' OCCUPATION

<table>
<thead>
<tr>
<th>Occupational Categories*</th>
<th>School A Ninth</th>
<th>School A Tenth</th>
<th>School B Ninth</th>
<th>School B Tenth</th>
<th>School C Ninth</th>
<th>School C Tenth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N = 128</td>
<td>N = 126</td>
<td>N = 218</td>
<td>N = 244</td>
<td>N = 146</td>
<td>N = 197</td>
</tr>
<tr>
<td></td>
<td>S  P  S  P</td>
<td>S  P</td>
<td>S  P</td>
<td>S  P</td>
<td>S  P</td>
<td>S  P</td>
</tr>
<tr>
<td>1. Advertising &amp; Communication</td>
<td>0 1 2 0</td>
<td>2 2 5 2</td>
<td>2 1 7 1</td>
<td>2 2 5 2</td>
<td>2 1 7 1</td>
<td></td>
</tr>
<tr>
<td>2. Agriculture</td>
<td>12 0 7 0</td>
<td>22 3 19 5</td>
<td>18 0 22 7</td>
<td>18 0 22 7</td>
<td>18 0 22 7</td>
<td>18 0 22 7</td>
</tr>
<tr>
<td>3. Applied Technology</td>
<td>7 3 5 1</td>
<td>8 4 22 11</td>
<td>7 3 10 6</td>
<td>7 3 10 6</td>
<td>7 3 10 6</td>
<td>7 3 10 6</td>
</tr>
<tr>
<td>4. Appraisal</td>
<td>0 2 0 0</td>
<td>0 2 0 2</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
<td>0 0 0 0</td>
</tr>
<tr>
<td>5. Artistic</td>
<td>6 1 8 0</td>
<td>12 1 11 1</td>
<td>9 1 14 0</td>
<td>9 1 14 0</td>
<td>9 1 14 0</td>
<td>9 1 14 0</td>
</tr>
<tr>
<td>8. Customer Services</td>
<td>0 5 2 6</td>
<td>1 3 2 4</td>
<td>0 2 2 3</td>
<td>0 2 2 3</td>
<td>0 2 2 3</td>
<td>0 2 2 3</td>
</tr>
<tr>
<td>9. Inspecting and Testing</td>
<td>0 1 0 1</td>
<td>1 6 0 4</td>
<td>0 2 0 4</td>
<td>0 2 0 4</td>
<td>0 2 0 4</td>
<td>0 2 0 4</td>
</tr>
<tr>
<td>10. Management &amp; Supervision</td>
<td>1 12 1 13</td>
<td>1 23 4 36</td>
<td>2 24 4 32</td>
<td>2 24 4 32</td>
<td>2 24 4 32</td>
<td>2 24 4 32</td>
</tr>
<tr>
<td>11. Manufacturing Work</td>
<td>1 11 0 14</td>
<td>2 8 0 6</td>
<td>1 15 0 20</td>
<td>1 15 0 20</td>
<td>1 15 0 20</td>
<td>1 15 0 20</td>
</tr>
<tr>
<td>12. Medical &amp; Related Technical Services</td>
<td>19 1 16 0</td>
<td>43 3 41 8</td>
<td>17 4 22 2</td>
<td>17 4 22 2</td>
<td>17 4 22 2</td>
<td>17 4 22 2</td>
</tr>
<tr>
<td>13. Military Service</td>
<td>11 1 4 0</td>
<td>14 3 14 1</td>
<td>9 0 8 1</td>
<td>9 0 8 1</td>
<td>9 0 8 1</td>
<td>9 0 8 1</td>
</tr>
<tr>
<td>14. Numerical</td>
<td>3 1 6 3</td>
<td>6 4 7 4</td>
<td>1 1 4 2</td>
<td>1 1 4 2</td>
<td>1 1 4 2</td>
<td>1 1 4 2</td>
</tr>
<tr>
<td>15. Public &amp; Legal Services</td>
<td>8 6 5 4</td>
<td>5 5 9 8</td>
<td>11 2 10 5</td>
<td>11 2 10 5</td>
<td>11 2 10 5</td>
<td>11 2 10 5</td>
</tr>
<tr>
<td>16. Sales Representative</td>
<td>0 6 0 6</td>
<td>1 17 2 16</td>
<td>1 9 2 14</td>
<td>1 9 2 14</td>
<td>1 9 2 14</td>
<td>1 9 2 14</td>
</tr>
<tr>
<td>17. Semi-Skilled Personal Services</td>
<td>2 4 9 5</td>
<td>1 6 7 3</td>
<td>8 4 6 1</td>
<td>8 4 6 1</td>
<td>8 4 6 1</td>
<td>8 4 6 1</td>
</tr>
<tr>
<td>18. Skilled Personal Services</td>
<td>12 1 5 1</td>
<td>11 2 10 4</td>
<td>7 8 6 3</td>
<td>7 8 6 3</td>
<td>7 8 6 3</td>
<td>7 8 6 3</td>
</tr>
<tr>
<td>19. Teaching and Counseling</td>
<td>7 3 8 3</td>
<td>26 9 20 2</td>
<td>12 6 27 3</td>
<td>12 6 27 3</td>
<td>12 6 27 3</td>
<td>12 6 27 3</td>
</tr>
<tr>
<td>20. Transportation</td>
<td>1 19 5 11</td>
<td>9 16 4 18</td>
<td>2 8 3 14</td>
<td>2 8 3 14</td>
<td>2 8 3 14</td>
<td>2 8 3 14</td>
</tr>
<tr>
<td>21. Unskilled, Semi-Skilled Manual Work</td>
<td>0 4 0 8</td>
<td>1 8 1 10</td>
<td>1 7 0 9</td>
<td>1 7 0 9</td>
<td>1 7 0 9</td>
<td>1 7 0 9</td>
</tr>
<tr>
<td>22. No Response</td>
<td>0 6 0 10</td>
<td>0 32 0 19</td>
<td>0 5 0 12</td>
<td>0 5 0 12</td>
<td>0 5 0 12</td>
<td>0 5 0 12</td>
</tr>
</tbody>
</table>

*S = Students, P = Parents  *See Appendix B for a complete description of each category.
or they might have skipped the words "parent's, guardian's, or head of household's" and felt that they had already answered the question earlier, since they were asked a very similar question about their own career choice. Some of the frequencies and responses in the category of "No Classification" were: "Unemployed" (14); "Did not know" (36); "Disabled" (3); and "Welfare" (5).

