Occupational-Educational Maturity: A Measure of Career Awareness

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OCCUPATIONAL-EDUCATIONAL MATURITY:
A MEASURE OF CAREER AWARENESS

by

Ralph George O'Sullivan

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OCCUPATIONAL-EDUCATIONAL MATURITY:  
A MEASURE OF CAREER AWARENESS

Ralph George O'Sullivan, Ph.D.  
Western Michigan University, 1982

This study was an attempt to develop the research concept of occupational-educational maturity, and then test it within a population of ninth-grade, public-school students from Grand Rapids, Michigan. This research concept was a composite variable which consisted of the alignment, or goodness of fit, between students' occupational aspirations and their educational expectations. The focus of the study was to determine whether or not students' expected levels of educational attainment or vocational training were appropriate prerequisites for entry into the students' desired occupations. No previous studies have directly addressed this idea, nor have they attempted to measure students' occupational-educational maturity levels.

By using the three independent variables of gender, social status, and ethnic identity, it was hypothesized that a majority of students would exhibit occupational-educational maturity, and that boys, upper-status students, and white students would be more likely than girls, lower-status students, and non-white students to exhibit occupational-educational maturity. Attempts were then made to determine the occupational-educational maturity levels of black and other-minority students, upper-status white students and upper-status
non-white students, and lower-status white students and lower-status
non-white students.

Based upon these research objectives it was found that: (1) A
majority of students exhibit occupational-educational maturity,
(2) upper-status students are more likely than lower-status students
to exhibit occupational-educational maturity, (3) white students
are more likely than non-white students to exhibit occupational-
educational maturity, and (4) there are statistically significant
differences between the occupational-educational maturity levels
of lower-status white students and lower-status non-white students.
It was also found that there are no statistically significant dif­
ferences between the occupational-educational maturity levels of
boys and girls, of black students and other-minority students,
and of upper-status white students and upper-status non-white stu-
dents. As a result of these calculations and findings it is
recommended that future studies of students' occupational-educa-
tional maturity levels reformulate research hypotheses to reflect
these data.
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I dedicate this dissertation in memory of Elsie Deller O'Sullivan and Lonnie F. Parr, Jr. They saw me begin my doctoral studies but they are not now here to see their completion.

Ralph George O'Sullivan
# TABLE OF CONTENTS

**ACKNOWLEDGEMENTS** .......................................................... ii  
**LIST OF TABLES** ................................................................. vii  
**LIST OF FIGURES** ................................................................. x  
**Chapter**  
  I. THE RESEARCH PROJECT. .................................................. 1  
    Statement of the Problem................................................ 1  
      Introduction ............................................................... 1  
      Relationship of this Study to Previous Research.......................... 1  
      Utility of the Study ..................................................... 2  
    Reviews of Related Research ............................................. 5  
      Career Education ....................................................... 5  
      Theoretical Orientations .............................................. 8  
      Problems of Career-Education Processes ................................ 14  
    Relevance of Social Identity ........................................... 18  
      Gender and Occupational/Educational Literature ........................ 19  
      Social Status and Occupational/Educational Literature .............. 23  
      Ethnic Identity and Occupational/Educational Literature .......... 26  
    Research Objectives ..................................................... 28  
      Research Hypothesis 1. ................................................... 29  
      Research Hypothesis 2. ................................................... 30  
      Research Hypothesis 3. ................................................... 31  
      Research Hypothesis 4. ................................................... 32

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II. THE POPULATION AND RESEARCH METHODS. 37

Introduction 37

The Population 37

Age and Gender. 37

Social Status 38

Ethnic Identity 38

Data Collection. 38

Construction of the Variables. 39

Independent Variables. 39

Gender 39

Social Status. 40

Ethnic Identity. 42

The Dependent Variable. 44

Occupational Aspirations 44

Educational Expectations 45

Construction of Occupational-Educational Maturity 45

Statistical Design 55

Research Hypothesis 1 56

Research Hypothesis 2 56

Research Hypothesis 3 57

Research Hypothesis 4 58

Exploratory Question 1 58
LIST OF TABLES

1. Percentage and Frequency Distributions of the Students' Primary Economic Supporters' Occupations ............... 41
2. Percentage and Frequency Distributions of the Students' Occupational Aspirations ................................ 46
3. Percentage and Frequency Distributions of the Students' Educational Expectations ............................... 47
4. Demographic Features of the Student Population ............ 60
5. Percentage and Frequency Distributions of Students' Occupational Aspirations and Educational Expectations.................................................... 62
6. Occupational-Educational Maturity Status Among All Students ............................. 63
7. Percentage and Frequency Distributions of Students Who Exhibited Occupational-Educational Maturity ...... 64
8. Social-Status Aspirations of Students Who Exhibited Occupational-Educational Maturity ......................... 66
9. Status of Educational Expectations Among the Students Who Did Not Exhibit Occupational-Educational Maturity ................................. 67
10. Percentage and Frequency Distributions of Boys' Occupational Aspirations and Educational Expectations ... 69
11. Percentage and Frequency Distributions of Girls' Occupational Aspirations and Educational Expectations ... 70
12. Occupational-Educational Maturity Status of Boys and Girls .................................................. 71
13. Percentage and Frequency Distributions of Boys and Girls Who Exhibited Occupational-Educational Maturity .............................................. 73
14. Social-Status Aspirations of Boys and Girls Who Exhibited Occupational-Educational Maturity .................. 75
15. Percentage and Frequency Distributions of Upper-Status Students' Occupational Aspirations and Educational Expectations ........................................ 77
16. Percentage and Frequency Distributions of Lower-Status Students' Occupational Aspirations and Educational Expectations ........................................ 78
17. Occupational-Educational Maturity Status of Upper-Status and Lower-Status Students ........................................ 79
18. Percentage and Frequency Distributions of Upper-Status and Lower-Status Students Who Exhibited Occupational-Educational Maturity ........................................ 80
19. Social-Status Aspirations of Upper-Status and Lower-Status Students Who Exhibited Occupational-Educational Maturity ........................................ 81
20. Percentage and Frequency Distributions of White Students' Occupational Aspirations and Educational Expectations ........................................ 83
21. Percentage and Frequency Distributions of Non-White Students' Occupational Aspirations and Educational Expectations ........................................ 84
22. Occupational-Educational Maturity Status of White and Non-White Students ........................................ 85
23. Percentage and Frequency Distributions of White and Non-White Students Who Exhibited Occupational-Educational Maturity ........................................ 87
24. Social-Status Aspirations of White and Non-White Students Who Exhibited Occupational-Educational Maturity ........................................ 88
25. Percentage and Frequency Distributions of Black Students' Occupational Aspirations and Educational Expectations ........................................ 90
26. Percentage and Frequency Distributions of Other-Minority Students' Occupational Aspirations and Educational Expectations ........................................ 91
27. Occupational-Educational Maturity Status of Black and Other-Minority Students ........................................ 92
28. Percentage and Frequency Distributions of Black and Other-Minority Students Who Exhibited Occupational-Educational Maturity ........................................... 94

29. Social-Status Aspirations of Black and Other-Minority Students Who Exhibited Occupational-Educational Maturity ........................................... 95