Students' Career-Preferences Compared with Parents' Career Choice by D.O.T. Classification

After the students were asked to indicate which occupational category best described their father's, guardian's or head of household's chosen career, they were asked to state in their own words exactly what type of work he performs. From this statement, their parents' chosen career was assigned a number from the D.O.T. classification system. A comparison of the frequencies, by school, and grade level, between the student's indicated career preferences and their parent's chosen occupation as classified under the D.O.T. major occupational groups are shown in Table 30.

An examination of the table revealed some interesting facts. First, at each grade level, in all three schools, the students aspired for careers at the Professional and Managerial level anywhere from two to four times more often than that which the parents were employed. A second point was in the classification of Agricultural occupations. As noted earlier, the students indicated a career in the field of agriculture much more often than were the parents employed in that area. A third point was one of similarity. The classifications of Clerical and Sales Services, and Skilled Occupations showed a rather balanced relationship
### Table 30.

A comparison of the frequencies, by school and grade level, between the student's indicated career choices and their parent's chosen occupation with the dictionary of occupational titles major occupational groups.

<table>
<thead>
<tr>
<th>School</th>
<th>Ninth Grade</th>
<th>Dictionary of Occupational Titles Major Groups</th>
<th>Tenth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Students</td>
<td>Parents</td>
<td>Students</td>
</tr>
<tr>
<td>A</td>
<td>45</td>
<td>15 Professional and Managerial</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>9 Clerical &amp; Sales</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>9 Services</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>1 Agricultural &amp; Kindred</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>34</td>
<td>44 Skilled</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>25 Semi-Skilled</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>9 Unskilled</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>4 No Classification*</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>6 No Response</td>
<td>0</td>
</tr>
<tr>
<td>B</td>
<td>87</td>
<td>32 Professional and Managerial</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>33</td>
<td>43 Clerical &amp; Sales</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>8 Services</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>4 Agricultural &amp; Kindred</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>59</td>
<td>47 Skilled</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>17 Semi-Skilled</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>3 Unskilled</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>32 No Classification*</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>32 No Response</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>64</td>
<td>26 Professional and Managerial</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>19 Clerical &amp; Sales</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>3 Services</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>0 Agricultural &amp; Kindred</td>
<td>19</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>50 Skilled</td>
<td>52</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>27 Semi-Skilled</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>8 Unskilled</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>8 No Classification*</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>5 No Response</td>
<td>0</td>
</tr>
</tbody>
</table>

* No classification for students contains all responses labeled Military Service.
between students and parents. The fact that the school district's
major emphasis on vocational education was in these areas might have
had an effect on the students' career choices. A fourth and final point
of interest between the students' choices and the parents' occupations
was contained in the classifications of Semi-Skilled and Unskilled
Occupations. At both grade levels in all three schools, the frequencies
for the parents outnumber those of the students. This might be attributed
to the strong emphasis being placed upon a college degree in today's
society. These data are also in agreement with those found in the study
made by Kroger and Louttit (44).

Students' Contact with Guidance Counselors

The students were then asked on the questionnaire to respond
to two questions relating to their guidance counselor. The first question
was: "How many times have you met with your guidance counselor this
school year (September to present)?". The frequencies, by school and
grade level, of the responses to this question are shown in Table 31.

An examination of the table revealed the largest concentration
of frequencies in the "None", "One", "Two", "Three" range. One alarming
aspect of the responses was the number of responses in the "None"
category, especially the ninth graders who have entered high school for
the first time. It was also interesting to note that the two larger
sample populations--Schools B and C had a much larger number (in pro-
portion to School A) of students who had not met with their guidance
counselor. Therefore, it might be concluded that the larger the school
population, the more likely students will not have met with their guidance
TABLE 31.
THE FREQUENCIES, BY SCHOOLS, AND GRADE LEVELS OF THE NUMBER OF TIMES THAT THOSE STUDENTS WHO HAVE MADE A CHOICE OF A CAREER HAVE MET WITH THEIR GUIDANCE COUNSELOR

<table>
<thead>
<tr>
<th>Number of times met with guidance counselor</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ninth</td>
<td>Tenth</td>
<td>Ninth</td>
</tr>
<tr>
<td></td>
<td>N=128</td>
<td>N=126</td>
<td>N=218</td>
</tr>
<tr>
<td>None</td>
<td>17</td>
<td>17</td>
<td>83</td>
</tr>
<tr>
<td>1</td>
<td>30</td>
<td>14</td>
<td>49</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>33</td>
<td>41</td>
</tr>
<tr>
<td>3</td>
<td>17</td>
<td>26</td>
<td>21</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>More</td>
<td>6</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>No Response</td>
<td>5</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

counselor. School A had the reputation of having an excellent guidance staff, which could indicate there was little reluctance on the part of students to meet with their counselor or that the counselors had made a greater effort to meet with their students.

Students' Reasons for Meeting with Guidance Counselors

The second question related to guidance counselors dealt with the reasons for having met. The frequencies by school, grade level and sex of those reasons given by the students for having met with their guidance counselor are shown in Table 32. An examination of the data revealed that the "Scheduling" category was the primary reason students indicated for having met with their guidance counselor. Scheduling often
TABLE 32.