30. Percentage and Frequency Distributions of Upper-Status White Students' Occupational Aspirations and Educational Expectations ......................... 97

31. Percentage and Frequency Distributions of Upper-Status Non-White Students' Occupational Aspirations and Educational Expectations ................. 98

32. Occupational-Educational Maturity Status Among Upper-Status Students ........................................... 99

33. Percentage and Frequency Distributions of Upper-Status White and Upper-Status Non-White Students Who Exhibited Occupational-Educational Maturity 100

34. Social-Status Aspirations Among Upper-Status Students Who Exhibited Occupational-Educational Maturity ........................................... 102

35. Percentage and Frequency Distributions of Lower-Status White Students' Occupational Aspirations and Educational Expectations ............................. 103

36. Percentage and Frequency Distributions of Lower-Status Non-White Students' Occupational Aspirations and Educational Expectations ..................... 104

37. Occupational-Educational Maturity Status Among Lower-Status Students ........................................... 105

38. Percentage and Frequency Distributions of Lower-Status White and Lower-Status Non-White Students Who Exhibited Occupational-Educational Maturity 107

39. Social-Status Aspirations Among Lower-Status Students Who Exhibited Occupational-Educational Maturity ........................................... 108

40. Review of Occupational-Educational Maturity Status Among Ninth-Grade Students ........................................... 111

41. Reviews of the Outcomes for the Research Hypotheses and the Exploratory Questions ........................................... 113
LIST OF FIGURES

1. Criteria for Determining the Presence or Absence of Occupational-Educational Maturity ........................................ 48

2. Histogram Illustrating the Percentages of Students Exhibiting Occupational-Educational Maturity ........................................ 112
CHAPTER I

THE RESEARCH PROJECT

Introduction

This study attempts to add a new dimension to the analyses of ninth-grade students' occupational and educational ambitions by measuring and assessing the possible effects of gender, social status, and ethnic identity on the alignment that exists between students' occupational aspirations and their educational expectations. In order to proceed with the study two key terms need to be defined. The first term, students' "occupational aspirations," refers to the types of jobs students desire to have after they have terminated formal schooling at the secondary level. The second term, students' "educational expectations," refers to the levels of formal schooling or vocational training which the students expect to attain in order to gain entry into the jobs to which they aspire.

Relationship of This Study to Previous Research

The independent variables of gender, social status, and ethnic identity are considered by social researchers to be associated with students' career outcomes, states of mental health, levels of occupational motivation and occupational achievement, as well as with students' levels of educational motivation and educational achievement.
Previous studies have used these three independent variables to measure and compare separate effects on: (1) students' occupational aspirations, (2) students' occupational expectations, (3) students' educational aspirations, and (4) students' educational expectations. These three independent variables have also been used in previous studies to measure and compare the interaction effects between: (5) students' occupational aspirations and their occupational expectations, and (6) students' educational aspirations and their educational expectations.

The present study differs from previous ones in that it attempts to determine whether or not boys and girls, upper-status and lower-status students, and white and non-white students develop occupational aspirations and educational expectations that are compatible with each other. The study, then, will determine if students' educational expectations as identified here are adequate prerequisites to gain entry into the types of jobs to which the students aspired. The alignment, or goodness of fit, between students' occupational aspirations and their educational expectations is identified in this study as occupational-educational maturity (henceforth, OEM).

Utility of the Study

This study measures and evaluates the possible interaction effects between gender, social status and ethnic identity with occupational-educational maturity for several reasons. First, though there is an existing body of theoretical literature which alludes to these associations (Brookover & Erickson, 1967; Ginzberg, Ginsburg,
Axelrad, & Herma, 1951; Rosen & Aneshensel, 1978) they are not addressed in the research literature. The present study develops this research concept and then measures it within a population of ninth-grade public-school students from Grand Rapids, Michigan.

Second, there is an existing body of theoretical and research literature which illustrates that boys and girls, upper-status and lower-status students, and white and non-white students often have dissimilar occupationally-related learning experiences. The study seeks to determine if the effects of these presumed differences in this aspect of their socialization processes are manifest in students' occupational-educational maturity levels. If such differences are reflected in students' occupational-educational maturity levels this study will then be able to identify the social categories of students that are not likely to exhibit this trait.

From such identification procedures the third reason for the study is derived. Once the categories of students which are least likely to exhibit occupational-educational maturity are known, school counseling personnel can then intervene in the students' school programs of study to give them special assistance in learning about occupational and educational alternatives available to them prior to the termination of schooling at the secondary level.

There is another important reason why an understanding of job-entry prerequisites is important for adolescent students. At this time in their schooling it is only a few years before many of them must begin to make firm occupational and educational plans as means of fulfilling personal and occupational goals in their lives. It
is a time when they can begin to develop occupational aspirations and educational expectations that are compatible with each other in order to develop the skills necessary for obtaining a desired job, occupation, or career.

Many adolescent students, however, who terminate formal schooling may be either under-trained or over-trained to get the jobs to which they aspire. The development of occupational aspirations and educational expectations that are compatible with each other may be the key to success in their ability to get a job in a labor market where it is increasingly difficult to get work. It is an understanding of the need to develop educational/vocational skills appropriate for desired jobs that is at the heart of this occupational-educational maturity concept.

It should be noted at the outset of the study that it assesses students' educational expectations only in terms of prerequisites to getting jobs to which students aspire. There are many reasons for either continuing one's formal education or for terminating one's formal education, but such reasons are beyond the scope of the study. Nonetheless, many employers will hire individuals who have developed necessary job skills rather than hire those individuals who are unable to fulfill job descriptions resulting from either not enough formal training or from too much formal training (Berg, 1970).

In summary, the study tests a possible consequence of students' occupationally-related learning experiences by developing and measuring the concept of occupational-educational maturity. As a
result of the occupationally-related learning experiences of early-adolescent students this study expects to find that many ninth-grade students are developing a sense of occupational-educational maturity. The study also expects to find that within its research population the occupational-educational maturity levels of boys and girls, of upper-status and lower-status students, and of white and non-white students, differ from each other. These variations are anticipated because of presumed differences in the students' occupationally-related socialization experiences.

The following portion of this chapter reviews the literature concerning the processes and goals of career education, theoretical foundations of this study, and the effects of occupationally-related learning experiences on the development of adolescent students' occupational and educational ambitions. Following these reviews the specific research objectives of this study are detailed. A summary portion then concludes this chapter.

Reviews of Related Literature

Career Education

The overall process by which society helps students develop their orientations toward future personal and occupational goals is called "career education." Career education is an aspect of the socialization process (as the term "socialization" refers to learning and acquiring as habits the way of life of a society) which occurs in a wide variety of more or less structured learning situa-
tions. The less-structured learning situations include casual and personal conversations between family members and peer-group associations, as well as exposure to role models portrayed in the mass media. More formally-structured occupationally-related learning environments include formal schooling in classrooms and/or workshops, as well as on-the-job employment training.

An orientation into the labor market of society is considered to be of such importance to society that many writers identify career education as one of the major manifest functions of school systems (The Educational Policies Commission of the National Educational Association of the United States and the American Association of School Administrators, 1961; Havighurst, 1974; Horton & Hunt, 1976, p. 180; Robertson, 1977, p. 345). Accordingly, many schools have specific programs built into curricula to assist students in the development of their career goals for the future (McMinn, 1973, & Tolbert, 1974).

Since the concept of career education is important both to society and to this study, the term needs to be defined. According to Wilson (1977) the National Association of State Directors of Education defines career education as a:

viable system of learning experiences which will assist all youth to acquire useful information about: the occupational structure of the economy, the alternatives of career choices, the obligations of involvement in the total work force, the intelligent determination of personal capabilities and aspirations, the requisites for all occupations, and the opportunities to prepare for gainful employment (p. 8).

While there are other definitions of career education (Truby,
specific objectives of career education also need to be identified. Some of the objectives of career education programs in schools are identified by Wilson, though other lists of career education program objectives are identified by Lauda and Lauda (1975, pp. 88-89), O'Dell, Abbey, Chermont, and DeMark (1975), Truby (pp. 6-10), and Woal (1976, pp. 2-3).

Career education seeks to produce individuals who, when they leave school (at any age or at any level), are:

1. Competent in the basic academic skills required for adaptability in our rapidly changing society.
2. Equipped with good work habits.
3. Equipped with a personally meaningful sets of work values that fosters in them a desire to work.
4. Equipped with career decision-making skills, job-hunting skills, and job-getting skills.
5. Equipped with job-specific occupational skills and interpersonal skills at a level that will allow them to gain entry into and attain a degree of success in the occupational society.
6. Equipped with a degree of self-understanding and understanding of educational-vocational opportunities sufficient for making sound career decisions.
7. Aware of means available to them for continuing and recurrent education.
8. Either placed or actively seeking placement in a paid occupation, in further education, or in a vocation consistent with their recurrent career decisions.
9. Actively seeking to find meaning and meaningfulness through work in productive use of leisure time.
10. Aware of means available to themselves for changing career options - of societal and personal constraints impinging upon career alternatives (Wilson, 1977, p. 10).
Such objectives suggest that career education is a process that begins early in life and continues through formal schooling to assist students to develop personal career plans and objectives. As students mature career education information becomes increasingly detailed, work-oriented, and relevant so that students can develop vocational goals and appropriate work skills.

Theoretical Orientations

Because there is a recognized need among educators to socialize students about and into the occupational structure of the economy there are numerous theories about how the goals and objectives of career education are met (Tolbert, 1973; Osipow, 1973). This portion of the chapter identifies these theory groups in general, and then identifies the specific theoretical orientations upon which the study is based.

The importance of career educational counseling and theories of career development was made by Tolbert (1973) when he stated that:

> the choice of work is one of the most important decisions one makes. It determines, to a large extent, how time will be spent, who will be chosen as friends, what attitudes and values will be adopted, where one will reside, and what pattern of family living will be adopted. The job provides an identity for the individual [a master status] . . .

As important as this decision is, it is often made with little thought or assistance. The high-school pupil sometimes selects an area of work in imitation of an admired teacher or a popular hero, to resist parental demands, or because it is the first one he learns about. The actual amount of consideration given to career planning may be less than that given to buying a pair of shoes (Tolbert, 1973, p. 1).
O'Dell et al (1975) have also provided a statement of similar concern. Tolbert (1973) then continued to provide summary descriptions of schools-of-thought (or, theory groups) into which specific theory of occupational development may be placed. These theory groups included:

1. **Trait and factor, actuarial.** The focus is on perceived 'traits' such as aptitudes, interests, and their relation to traits required by the job.

2. **Decision theory.** The individual chooses, along with lines of concepts derived from decision theory, the vocational alternatives that offers the best 'payoff.'

3. **Sociological emphasis.** Sociological factors such as one's social group and the social structure can exert an influence on vocational development and choice.

4. **Psychological emphasis.** Development and choice, to a large extent, depend upon the person's psychological makeup, e.g., motivation, personality structures, and needs.

5. **Developmental emphasis.** Theories in this group go beyond the previous ones in focusing on the development of the individual over a relatively long period of time (Tolbert, 1973, pp. 29-30).

While this classification of theory groups may be reasonably exhaustive, the ideas that all the theories contain are not the singular domain of any specific theory. Occupational development is an eclectic process in which many psychological, sociological, economic, educational, and experiential variables are involved.

Ginzberg et al (1951) presented a theory of occupational development which, according to Tolbert (1973), was a developmental one with psycho-sociological overtones. Ginzberg et al (1951) stated that career development was an irreversible, developmental
process in which personal compromises were made. However, in light
of continued research and social changes that have occurred since
the original formulation of the theory Ginzberg (1972) modified his
theoretical stance and stated that:

occupational choice is a lifelong process of decision
making in which the individual seeks to find the op­
timal fit between his career preparation and goals and
the realities of the world of work (p. 172).

Using the Ginzberg et al. theory as a base, Super (1953) devel­
oped a "differential-developmental-social-phenomenological psycholo­
gy" theory of occupational development (Tolbert, p. 31). Super's
theory contained a list of propositions which described the process
of occupational development.

1. People differ in their abilities, interests, and
personalities.

2. They are qualified, by virtue of these characteris­
tics, each for a number of occupations.

3. Each of these occupations requires a character­
istic pattern of abilities, interests, and personality
traits, with tolerance 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 situa­
tions in which people live and work, and hence
their self concepts, change with time and experience
(although self concepts are generally stable from
late adolescence until maturity), making choice and
adjustment a continuing process.

5. This process may be summed up in terms of life
stages characterized as those of growth, exploration,
establishment, maintenance, and decline, and these
stages may in turn be subdivided into (a) fantasy,
tentative, and realistic phases of the exploratory
stage, and (b) the trial and stable phase of the es­
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 socio-economic level, mental ability, and personality traits, and by the opportunities to which he is exposed.

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

8. The process of vocational development is essentially that of developing or implementing a self-concept; it is a compromise 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, and entry jobs.

10. Work satisfactions and life satisfactions depend on 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 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 (Super, 1953, pp. 190-191).

Super's theory is one of two theoretical orientations upon which this study is based. The second theory is a sociological one in the functionalist tradition (Cancian, 1968; Levy, 1968) developed by Davis and Moore (1945) which was an attempt to explain the nature and development of social stratification systems in societies. The theory of Davis and Moore was summarized in another list of propositions by Tumin (1953).
1. Certain positions in any society are functionally more important than others, and require special skills for their performance.

2. Only a limited number of individuals in any society have the talents which can be trained into the skills appropriate to these positions.

3. The conversion of talents into skills involves a training period during which sacrifices of one kind or another are made by those undergoing the training.

4. In order to induce talented persons to undergo these sacrifices and acquire the training, their future positions must carry an inducement value in the form of differential, i.e., privileged and disproportionate, access to the scarce and desired rewards that the society has to offer.

5. These scarce and desired goods consists of the rights and perquisites attached to, or built into the positions can be classified into those which contribute to (a) sustenance and comfort, (b) humor and recreation, and (c) self respect and ego expansion.

6. This differential access to the basic rewards of the society has as a consequence the differentiation of prestige and esteem which various strata acquire. This may be said, along with the rights and prerequisites, to constitute institutionalized social inequality, i.e., social stratification.