THE FREQUENCIES, BY SCHOOL, GRADE LEVEL, AND SEX, OF THE REASONS GIVEN BY THE STUDENTS FOR MEETING WITH THEIR GUIDANCE COUNSELOR

<table>
<thead>
<tr>
<th>Reasons</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9th</td>
<td>10th</td>
<td>9th</td>
</tr>
<tr>
<td></td>
<td>M F M F</td>
<td>M F M F</td>
<td>M F M F</td>
</tr>
<tr>
<td>(A) Discipline</td>
<td>6 9 5 13</td>
<td>6 2 6 1</td>
<td>8 4 8 5</td>
</tr>
<tr>
<td>(b) Scheduling</td>
<td>76 82 60 78</td>
<td>105 80 117 118</td>
<td>67 53 100 115</td>
</tr>
<tr>
<td>(C) College Information</td>
<td>13 8 5 10</td>
<td>16 14 29 41</td>
<td>5 7 15 30</td>
</tr>
<tr>
<td>(D) Career Information</td>
<td>20 33 17 44</td>
<td>11 26 49 63</td>
<td>10 4 17 68</td>
</tr>
<tr>
<td>(E) Interpretation of Test Scores</td>
<td>37 24 2 19</td>
<td>6 7 21 22</td>
<td>12 9 1 8</td>
</tr>
<tr>
<td>(F) Other Reasons</td>
<td>10 19 12 18</td>
<td>15 15 3 10</td>
<td>13 6 7 42</td>
</tr>
<tr>
<td>(G) No Response</td>
<td>0 1 1 3</td>
<td>2 0 0 0</td>
<td>4 0 1 0</td>
</tr>
</tbody>
</table>

outnumbers all of the other reasons combined at some grade level within the three schools. This was interesting because scheduling is not a prescribed duty as outlined by Reccio, Peters, Shertzer, Stone or Brewer who are considered by many educators to be experts in the discipline of educational guidance.

The frequencies in the category of "College Information" are probably linked directly to those in the category of "Career Information", since most students interested in going to college have some type of career in mind for which they desire to prepare. The category of "Interpretation of Test Scores" might also be linked to career information, since this serves as an opportunity to discuss future plans in terms of student abilities and limitations. Some of the frequencies and responses in the "Others" category were: "Grades" (6); "Personal" (11); "Graduate Early" (3), "Just to Talk" (10), and "Teacher Problems" (4).
Forces Most Influential on Students' Career Choice

The students were asked to respond to the question: "Which of the following things has influenced you the most with your present choice of a career?". They were given six possible responses. The frequencies by school, grade level, and sex of those things which were most influential in assisting the students with their present choice of a career are shown in Table 33.

An examination of the frequencies in Table 33 revealed that the categories of "Work Experience" and "Hobbies" were the most influential things assisting the students with their present career choice. It is also interesting to note that "Work Experience" was more of an influence on the females than on the males in all but one grade in all three schools, whereas "Hobbies" had the most influence on males in all but one grade in each of the three schools. One surprising note to the author was that the category of "Book and Magazines" was generally more influential on the entire sample than was the category of "Radio and T.V.". Some of the frequencies and responses given in the "Others" category were: "School work" (33); "R.O.T.C." (5); "Tech School Tour" (7); and "Cars" (5).

Likewise, the students were asked to respond to the question: "Which one of the following persons have influenced you the most with your present choice of a career?". They were given six possible responses. The frequencies by school, grade level, and sex of those people which were most influential in assisting the students with their present choice of a career are shown in Table 34, page 97.
TABLE 33.

THE FREQUENCIES BY SCHOOL, GRADE LEVEL, AND SEX, OF THOSE "THINGS" WHICH WERE MOST INFLUENTIAL IN ASSISTING THE STUDENTS WITH THEIR PRESENT CAREER CHOICE

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A Ninth</th>
<th>School B Ninth</th>
<th>School C Ninth</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male Female</td>
<td>Male Female</td>
<td>Male Female</td>
</tr>
<tr>
<td></td>
<td>N=65 N=62</td>
<td>N=108 N=110</td>
<td>N=95 N=102</td>
</tr>
<tr>
<td>Books and Magazines</td>
<td>8 7</td>
<td>13 10</td>
<td>12 7</td>
</tr>
<tr>
<td>T.V. and Radio</td>
<td>10 6</td>
<td>6 6</td>
<td>6 7</td>
</tr>
<tr>
<td>Work Experience</td>
<td>13 20</td>
<td>13 10</td>
<td>5 7</td>
</tr>
<tr>
<td>Hobbies</td>
<td>4 12</td>
<td>28 19</td>
<td>10 8</td>
</tr>
<tr>
<td>Others</td>
<td>8 3</td>
<td>16 21</td>
<td>10 11</td>
</tr>
<tr>
<td>None of the Above</td>
<td>17 15</td>
<td>26 38</td>
<td>13 29</td>
</tr>
<tr>
<td>No Response</td>
<td>5 0</td>
<td>6 6</td>
<td>6 15</td>
</tr>
</tbody>
</table>
TABLE 34.