7. Therefore, social inequality among different strata in the amounts of scarce and desired goods and the amounts of prestige and esteem which they receive, is both positively functional and inevitable in any society (Tumin, 1953, pp. 387-388).

The propositions for the Davis and Moore theory, when combined with the major points of Super's theory, provide the theoretical foundations for this study. The interrelationships of these theories and how they relate to the objectives of career education are now discussed.

Collectively, the sets of ideas identified by Super and by Davis and Moore describe a complex social structure which includes
the interplay between education, the economy, politics, self-concept development, social status, socialization processes and experiences, and career education. It becomes the task of career education (in its wide variety of forms, learning situations, and agents of socialization) to aid adolescent students in making occupational occupational choices, and to assist them to realize their occupational and educational ambitions. Such occupationally-related learning experiences are functionally necessary for society in order to instill into its individuals a work ethic through which people work for enjoyment and job-related benefits (such as salaries/wages, insurance, vacations, and so on) by making products or providing social services for consumption or use.

However, as the research literature illustrates, there appear to be some failures in the career development experiences of many students at all ages and at all levels of schooling. Studies have suggested that many students did not have clearly-developed occupational goals when they entered the labor market of society because of dissimilar occupationally-related learning experiences which they have had. Such dissimilar socialization experiences are expected to produce different occupational-educational maturity levels within this study's research population of ninth-grade students. The following section of this chapter details sets of related literature concerned with the dissimilar occupationally-related learning experiences of students as the data relate to this study.
Problems of Career-Education Processes

While there are numerous definitions of career education and as many lists of its goals and objectives, there is some evidence in the research literature indicating that these goals and objectives are not being met for all students. Data exist which illustrate that many students are not aware of the skills that are necessary to enter into many jobs in the labor market of society. Consequently, many students are ill-prepared to begin vocational careers (Tolbert, 1974; Truby, 1975). Discussions of some of these findings as they relate to several levels of schooling are presented here.

Wolmot, McCaleb, and Engebretsen (1976) stated that there was a fantasy period in students which ranged from ages four to about eleven "...wherein the student is unaware of the barriers standing in the way of his or her [occupational] choice" (p. 2). During this period students "choose" future occupations for themselves without really knowing much about job opportunities, job tasks, and so on.

In a study of a Portland, Oregon, suburban school, students were the subjects in a "reality awareness" training program which acquainted them with various kinds of occupations. Specific supplemental information about job skills, job tools, work schedules, job safety, and job-entry prerequisites was given to an experimental group of students but such information was not given to a control group of students. Wolmot et al. (1976) concluded that students who were provided with job-related information were able to more realistically view their potential occupational choices than students who
were not exposed to job-related information about certain occupations.

Based upon their findings Wolmert et al. (1976) recommended that:

career awareness instruction might be made...compatible with the students' developmental stages and needs. Career awareness instruction on job duties, supplemented by reality awareness instruction may produce students better able to realistically proceed into career explorations and vocational choices (p. 8).

The research literature on ninth-grade students suggests that this level of formal schooling is crucial in the development of occupational and educational plans for the future (Prediger, Roth, & Noeth, 1973; Tolbert, 1973; Super, 1960a). For example, Ginzberg et al. (1951) stated that adolescent students' career choices were partially based upon personal interests rather than upon actual information concerning occupational opportunities and educational prerequisites. Ginzberg et al. (1951) concluded that there were vestiges of fantasy choices of occupations at about the ninth-grade level of formal schooling. Similarly, Super (1960a) concluded that ninth-grade students were not ready to make firm occupational and educational plans for themselves. Super stated that:

ninth graders are ready to look into things, to try themselves out, but they have not developed to a point which is reasonable or desirable to expect them to commit themselves to a vocation (Super, 1960a, pp. 108-109).

In a related study, Super and Overstreet (1960) derived the conclusion that among early-adolescent students:

vocational development is not characterizable as goal attainment, as the having of consistent, realistic preferences, nor as having begun to make a place for oneself in the world of work (p. 146).
Since research literature clearly indicated that the ninth-grade level of formal schooling was important in the social development of students, Tolbert (1973) summarized many of the major conclusions of these types of studies. These characteristics were:

1. An awareness of the need to make vocational and educational plans.

2. An acceptance of the responsibility for making plans and decisions.

3. Some planning and participation in information-getting activities.

4. A lack of readiness to decide upon a specific direction of occupation/al choice.

5. Lack of knowledge about work and training opportunities and failure to utilize resources to obtain information and little self-understanding (Tolbert, 1973, p. 35).

These summary statements describing the future plans of early-adolescent students suggest that there is a need for good career-planning assistance for them when they may need to begin to formulate their occupational and educational ambitions.

In addition to studies which assessed pre- or early-adolescent students' occupational and educational plans there is also research evidence which illustrates that many college-level students are ill-prepared to begin work. Gatlin (1975) illustrated through a study of seniors and graduates from a small, private, liberal arts college for women that liberal arts majors were only marginally prepared for entry-level positions. She further stated that liberal arts majors:

- do not know where to begin looking for a job of their hazy dreams, often do not form or assemble a resume,
- and frequently do not bother to interview the few firms which still recruit liberal arts majors (Gatlin, 1974 pp. 4-5).
Many of the school's graduates quit their first jobs and returned to the placement office of the college and sought assistance in occupational planning. It should be recognized, though, that the students' inabilities to acquire jobs in entry-level positions may have been a function of a liberal arts education which has not traditionally been job-oriented.

Not only is there literature suggesting that some undergraduate college students are inadequately prepared to enter the job market, but there is also some literature which derived similar conclusions about graduate students. Boderman (1980) made this observation about former graduate students in sociology.

Based upon these ideas and information it can be concluded that the occupationally-related learning experiences of students are dynamic aspects of social life. Job-related learning experiences are especially crucial for early adolescent students because their perceptions about the job market of society provide the foundations for future occupational and educational plans which many of them have soon to make.

Not all students have similar occupationally-related learning experiences, however, and their perceptions about work are often based upon their treatment in society by other people. The following portion of this study discusses the nature of social identity and how it can affect students' perceptions of what their future personal and occupational goals will be.
Relevance of Social Identity

Numerous social researchers (Abrahamson, 1972; Dreeben, 1971; Ginzberg et al., 1951; Sewell, Haller, & Ohlendorf, 1970; Sewell, Haller, & Portes, 1967; Super, 1960a; Super & Overstreet, 1960) emphasized the importance of learning about the possible effects of students' socialization experiences in terms of a general ability to make plans for the future. While many occupationally-related learning experiences may be intended to provide people with more or less similar skills, they do not. Differences in students' occupationally-related learning experiences contribute to differences in the ways that students perceive their future personal and occupational goals in society.

Variations in students' socialization experiences are often based upon the attributions of role/personality stereotypes to them. For example: (1) Boys may be perceived as being more socially aggressive than girls, (2) upper-status students may be considered as being more achievement-oriented than lower-status students, and (3) white students may be considered as being intellectually superior to non-white or other minority students. Regardless of which specific stereotypes or combinations of them are in play, students are often treated as having these or other characteristics. Some possible effects of these attributed characteristics are well-documented by social researchers (Clark, 1960; Goslin, 1971; Rosenthal & Jacobsen, 1968; Spring, 1976).

The attributions of social category stereotypes to individual
students may be of such strength that the attributed characteristics have the effect of differentially affecting students' occupational-educational maturity levels because of the ways that students are treated on the bases of alleged attributes. Since it is reasonable to assume that gender, social status, and ethnic identity are important social categories which might be associated with students' occupational and educational plans for the future, the following portions of this chapter review related sets of research findings on the association between students' social identities and their occupational and educational ambitions.

**Gender and Occupational/Educational Literature**

Research data on the association between students' gender and occupational and educational ambition levels provided conflicting and inconsistent findings and conclusions. Some of these data have led researchers to conclude that there were differences in the ways that boys and girls perceived their future personal and occupational goals. Other sets of findings have led researchers to conclude that there were no statistically significant differences in the ways that boys and girls view their futures.

The research literature which concluded that there were differences in boys' and girls' occupationally-related learning experiences was based on the assumption that girls' career education learning experiences were different from those of boys. Rosen and Aneshensel (1978) stated that these differences in learning experiences began early in life by:
restricting career choice and channelling activities into areas considered proper for a particular sex. Traditionally socialized males and females learn to aspire to occupations conventionally allocated to them in the occupational structure [of society] (Rosen & Aneshensel, 1978, p. 165).

Rosen and Aneshensel (1978) further stated that even though many adolescent girls had strong orientations to their future personal and occupational goals, boys, overall, exhibited stronger orientations to their occupational goals. These findings have been attributed to differences in the ways that boys and girls were socialized in the development of occupational and educational ambitions for themselves.

In a study which analyzed illustrations of people in work environments Vetter (1975) found that:

there were no illustrations in the materials of women in the managerial occupations, crafts occupations, transport and equipment operative occupations, laborers, or farm occupations (p. 6).

By implication it may be concluded that if girls do not view women in these or similar types of occupations that are traditionally male-dominated, they will not perceive these types of jobs as being open to them. If these occupational categories are not presented as being open to women, non-pioneering women will, therefore, probably not desire to enter them, thus effectively limiting their occupational alternatives.

Prediger and Cole (1975) reported similar findings when they stated that:

in a recent nationwide study...[it was] found that the vocational preferences of more than half of the nation's 11th grade girls fell into 3 of 25 job families (education and social services, nursing and human care, and clerical/secretarial work) - job families preferred by
only 7% of the nation's 11th grade boys. By contrast, the vocational preferences of boys greatly outnumbered those of girls in the technologies/trades, engineering, natural science and business management families [of jobs] (p. 1).

These studies and others (Buslin, 1974; Spaeth, 1977; Turner, 1964) provide support to the conclusion that boys' and girls' occupationally-related learning experiences provide different orientations by which boys and girls perceive their future occupational and educational goals.

However, there is also a body of research literature which illustrates that boys and girls are similarly socialized into society resulting in no statistically significant differences in the ways that boys and girls develop their occupational and educational ambitions. Cole (1975) concluded that the vocational interests of girls were no different than those of boys. She believed that the similarity of vocational interests for boys and girls was due to three important social conditions.

The application of civil rights laws to discrimination against women in hiring and in salary levels, the public attention given by the women's liberation movement, and the increasing number of women who enter the labor force each year seem to be combining to produce a large number of women with access to a greatly increased variety of careers (Cole, 1975, p. 105).

While Cole (1975) believed that the vocational interests of boys and girls were similar, Astin (1968) found that the vocational interests of girls were more stable than the vocational interests of boys. These findings suggest the possibility that girls' orientations to their future occupational goals are more consistent than the occupational goals of boys. However, Astin's (1968) findings may al-
so be interpreted to mean that boys experience greater difficulty in planning for their futures than girls because of a wider range of occupational opportunities available to boys but not to girls.

Lueptow (1981) provided information which partially supported the first interpretation of Astin's (1968) findings. Within the last twenty years there has been a great deal of male-female role convergence. This role convergence has had the effect of producing similarities, and reducing differences, in the ways that adolescent boys and girls perceive their future occupational and educational ambitions.

Based upon these sets of information various social researchers have concluded that some data supported the assertion that there were differences in the ways that adolescent boys and girls develop their occupational and educational plans for the future, while other data have not supported such an assertion. Conflicting sets of data may be attributed to such methodological considerations as: (1) differences in the means by which students identify their occupational and educational ambitions to social researchers, such as open-ended versus fixed-response questions, (2) differences in the means by which the researchers assess students' responses, and (3) the use of dissimilar research populations. Different research tools and research populations may yield different sets of findings. Possible variations in data may also be attributed to absolute differences in boys' and girls' occupational and educational ambitions.

While the research literature on this topic provides an inconclusive answer to the question, 'Are boys' and girls' occupational
and educational ambitions similar or different?", this study makes the assumption that boys and girls are not similarly socialized in the development of their occupational and educational plans. Therefore, presumed differences in the occupationally-related learning experiences of adolescent boys and girls are expected to produce higher occupational-educational maturity levels for boys than for girls.

**Social Status and Occupational/Educational Literature**

The research literature which measured associations between students' social-status backgrounds with their occupational and educational ambitions for the future also provided inconsistent and conflicting sets of data and conclusions. Some studies have indicated that students from different social-status backgrounds had different occupational and educational ambitions for themselves, while other studies indicated that no such differences existed.

Numerous social researchers (Buslin, 1974; Ginzberg et al., 1951; Super & Bohn, 1970) have contended that students from lower-status social backgrounds have had limited access to the means by which socially-approved goals could be achieved, as well as limited access to job-entry requirement information. In accounting for these findings Ginzberg et al. (1951) identified some of the social process variables which contributed to these limitations.

The process of occupational choice determination among the lower-income group suggests that with few notable exceptions, it can be characterized by two terms: passive and stagnant. These adolescent students convey the impression that although they have considerable
concern about entering the job market, they believe that there is little they can do about it in advance beyond selecting a high school where they can pursue an appropriate vocational choice... Just when the boys begin to understand themselves and reality and are in a position to explore the opportunities which might contribute most to their eventual occupational adjustment, they find themselves at the end of the conventional period of schooling (Ginzberg et al., 1951, p. 155).

Whereas Ginzberg et al. (1951) implied that higher-status adolescent students were in more enviable positions than lower-status students to develop clear occupational and educational plans for themselves, Super and Bohn (1970) stated that they were.

High socio-economic status, intelligence, and education enable a person to know the importance of having good information in making [career] decisions. A person's understanding of these characteristics greatly influences his access to information, his ability to judge its quality, and his freedom to act (Super & Bohn, 1970, pp. 145-146).

These findings and similar ones in the research literature (Alwin & Otto, 1977; Buslin, 1974; Herriott, 1963; Kahl, 1953; Kerckhoff, 1977; Super & Overstreet, 1960) lend support to the assertion that upper-status students are differentially favored in their occupationally-related learning experiences which contribute to the development of clearer plans for the future than lower-status students. While it is incorrect to suggest that all lower-status students have lower occupational and educational ambitions for themselves than upper-status students, there is some evidence which illustrates that many lower-status students do have lower ambitions for themselves than upper-status students (Ginzberg et al., 1951).