THE FREQUENCIES BY SCHOOL, GRADE LEVEL, AND SEX OF THE PEOPLE WHICH WERE MOST INFLUENTIAL IN ASSISTING THE STUDENTS WITH THEIR PRESENT CAREER CHOICE

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ninth</td>
<td>Tenth</td>
<td>Ninth</td>
</tr>
<tr>
<td></td>
<td>Male Female</td>
<td>Male Female</td>
<td>Male Female</td>
</tr>
<tr>
<td></td>
<td>N=65 N=63</td>
<td>N=37 N=89</td>
<td>N=108 N=110</td>
</tr>
<tr>
<td>(A) Parents</td>
<td>14 13</td>
<td>10 23</td>
<td>34 28</td>
</tr>
<tr>
<td>(B) Teachers</td>
<td>4 3</td>
<td>5 12</td>
<td>5 9</td>
</tr>
<tr>
<td>(C) Friends</td>
<td>10 7</td>
<td>3 11</td>
<td>8 12</td>
</tr>
<tr>
<td>(D) Guidance Counselor</td>
<td>1 0</td>
<td>1 1</td>
<td>2 1</td>
</tr>
<tr>
<td>(E) No One in Particular</td>
<td>25 30</td>
<td>15 31</td>
<td>36 46</td>
</tr>
<tr>
<td>(F) Others</td>
<td>6 9</td>
<td>4 9</td>
<td>14 10</td>
</tr>
<tr>
<td>(G) No Response</td>
<td>5 0</td>
<td>0 2</td>
<td>9 5</td>
</tr>
</tbody>
</table>
An examination of the frequencies in Table 34 revealed that a large number of the students felt that "No One in Particular" helped them in making their present career choice. The second most influential people given by the students was the category of "Parents" with the categories of "Teachers" and "Friends" close behind. One very interesting point was the lack of frequencies in the category of "Guidance Counselor". There were only twenty students in all three schools that indicated the guidance counselor as the most influential person in assisting them with their present career choice. Some of the frequencies and responses in the "Others" category were: "Relatives" (42); "Myself" (19); "Doctors" (5); and "God" (3).

Tests for Significance of Factors Which Influenced Students' Career Choices Among Schools

Hypothesis ten was: There is no significant difference in the forces (things) which influenced the ninth grade students' career selections among the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions. There were significant differences in the forces (things) which influenced the ninth grade students' selections among the three high schools as shown in Table 35. Hypothesis ten was rejected. As stated earlier, due to small cell sizes (a lack of frequencies in a given category) it was necessary for the author to combine two categories in each of the following five tables. It was necessary to combine three categories in Table 40.
### Table 35.

AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES BY SCHOOL AND GRADE LEVEL OF THOSE FORCES - THINGS - WHICH WERE MOST INFLUENTIAL IN ASSISTING THE NINTH GRADE STUDENTS WITH THEIR PRESENT CAREER CHOICE AMONG SCHOOLS

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Books and Magazines</td>
<td>0.0015</td>
<td>0.2070</td>
<td>0.2515</td>
</tr>
<tr>
<td>(B) T.V. and Radio</td>
<td>2.7204*</td>
<td>2.0524*</td>
<td>0.0642</td>
</tr>
<tr>
<td>(C) Work Experience</td>
<td>11.5100*</td>
<td>2.2434*</td>
<td>1.7260*</td>
</tr>
<tr>
<td>(D) Hobbies</td>
<td>0.3209</td>
<td>7.7603*</td>
<td>0.4350</td>
</tr>
<tr>
<td>(E) Others</td>
<td>2.6722*</td>
<td>1.3758*</td>
<td>0.0153</td>
</tr>
<tr>
<td>(F) None of the above and no response</td>
<td>1.6548*</td>
<td>0.0428</td>
<td>2.2745*</td>
</tr>
</tbody>
</table>

\[ X^2 \text{ total} = 37.3280 \]

* Major contributors to significance.

Hypothesis eleven was: There is no significant difference in the forces (people) which influenced the ninth grade students' career selections among the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions. There were no significant differences in the forces (people) which influenced the ninth grade students' selections among the three high schools as shown in Table 36. Hypothesis eleven was not rejected.

Hypothesis 12 was: There is no significant difference in the forces (things) which influenced the tenth grade students' career selections among the three high schools of the South-Western City School.
### Table 36.

**An indication of significance of the differences, by school, and grade level of those forces - people - which were most influential in assisting the ninth grade students with their present career choice among schools**

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Parents</td>
<td>0.4852</td>
<td>1.3815</td>
<td>0.6361</td>
</tr>
<tr>
<td>(B) Teachers</td>
<td>0.2463</td>
<td>0.0251</td>
<td>0.5029</td>
</tr>
<tr>
<td>(C) Friends</td>
<td>2.2445</td>
<td>0.0118</td>
<td>1.6261</td>
</tr>
<tr>
<td>(D) No one</td>
<td>0.5221</td>
<td>0.2170</td>
<td>0.0115</td>
</tr>
<tr>
<td>(E) Guidance Counselor and Others</td>
<td>0.0039</td>
<td>0.0023</td>
<td>0.0034</td>
</tr>
<tr>
<td>(F) No Response</td>
<td>2.9375</td>
<td>0.5336</td>
<td>6.5293</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ total} = 17.9201 \]

Not significant at 0.05 level

District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions. There were no significant differences in the forces (things) which influenced the tenth grade students' selections among the three high schools as shown in Table 37. Hypothesis twelve was not rejected.

Hypothesis thirteen was: There is no significant difference in the forces (people) which influenced the tenth grade students' career selections among the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions.
TABLE 37.

AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES, BY SCHOOL, AND GRADE LEVEL OF THOSE FORCES - THINGS - WHICH WERE MOST INFLUENTIAL IN ASSISTING THE TENTH GRADE STUDENTS WITH THEIR PRESENT CAREER CHOICE AMONG SCHOOLS

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Books and Magazines</td>
<td>0.0259</td>
<td>0.0600</td>
<td>0.2019</td>
</tr>
<tr>
<td>(B) T.V. and Radio</td>
<td>0.2033</td>
<td>0.0774</td>
<td>0.4291</td>
</tr>
<tr>
<td>(C) Work Experience</td>
<td>1.1523</td>
<td>5.2103</td>
<td>2.9671</td>
</tr>
<tr>
<td>(D) Hobbies</td>
<td>1.9888</td>
<td>2.5308</td>
<td>0.4035</td>
</tr>
<tr>
<td>(E) Others</td>
<td>0.4235</td>
<td>0.2286</td>
<td>1.1799</td>
</tr>
<tr>
<td>(F) None of the above and No Response</td>
<td>0.0401</td>
<td>0.1297</td>
<td>0.2714</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ total} = 17.3436 \]

Not significant at 0.05 level

There were significant differences in the forces (people) which influenced the tenth grade students' selections among the three high schools as shown in Table 38. Hypothesis thirteen was rejected.