On the other hand, there are also existing data which contradict
the preceding sets of findings and conclusions. For example, Empey (1956) concluded that lower-status students were not limited by social-status horizons in the development of their plans for the future.

These conflicting data may also be attributed to variations in social research processes, such as those discussed in the context of occupational and educational plans for boys and girls in a previous portion of this chapter. The conflicting sets of data on the occupational and educational plans of upper-status and lower-status students may also be due to different means by which social researchers operationalized the social-status categories used in their studies. Again, however, variations in students' occupational and educational ambitions may also be attributed to absolute differences in such plans for the future.

These alternative findings neither allow the researcher to confirm nor to reject assumptions that students' social-status backgrounds are positively or inversely associated with their occupational and educational plans for the future. Even though such discrepancies in data and their possible interpretations exist, the present study abides by previous discussions and makes the assumption that upper-status and lower-status students are socialized differently in the development of their future plans. Therefore, such presumed differences in occupationally-related learning experiences are expected to produce higher occupational-educational maturity levels for upper-status students than for lower-status students.
Ethnic Identity and Occupational/Educational Literature

Bodies of literature which assessed associations between students' ethnic identities with occupational and educational ambitions for the future provided more or less consistent sets of data. These bodies of information illustrated that white/majority students had more consistent, and higher, occupational and educational plans for themselves than non-white/minority students. Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, and York (1966) have provided definitive statements on this subject.

Differences in the plans of white and non-white/minority students have been partially attributed to overt and covert discrimination practices directed toward non-white/minority students in American society. Therefore, this study makes the assumption that white and non-white students are socialized differently in the development of their occupational and educational plans. These presumed differences in occupationally-related learning experiences are expected to produce higher occupational-educational maturity levels for white students than for non-white students.

In this light, however, related studies have also shown that within minority-group categories students' occupational and educational plans varied. Super and Bohn (1970) have made the following statements on this topic.

Minority status has been shown to operate differentially on different ethnic and religious groups: Orientals in North America tend to perform better in education and in work than their socially imposed handicap might lead one to suspect. As a group, Jews similarly tend to achieve at higher levels than might be expected of them.
Blacks, on the other hand, have until recently been depressed by discrimination rather than stimulated to overcome their handicap...

Racial or religious prejudices operate in the same way as do socio-economic handicaps, spurring some people on to greater performance [levels] than might be predicted, deterring others from even trying, and preventing some who try from achieving...

Barriers inhibit achievement: motivation may overcome them. When the barriers are widespread and impenetrable, as they have tended to be for blacks, motivation is destroyed. When they are not ubiquitous and insurmountable, as has been true to Orientals in North America, motivation is usually increased (Super & Bohn, 1970, pp. 143-144).

In accord with this concern the present study also calculates the occupational-educational maturity levels of black and other-minority students to determine if this trait varies among non-white/minority students, as research data suggest they might.

An understanding of any presumed differences in the occupational and educational plans of adolescent students when ethnic identity is used as an independent variable is often clouded by social-status interaction (Kerckhoff & Campbell, 1977; Osipow, 1973). Since there is a need to be aware of such an interaction effect the study also calculates and assesses the occupational-educational maturity level data of upper-status white students and upper-status non-white students, as well as for lower-status white students and lower-status non-white students. These calculations are made in an attempt to determine what possible effects the interaction between students' social-status backgrounds and their ethnic identities may have on their occupational-educational maturity levels.

In summary, literature relevant to the occupational development
plans of adolescent students established that though many schools do provide career-guidance programs for students, many students still do not know what the educational or vocational prerequisites for their desired occupations are. It must be reaffirmed, however, that a school is only one site where adolescent students learn about the job market, and job-entry requirements. Many other sources provide this information and it is from this plethora of sources that students may, or may not, be able to develop clear occupational and educational plans for themselves. It is for this reason that the study attempts to determine which categories of students are more likely than others to exhibit occupational-educational maturity. While this section of the chapter has identified the general research concerns of the study the following one outlines its specific research hypotheses and exploratory questions.

Research Objectives

Walizer and Wienir (1978) stated that the social research process "begins with a general idea about some phenomenon" (p. 455). In order to gather information several hypotheses about the topic may be created. They stated further that:

This general idea is sometimes called a general hypothesis \[ H_n \]. In order to conduct research, the general hypothesis must be translated into a hypothesis about variables which could potentially be measured and tested. This hypothesis is called a research hypothesis \[ H_n \] and is often a statement about the nature of the relationship between variables... From this research hypothesis a statistical hypothesis could be developed. A statistical hypothesis \[ H_n \] is derived from the research hypothesis

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and translates the research hypothesis into statistical terms (Walizer & Wienir, 1978, p. 455).

The present study adheres to the research outline described by Walizer and Wienir (1978).

Four sets of general hypotheses \( H_n \), research hypotheses \( H_r \), and statistical hypotheses \( H_s \) are constructed for which data are to be obtained for analyses. The four sets of hypotheses are presented as attempts to measure and assess the occupational-educational maturity levels of the population of adolescent students, as well as for boys and girls, for upper-status and lower-status students, and for white and non-white students in the population.

In addition to these sets of hypotheses three exploratory questions are raised for which empirical answers are sought. The questions are asked in order to gather and evaluate the occupational-educational maturity level data for black students and other-minority students, for upper-status white students and upper-status non-white students, and for lower-status white students and lower-status non-white students. The research hypotheses and exploratory questions of the study are presented formally in the following portions of this chapter.

**Research Hypothesis 1**

In accord with the established research outline for this study, the first general hypothesis is that:

\[ H_{1} : \text{By the ninth-grade level of schooling many students begin to exhibit occupational-educational maturity.} \]
For example, many of the students may aspire to become medical doctors while at the same time they plan to attain the necessary schooling requirements of a baccalaureate degree, attend medical school, and have an internship at a hospital. However, even though students have had occupationally-related learning experiences some of the students may not have crystallized commitments to their future occupational and educational plans. Therefore, not all of the students can be expected to exhibit occupational-educational maturity. Nonetheless, it is reasonable to expect that by the ninth-grade level of schooling most of the students are beginning to make their educational plans in order to meet those requirements necessary for gaining entry into the types of jobs to which they aspire.

Accordingly, the first research hypothesis of the study is that:

\[ H_1: \text{A majority of ninth-grade students exhibit occupational-educational maturity.} \]

This research hypothesis is translated into the first statistical hypothesis of this study as:

\[ H: \frac{\% \text{ students OEM}}{81} \geq 51\%. \]

The second set of hypotheses predicts differences in the occupational-educational maturity levels of boys and girls. This set of hypotheses follows.

Research Hypothesis 2

The second general hypothesis of the study of students' occupational-educational maturity levels is that:
H_1: By the ninth-grade level of schooling boys are more likely than girls to exhibit occupational-educational maturity.

This general hypothesis is based on the assumption that although there appears to be a great deal of role convergence for boys and girls in American society, boys and girls are still socialized differently into society.

Based on this assumption the second research hypothesis of the study is that:

H_2: The percentage of boys exhibiting occupational-educational maturity is larger than the percentage of girls exhibiting occupational-educational maturity.

This second research hypothesis is translated into the second statistical hypothesis as:

H_2: \( \frac{\%_{\text{boys OEM}}}{\%_{\text{girls OEM}}} > 1 \)

Research Hypothesis 3

The third general hypothesis of the study of students' occupational-educational maturity levels is that:

H_3: By the ninth-grade level of schooling upper-status students are more likely than lower-status students to exhibit occupational-educational maturity.

This general hypothesis is founded on the assumption that upper-status students are more apt than lower-status students to have occupationally-related learning experiences conducive to the development of occupational-educational maturity.

Based upon this general hypothesis the third research hypothesis of the study is that:
The percentage of upper-status students exhibiting occupational-educational maturity is larger than the percentage of lower-status students exhibiting occupational-educational maturity.

This research hypothesis is translated into the third statistical hypothesis as

\[ H_3 : \%_{\text{upper-status}} \mathrm{OEM} > \%_{\text{lower-status}} \mathrm{OEM}. \]

The fourth set of hypotheses predicts differences in the occupational-educational maturity levels of white and non-white students. It also contains the three exploratory questions of the study. This set of hypotheses and three exploratory questions follows.

**Research Hypothesis 4**

The fourth general hypothesis of the study of students' occupational-educational maturity levels is that:

\[ H_4 : \text{By the ninth-grade level of schooling white students are more likely than non-white students to exhibit occupational-educational maturity.} \]

Once again, this general hypothesis is predicated on the assumption that the occupationally-related learning experiences of white students are more conducive to the development of occupational-educational maturity than the occupationally-related learning experiences of non-white students in American society.

The fourth research hypothesis of the study states that:

\[ H_4 : \text{The percentage of white students exhibiting occupational-educational maturity is larger than the percentage of non-white students exhibiting occupational-educational maturity.} \]

This research hypothesis is transformed into the fourth statistical
hypothesis as:

\[ H_4 : \% \text{whites OEM} > \% \text{non-whites OEM}. \]

**Exploratory Question 1**

The research literature on students' occupational and educational ambitions suggests that such ambitions may vary among non-white/minority students. Therefore, the study presents its first exploratory question which seeks to determine if the occupational-educational maturity levels of black and other-minority students are similar or different, and then to determine how closely these data are to the occupational-educational maturity level data for the non-white student population, as a whole. This exploratory question asks:

\[ EQ_1: \text{What are the occupational-educational maturity levels of black and other-minority students?} \]

The study does not predict differences in the occupational-educational maturity levels of black students and other-minority students. Rather, it wants to see what proportions of these categories of students have occupational plans that are here identified as adequate prerequisites to the types of jobs to which the students aspire.

**Exploratory Questions 2 and 3**

The research literature on non-white/minority students' occupational and educational plans for the future suggests that such plans may be affected by social status interaction with ethnic identity. Based upon this possibility the present study asks two additional questions in order to determine if such interaction affects students'
occupational-educational maturity levels. These two exploratory
questions ask:

\[ EQ_2: \] What are the occupational-educational maturity
levels of upper-status white and upper-status
non-white students?

\[ EQ_3: \] What are the occupational-educational maturity
levels of lower-status white and lower-status
non-white students?

As with the first exploratory question these questions do not attempt
to predict possible differences in students' occupational-educational
maturity levels. These exploratory questions are efforts to determine
if there is any social status and ethnic identity interaction affecting
students' occupational-educational maturity levels.

With the hypotheses and exploratory questions the specific re-
search objectives of the study are set forth. These research goals
are grounded in sets of theoretical and research literature relevant
to analyses of adolescent students' occupational and educational am-
bitions.

**Summary**

This is a study of ninth-grade, public-school students' occupa-
tional-educational maturity levels. This research concept is a
measure of the alignment, or goodness of fit, that exists between
students' occupational aspirations and their educational expecta-
tions. Related sets of theoretical and research literature have al-
luded to this measure of occupational awareness but it was neither
addressed nor measured in previous studies.

The available data from previous studies suggested the possibil-
It is noted that by the ninth-grade level of formal schooling students have begun to develop occupational aspirations and educational expectations that are compatible with each other in order for students to gain entry into their desired occupations. Other research literature has shown that students have not had similar occupationally-related learning experiences upon which their occupational-educational maturity levels would be based. While previous research has provided many inconclusive and contradictory findings this study tests the assumption that if differences in students' occupationally-related learning experiences have occurred, such differences would be manifest in different occupational-educational maturity levels for boys and girls, for upper-status and lower-status students, and for white and non-white students. Accordingly, the four research hypotheses presented in previous pages are:

\[ H_1: \frac{\% \text{ students OEM}}{51\%} \]

\[ H_2: \frac{\% \text{ boys OEM}}{\% \text{ girls OEM}} > 1 \]

\[ H_3: \frac{\% \text{ upper-status OEM}}{\% \text{ lower-status OEM}} > 1 \]

\[ H_4: \frac{\% \text{ whites OEM}}{\% \text{ non-whites OEM}} > 1 \]

Other research literature has suggested the possibility that occupational-educational maturity levels of adolescent students might vary among non-white/minority students, and as the result of social-status and ethnic-identity interaction. Therefore, the three exploratory questions that are raised and for which empirical answers are sought include:
EQ₁: What are the occupational-educational maturity levels of black and other-minority students?

EQ₂: What are the occupational-educational maturity levels of upper-status white and upper-status non-white students?

EQ₃: What are the occupational-educational maturity levels of lower-status white and lower-status non-white students?

The means by which students' occupational-educational maturity levels are developed is called career education. This process involves a myriad of learning experiences including formal schooling, exposure to role models portrayed in the mass media, informal conversations with other people about the world of work, employment training opportunities, and so on. While such occupationally-related information is gleaned from a wide variety of sources it contributes to the development of students' occupational aspirations and educational expectations, of which the presence or absence of occupational-educational maturity is but one possible outcome variable.

This chapter has reviewed the nature of the research problem, related sets of findings and theoretical foundations, and the specific research objectives of the present study. Chapter II identifies and describes the means by which pertinent data were gathered for measurement and evaluation, and Chapter III presents these data. Discussions of the data and their possible implications for future research, and for school counseling programs, are then made in the fourth, and final, chapter of this report.
CHAPTER II

THE POPULATION AND RESEARCH METHODS

Introduction

This chapter has four major sections in it. The first section describes the pertinent demographic features of the research population. The second section recounts the data collection process. The third portion chronicles the means by which the independent and dependent variables were constructed. The last major portion depicts the statistical design of the study. A summary then follows and completes the chapter.

The Population

The population for this study consisted of ninth-grade students from the Grand Rapids Public Schools in Grand Rapids, Michigan. From the population of approximately 1750 students 1626 of them responded to a questionnaire administered in April, 1978. The questionnaire was administered to the students by the school system as a part of its annual survey of students' occupational and educational attitudes. This portion of the chapter briefly identifies several of the pertinent demographic features of this population of students.