Tests for Significance of Factors Which Influenced Students Career Choices Within Schools

Hypothesis fourteen was: There is no significant difference between the forces (things) which influenced the ninth and tenth grade students' career selections within the three high schools of the South-Western City School District. The chi-square, at the 0.05 level of confidence, was used to test for significant differences within the frequency distributions. There were no significant differences in the
TABLE 38.
AN INDICATION OF SIGNIFICANCE OF THE DIFFERENCES, BY SCHOOL, AND GRADE LEVEL OF THOSE FORCES - THINGS - WHICH WERE MOST INFLUENTIAL IN ASSISTING THE NINTH GRADE STUDENTS WITH THEIR PRESENT CAREER CHOICE AMONG SCHOOLS

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A</th>
<th>School B</th>
<th>School C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Parents</td>
<td>1.6681*</td>
<td>1.7074*</td>
<td>0.1441</td>
</tr>
<tr>
<td>(B) Teachers</td>
<td>0.2380</td>
<td>0.0218</td>
<td>0.0668</td>
</tr>
<tr>
<td>(C) Friends</td>
<td>0.0067</td>
<td>0.0005</td>
<td>0.0003</td>
</tr>
<tr>
<td>(D) No One</td>
<td>1.3709*</td>
<td>0.0315</td>
<td>0.5629</td>
</tr>
<tr>
<td>(E) Guidance Counselor and Others</td>
<td>0.1125</td>
<td>0.0066</td>
<td>0.0249</td>
</tr>
<tr>
<td>(F) No Response</td>
<td>0.3522</td>
<td>7.4744*</td>
<td>6.3949*</td>
</tr>
</tbody>
</table>

\[ \chi^2 \text{ total} = 20.1845 \]

Significant at 0.05 level

* Major contributors to significance.

forces (things) which influenced the ninth and tenth grade students' career selections within Schools A and C, but there was a significant difference within School B as shown in Table 39. Hypothesis fourteen was not rejected within Schools A and C, but was rejected within School B.

Hypothesis fifteen was: There is no significant difference between the forces (people) which influenced the ninth and tenth grade students' career selections within the three high schools of the South-Western City School District. The chi-square test, at the 0.05 level of confidence, was used to test for significant differences within the
TABLE 39.

AN INDICATION OF SIGNIFICANCE DIFFERENCE BETWEEN THE FORCES - THINGS - WHICH INFLUENCED THE NINTH AND TENTH GRADE STUDENTS' CAREER SELECTIONS WITHIN SCHOOLS

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A Ninth</th>
<th>School A Tenth</th>
<th>School B Ninth</th>
<th>School B Tenth</th>
<th>School C Ninth</th>
<th>School C Tenth</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Books and Magazines</td>
<td>0.0114</td>
<td>0.0093</td>
<td>0.1257</td>
<td>0.1593</td>
<td>0.0052</td>
<td>0.0019</td>
</tr>
<tr>
<td>(B) T.V. and Radio</td>
<td>0.9522</td>
<td>0.9078</td>
<td>4.6496*</td>
<td>4.3021*</td>
<td>0.0246</td>
<td>0.0252</td>
</tr>
<tr>
<td>(C) Work Experience</td>
<td>0.8319</td>
<td>0.8037</td>
<td>1.6255*</td>
<td>1.1755*</td>
<td>2.5736</td>
<td>1.8250</td>
</tr>
<tr>
<td>(D) Hobbies</td>
<td>0.0095</td>
<td>0.0093</td>
<td>0.1211</td>
<td>0.0089</td>
<td>0.2913</td>
<td>0.2123</td>
</tr>
<tr>
<td>(E) Others</td>
<td>1.9117</td>
<td>1.9282</td>
<td>0.0260</td>
<td>0.1373</td>
<td>0.4144</td>
<td>0.0159</td>
</tr>
<tr>
<td>(F) None of the above and No Response</td>
<td>0.2734</td>
<td>0.2760</td>
<td>0.0434</td>
<td>0.0213</td>
<td>2.0110</td>
<td>1.440</td>
</tr>
</tbody>
</table>

$X^2$ total = 7.9241  $X^2$ total = 12.3957  $X^2$ total = 5.7345

Not significant at 0.05 level  Significant at 0.05 level  Not significant at 0.05 level

* Major contributors to significance.

frequency distributions. There were no significant differences in the forces (people) which influenced the ninth and tenth grade students' career selections within School A, but there was a significant difference within Schools B and C as shown in Table 40. Hypothesis fifteen was not rejected within School A, but was rejected within Schools B and C.
**TABLE 40.**

**AN INDICATION OF SIGNIFICANCE DIFFERENCE BETWEEN THE FORCES - PEOPLE - WHICH INFLUENCED THE NINTH AND TENTH GRADE STUDENTS' CAREER SELECTIONS WITHIN SCHOOLS**

<table>
<thead>
<tr>
<th>Categories</th>
<th>School A Ninth</th>
<th>School B Ninth</th>
<th>School C Ninth</th>
<th>School A Tenth</th>
<th>School B Tenth</th>
<th>School C Tenth</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Parents</td>
<td>0.2561</td>
<td>3.6995*</td>
<td>0.2531</td>
<td>3.2953*</td>
<td>0.091</td>
<td>0.0047</td>
</tr>
<tr>
<td>(B) Teachers</td>
<td>2.0139</td>
<td>1.7070*</td>
<td>2.0007</td>
<td>1.5273*</td>
<td>0.4166</td>
<td>0.3196</td>
</tr>
<tr>
<td>(C) Friends</td>
<td>0.1724</td>
<td>0.1318</td>
<td>0.1672</td>
<td>0.1221</td>
<td>1.0789*</td>
<td>0.8697</td>
</tr>
<tr>
<td>(D) No One</td>
<td>0.4797</td>
<td>0.5066</td>
<td>0.4703</td>
<td>0.4543</td>
<td>0.5580</td>
<td>0.4372</td>
</tr>
<tr>
<td>(E) Guidance Counselor, Others, and No Response</td>
<td>0.0702</td>
<td>0.0183</td>
<td>0.0689</td>
<td>0.0154</td>
<td>6.7222*</td>
<td>4.9336*</td>
</tr>
</tbody>
</table>

\[ X^2 \text{ total} = 5.9525 \quad X^2 \text{ total} = 11.4776 \quad X^2 \text{ total} = 15.3496 \]

Not significant at 0.05 level  
Significant at 0.05 level  
Significant at 0.05 level

* Major contributors to significance.

### Summary

In this chapter the fifteen hypotheses were tested and the statistical interpretation of the data were presented. The normative data were also discussed and presented in tabular form. In Chapter V the author will give a summary of the study along with the conclusions and recommendations for further research.
CHAPTER V

SUMMARY OF STUDY

Introduction

The purpose of this research was to study the career aspirations of the ninth and tenth grade students in the three high schools of the South-Western City School District. An attempt was made to determine if there were significant differences between those students who have and have not expressed a career preference within and among the three high schools. An additional objective of the study was to determine whether there were significant differences in the preferences and the factors which influenced the students' career choices. Finally, an attempt was made to summarize and present for informational purposes some related characteristics of the adolescents who were tested in the study.

Ninth and tenth grade students within the district's three high schools were the population for this study. All three high schools of the district were selected because they each represented a somewhat different socio-economic attendance area. A questionnaire-type instrument, developed by the author, was used to collect the data.

Testing the null hypothesis of the study necessitated the use of two non-parametric statistical tests. The 0.95 confidence interval was utilized to test for significant differences between those students who have and have not expressed a career preference. The 0.95 confidence
interval was also used to analyze the sample when it was divided according to sex. The chi-square test was used to test for significant differences within and among schools of those students' career preferences and forces which were indicated as most influential in the choice of a career.

The information gathered from the questionnaire was coded and punched on IBM cards for processing. The final stages of the study involved the tabulation and statistical analysis of the data.

Findings

The conclusions of this study are based upon the findings of the author. A summary of the findings are listed below.

1. Of all ninth and tenth graders, 48.9 percent and 56.6 percent, respectively, were willing to express a career preference on the questionnaire at the time of the study. Among the three schools, at the ninth grade level, the percent of affirmative responses ranged from 43.1 percent to 52.7 percent. At the tenth grade level, the affirmative responses ranged from 51.7 to 61.0 percent.

2. The most frequent reasons given by those students who had not indicated a career preference were: "I haven't found a career that I like yet" and "Haven't had enough information to make a choice".

3. There were no significant differences in the percentage of ninth grade students who have and have not expressed a career preference within Schools A and B, but there was a significant difference within School C, at the 0.95 confidence interval.

4. There was a significant difference in the percentage of
tenth grade students who have and have not expressed a career preference within School B, but there was no significant difference within Schools A and C, at the 0.95 confidence interval.

5. There were significant differences in the percentage of ninth grade students who have and have not expressed a career preference among the three schools at the 0.05 level of confidence.

6. There were significant differences in the percentage of tenth grade students who have and have not expressed a career preference among the three schools.

7. There were significant differences in the percentage of ninth and tenth grade students who have and have not expressed a career preference within Schools B and C, but not within School A, at the 0.05 level of confidence.

8. There were significant differences in the percentage of ninth and tenth grade students who have and have not expressed a career preference among the three schools.

9. Fifty-one and three-tenths percent of the ninth grade females had made a career choice as compared to 46.5 percent of the ninth grade males, at the time the questionnaire was administered.

10. Sixty-three and three-tenths percent of the tenth grade females had made a career choice as compared to 49.6 percent of the tenth grade males, at the time the questionnaire was administered.

11. There were no significant differences in the percentage of ninth grade males who have and have not expressed a career preference within Schools A and B; but there was a significant difference within School C, at the 0.95 confidence interval.
12. There were no significant differences in the percentage of ninth grade females who have and have not expressed a career preference within Schools A, B, and C.

13. There were no significant differences in the percentage of the tenth grade males who have and have not expressed a career preference within Schools B and C; but there was a significant difference within School A, at the 0.95 confidence interval.

14. There were significant differences in the percentage of tenth grade females who have and have not expressed a career preference within Schools A and B; but there was no significant difference within School C, at the 0.95 confidence interval.

15. There was no significant difference between those ninth grade males and females who have and have not expressed a career preference within School A; but there was a significant difference between the tenth grade males and females within School A, at the 0.05 level of confidence.

16. There was no significant difference between those ninth grade males and females who have and have not expressed a career preference within School B; but there was a significant difference between the tenth grade males and females within School B, at the 0.05 level of confidence.

17. There was a significant difference between those ninth grade males and females who have and have not expressed a career preference within School C; but there was no significant difference between the tenth grade males and females within School C, at the 0.05 level of confidence.

18. The occupational categories of Agriculture, Clerical Services, Construction, Medical, Public and Legal Services, Skilled
Personal Service and Teaching were the most preferred categories by those students who had expressed a career choice.

19. The occupational categories of Customer Services, Inspecting and Testing, Manufacturing Work, Sales Representative, Semi-Skilled Personal Services, and Unskilled Manual Work were the least preferred categories by those students who had expressed a career choice.

20. Most students preferred careers at the Professional and Managerial, Clerical and Sales, and Skilled levels. Likewise, very few students preferred careers at the Semi-Skilled and Unskilled levels (under the D.O.T. system of classification).

21. There were no significant differences in the career aspirations indicated by the ninth grade students among the three schools, at the 0.05 level of confidence.

22. There were significant differences in the career aspirations indicated by the tenth grade students among the three schools, at the 0.05 level of confidence.

23. There were significant differences between the expressed career aspirations of the ninth and tenth grade students within Schools A and C, but there was no significant difference within School B.

24. Most parental occupations were in the categories of Construction, Management, Manufacturing, Public Services, and Transportation.

25. Most parental occupations were at the Skilled and Semi-Skilled level (under the D.O.T. system of classification).

26. Most students had met with their guidance counselor one, two, or three times with very little difference between grade levels,
but there were some differences between schools. Scheduling was the
overwhelming reason for students having met with their guidance
counselor.

27. Work Experience and Hobbies were the things most influ-
ential in assisting the students with their career choice, while Parents
were the people most influential in assisting the students with their
career choice.

28. There were significant differences in the forces (things)
which influenced the ninth grade student's selections among the three
schools, at the 0.05 level of confidence.

29. There were no significant differences in the forces
(people) which influenced the ninth grade students' selections among
the three schools, at the 0.05 level of confidence.

30. There were no significant differences in the forces
(things) which influenced the tenth grade students' selections among
the three schools, at 0.05 level of confidence.

31. There were significant differences in the forces (people)
which influenced the tenth grade students' selections among the three
schools, at the 0.05 level of confidence.

32. There were no significant differences in the forces
(things) which influenced the ninth and tenth grade students' career
selections within Schools A and C, but there was a significant difference
within School B, at the 0.05 level of confidence.

33. There were no significant differences in the forces
(people) which influenced the ninth and tenth grade students' career
selections within School A, but there was a significant difference within
Schools B and C, at the 0.05 level of confidence.

Conclusions

Based on the findings of this study and the experience of the researcher, the following conclusions (with the corresponding findings number given in parentheses) may be drawn from this study:

1. One additional year in education increases career selection, more so for females than males. (1,9, and 10)
2. There is a need for more career exploration-orientation information within each school. (1,2, and 26)
3. Only a limited number of identifiable differences were found between those students who have and have not made an initial career choice. Within the three schools at both the ninth and tenth grade levels. The factors which caused these differences could not be identified. (3,4,7,8, 11-17, 21-23, and 28-33)
4. There were some differences found between those students who have and have not made an initial career choice among the three schools at both the ninth and tenth grade levels. (5 and 6)
5. The students at both the ninth and tenth grade levels aspire for higher level careers than those held by their parents. (18,19, and 20)
6. Work experience, Hobbies and Parents were the most influential forces in assisting both the ninth and tenth grade students, with their career selections. (27)
7. In each of the three schools there is a need for a reevaluation of the guidance staff's prescribed duties. (1,2, and 26)

Recommendations

The findings of this study seem to support the following recommendations:

1. It is recommended that this study be replicated in two to three years in order to ascertain which careers the subjects of this study are entering.
(2) It is recommended that additional research be done to determine the type and nature of career information services provided at the ninth and tenth grade level.

(3) It is recommended that additional research be done to determine why some students have not made a career choice.

(4) It is recommended that additional research be done in the earlier grades (K-8) to determine needs for a career exploration program.
APPENDIX A

MEMO TO HOMEROOM TEACHERS
TO: All 9th and 10th grade Homeroom Teachers

FROM: Jerry Wircenski, Grove City High School

Re: Career Interest Survey

The enclosed questionnaire will be used in a research study at Ohio State University, Department of Vocational-Technical Education. Please distribute the questionnaire to all of your homeroom students in attendance today. Do not be concerned with those students who are absent or arrive too late to complete the instrument. The questionnaire may be completed in either pencil or pen and the students need not sign or identify themselves in any manner.

To better facilitate the administration of this questionnaire, it is suggested that the instrument be distributed to the student's seat prior to the beginning of the homeroom period.

Upon completion, please collect and return the questionnaire to the school office immediately following the homeroom period.

JW:rs
APPENDIX B

CAREER INTEREST SURVEY
CAREER INTEREST SURVEY

The following questionnaire will be used in a research study at The Ohio State University, Department of Vocational-Technical Education. Please answer the questions to the best of your ability. Your sincere cooperation will be greatly appreciated.

1) School (circle answer)
   A. Franklin Heights
   B. Grove City
   C. Westland

2) Sex (circle answer)
   A. Male
   B. Female

3) Grade Level (circle answer)
   A. 9th grade
   B. 10th grade

4) Have you decided upon your initial career after high school graduation? (circle answer)
   A. Yes
   B. No

If you answered No in question 4, go directly to question 13 on page 3.

NOTE:
If you answered Yes in question 4, go directly to question 5 on this page.

5) Review all 22 occupation categories briefly described below and then circle the number in front of the category which best fits your initial career objective following high school graduation.

   1. Advertising and Communication Advertising, publicity, radio announcing, journalism, news information service, and interviewing.

   2. Agriculture, Natural Resources and Animal Care Farming, conservation, landscaping, nursery work. Plant or animal care and research. Includes working in pet stores, zoo, or animal laboratory. Also includes
5) Review all 22 occupation categories briefly described below and then circle the number in front of the category which best fits your initial career objective following high school graduation.

1. Advertising and Communication Advertising, publicity, radio announcing, journalism, news information service, and interviewing.

2. Agriculture, Natural Resources and Animal Care Farming, conservation, landscaping, nursery work. Plant or animal care and research. Includes working in pet stores, zoo, or animal laboratory. Also includes training dogs, horses, and other animals.

3. Applied Technology Engineering principles and scientific knowledge like those used by technicians and other engineering specialists. Includes physicist, chemist, geologist, architect. Also includes chemical or other laboratory testing specialists.

4. Appraisal Determining the efficiency of industrial plants and businesses, evaluating real estate, and surveying land.

5. Artistic, Fine Arts, Humanities, and Performing Arts Composing, arranging, conducting music, singing or playing instruments. Entertaining others by participating in dramatics, dancing, comedy routines, or acrobatics. Creative art work such as drawing, painting, sketching, artistic restoration, pottery, and sculpture. Writing novels, poetry, reviews, or speeches. Interior decoration and display work.

6. Clerical Services Typing, recording, filing, and other clerical or stenographic work. Secretarial personnel.

7. Construction, Crafts, and Precise Operations Skilled use of tools or other equipment as in the building trades, machine installation and repair. Includes carpenter, welder, tool and die maker, watch repairman, radio-television repairman, mechanic, and appliance repairman. Also includes operating heavy equipment.
8. **Customer Services** Waiting on customers in stores, banks, motels, offices, or at home; helping telephone customers with business orders, reservations, and other information. Also includes tour guides, and ticket and toll collectors.

9. **Inspecting and Testing** Sorting, measuring, or checking products and materials; inspecting equipment or public facilities.

10. **Management and Supervision** Administrative or supervisory work, such as shop foremen, supervisor, school administrator, head librarian, executive, hotel manager, and union official. Includes owning or managing a store or business.

11. **Manufacturing Work** Operating and adjusting machines used in processing or manufacturing goods and products.

12. **Medical and Related Technical Services** Providing services as a nurse, doctor, dentist, physical therapist, x-ray or medical laboratory technician or dental hygienist. Also includes working in nursing homes.

13. **Military Service** Army, Air Force, Navy, Marines, and Coast Guard

14. **Numerical** Using mathematics as in accounting, finance, data processing, or statistics.

15. **Public and Legal Services** Serving as a public official such as mayor, city manager, or fire chief. Includes lawyer, public defender, and judge. Also includes welfare and unemployment agency personnel.

16. **Sales Representative** Demonstrating and providing technical explanations of products or services to customers; selling products or services and providing related technical assistance. Includes department story buyer, factory sales representative, wholesaler, and insurance or real estate salesman.

17. **Semi-Skilled Personal Services** Providing routine services for people as a waiter, waitress, household worker, doorman, messenger, gas station attendant, train conductor, steward, fashion model or stewardess.

18. **Skilled Personal Services** Providing skilled services to people such as tailoring, cooking, barbering, or hairdressing.

19. **Teaching and Counseling** Providing instruction or other services in a
15. **Public and Legal Services** Serving as a public official such as mayor, city manager, or fire chief. Includes lawyer, public defender, and judge. Also includes welfare and unemployment agency personnel.

16. **Sales Representative** Demonstrating and providing technical explanations of products or services to customers; selling products or services and providing related technical assistance. Includes department story buyer, factory sales representative, wholesaler, and insurance or real estate salesman.

17. **Semi-Skilled Personal Services** Providing routine services for people as a waiter, waitress, household worker, doorman, messenger, gas station attendant, train conductor, steward, fashion model or stewardess.

18. **Skilled Personal Services** Providing skilled services to people such as tailoring, cooking, barbering, or hairdressing.

19. **Teaching and Counseling** Providing instruction or other services in a school, college, church, clinic, business, or industry. Instructing people in employment or leisure-time activities such as games, handicrafts, flying, driving, or other occupational areas such as machine operation.

20. **Transportation** Truck driver, taxi drivers, bus drivers, operation of trains, planes, and ships.

21. **Unskilled, Semi-Skilled Manual Work** Limited use of tools and routine work done by hand. Includes construction labor, farmhand, dishwasher, furniture mover, car washer, etc.

22. **Other (specify)** ___________

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6) State in your own words exactly what your initial career objective is. (Example: Transportation - Truck Driver - Drives Tractor-trailer)
7) Which one of the following things has influenced you the most with your present choice of a career? (circle one category)
   A. Books, magazines
   B. Television, radio
   C. Work experience
   D. Hobbies
   E. Other (specify)
   F. None of the above

8) Which one of the following persons have influenced you the most with your present choice of a career? (circle one category)
   A. Parents
   B. Teachers
   C. Friends
   D. Guidance counselor
   E. No one in particular
   F. Others (specify)

9) How many times have you met with your guidance counselor this school year? (September - present) (circle number of times)
   None 1 2 3 4 5 6 7 more (specify)

10) Of the number of times you met with your guidance counselor in question number 9, how many times did you see him for each of the following reasons?
    A. ___ Discipline reasons
    B. ___ Scheduling reasons
    C. ___ College information
    D. ___ Career information
    E. ___ Interpretation of test score
    F. ___ Other reasons (specify)
    G. ___

11) Using the same 22 occupational categories as those in question number 5, write in the number of the category which best describes the type of work your father, guardian, or the head of household performs.
A. __ Discipline reasons
B. __ Scheduling reasons
C. __ College information
D. __ Career information
E. __ Interpretation of test score
F. __ Other reasons (specify) __________
G. __ _______

11) Using the same 22 occupational categories as those in question number 5, write in the number of the category which best describes the type of work your father, guardian, or the head of household performs.

__________________________

Number from question 6

12) Describe, in your own words, exactly what type of work your father, guardian, or head of household performs. (Example: Transportation - Truck Driver - Drive Tractor-Trailer)

__________________________

NOTE: If you answered questions 5-12, DO NOT answer question number 13.

13) In your own opinion, why have you not decided upon your initial career after high school graduation? (circle one answer)

A. Haven't given it much thought.
B. There's no rush. I have plenty of time to decide.
C. Haven't found a career that I like yet.
D. Haven't had enough information to make a choice.
E. Other (specify)
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