Age and Gender

The identified ages of the students in the population ranged
from 13 to 18 years, for which the median age was 15 years, the mean age was 14.7 years, and the modal age was 15 years. There were 820 boys and 804 girls in the population.

Social Status

On the questionnaires the students identified the occupation(s) of their primary economic supporter(s). Based upon their responses to this item, their organization into parental occupational statuses, and the attributions of these statuses to the students, there were 354 upper-status students and 1009 lower-status students. A complete description of these social-status category assignments is presented in a later section of this chapter.

Ethnic Identity

The questionnaire contained several fixed-response categories by which the students identified their ethnic identities. From the information which the students provided there were 1041 white students, 496 black youths, 56 Hispanic students, 8 Asian/Oriental adolescents, and 19 students who were native Americans/North American Indians.

Data Collection

The raw data for this study were originally collected by the Grand Rapids public school system in the Spring of 1978. The students' questionnaires were subsequently sent to Edsel L. Erickson at Western Michigan University in February, 1979. Permission was granted by the Grand Rapids Public Schools to use specific sets of infor-
Information from the questionnaires for primary data analysis in this study. Those sets of information relevant to the present study were taken from the questionnaires in preparation for analyses here between March 29, 1979 and April 12, 1979. Once these data were gathered they then had to be organized for analyses. These procedures are outlined in the following section of this chapter.

Construction of the Variables

This section details the means by which the independent and dependent variables were constructed for study. The means by which the independent variables were organized is presented first. Discussions concerning the organization of the dependent variable then follow.

Independent Variables

The study expected to find that the occupational-educational maturity levels of ninth-grade students varied as functions of the independent variables of gender, social status, and ethnic identity. This section of the chapter identifies the means by which these independent variables were developed into operational categories.

Gender

Gender was operationalized by having the students identify themselves as either boys or girls. Students who did not respond to this item on the questionnaire were assigned to a "missing data" category and were subsequently excluded from data analyses (N=2). This information in the "missing data" categories of the study did not exert
cumulative effects on the independent variables for the research hypotheses. Such missing data did affect the construction and measurement of the dependent variable, as well as upon the independent variables in the second and third exploratory questions.

**Social Status**

In the social sciences the concepts of social status and social class are often closely associated even though they are both difficult to measure empirically and consistently. Regardless of these measurement difficulties social researchers assume that their associated life experiences affect individuals' perceptions of "reality."

The study constructed the social-status categories of "upper-status" students and "lower-status" students which were intended as representations of the diverse social-background learning experiences which these adolescent students have had, though such categories were not able to represent the educational levels, income levels, residence patterns, and life styles (Robertson, 1977, p. 272) of the students' primary economic supporters. The two social-status categories provided the means by which the study measured and evaluated the data for the second research hypothesis and the second and third exploratory questions. The means by which these two social-status categories were constructed are now discussed.

On the questionnaire the students were asked to identify the occupation(s) of their primary economic supporter(s). These responses were then classified into the occupational categories identified by Duncan (1959) and are presented in Table 1. Duncan's
<table>
<thead>
<tr>
<th>Occupational Categories</th>
<th>Student Social Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Students</td>
</tr>
<tr>
<td></td>
<td>Students</td>
</tr>
<tr>
<td>Laborers</td>
<td>19.4%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>11.7%</td>
</tr>
<tr>
<td>Private Household</td>
<td>.1%</td>
</tr>
<tr>
<td>Workers</td>
<td>.1%</td>
</tr>
<tr>
<td>Operatives</td>
<td>11.4%</td>
</tr>
<tr>
<td>Craftsmen and Foremen</td>
<td>21.8%</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>7.3%</td>
</tr>
<tr>
<td>Office Workers</td>
<td>2.4%</td>
</tr>
<tr>
<td>Managers</td>
<td>11.9%</td>
</tr>
<tr>
<td>Professionals</td>
<td>14.0%</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
occupational category listing also included the categories of "farm laborers" and "farm managers." Since no students in the population identified their primary economic supporters as working in either of these kinds of occupations, these two occupational categories were not used in this study. Students who did not respond to this item or for whom primary economic supporters' occupational assignments could not be made were assigned to a "missing data" category and were excluded from these analyses (N=293).

Based on the distributions of these responses the "upper-status" students and "lower-status" students categories were constructed. Those students whose primary economic supporters were classified as belonging in either the "managers, officials, and proprietors" category or in the "professional, technical, and kindred workers" category were identified as "upper-status" students for this study. Those students whose primary economic supporters were classified as belonging in either of the remaining occupational categories (that is, "laborers," "service workers," "private household workers," "operative and kindred workers," "craftsmen and foremen," "sales workers," and "office and kindred workers") were identified as belonging in the "lower-status" students category. Students who did not respond to this item were assigned to a "missing data" category and were excluded from these analyses (N=262).

Ethnic Identity

The third independent variable of the study was ethnic identity. The categories of "white" students and "non-white" students were
constructed by using the item on the questionnaire which asked the students to identify their ethnicity. Those students who identified themselves as being white constituted the "white" students category. Those students who identified themselves as being either Black, Hispanic, Asian/Oriental, or native American/North American Indian were combined into the "non-white" students category. Students who did not respond to this item were assigned to a "missing data" category and were excluded from these analyses (N=5).

In order to answer the first exploratory question of the study the "non-white" students category needed further refinement. Those students who identified themselves as Blacks constituted the "black" student category for the answering of this question. Those students who identified themselves as being either Hispanic, Asian/Oriental, or native American/North American Indian were combined into the "other-minority" student category for the study.

In order to answer the second and third exploratory questions the social categories of "upper-status white" students, "upper-status non-white" students, "lower-status white" students, and "lower-status non-white" students needed to be created. These tasks were accomplished first by sorting for those students identified as "white" and "non-white" from "upper-status" backgrounds, and second by sorting for those students identified as "white" and "non-white" from "lower-status" backgrounds, respectively. Once these four additional categories of students were created their separate occupational-educational maturity level data were calculated for analyses and comparisons.
In review, this section of the chapter has identified the social categories of students that were used as independent variables in this study. These categories were identified as boys, girls, upper-status students, lower-status students, white students, non-white students, black students, other-minority students, upper-status white students, upper-status non-white students, lower-status white students, and lower-status non-white students. The following section of the chapter details the methods that were used in the construction of the dependent variable of this study.

The Dependent Variable

Occupational-educational maturity is the dependent variable of the study. It consists of the alignment, or goodness of fit, between students' occupational aspirations and their educational expectations. It was constructed first by obtaining information from two separate items on the questionnaire, and second by cross-tabulating the responses to these items with each other in order to determine whether or not students' educational expectations were here identified as adequate prerequisites to gain entry into the jobs to which the students aspired.

Occupational Aspirations

The first item on the questionnaire from which the presence or absence of occupational-educational maturity was determined asked the students to identify the types of work to which they aspired. These responses were also organized into Duncan's occupational categories.
and their distributions are presented in Table 2. Students who did not respond to this item or who responded with uncertainty were assigned to a "missing data" category and were excluded from these analyses (N=157).

**Educational Expectations**

The second item on the questionnaire which constituted part of the dependent variable of the study asked the students to identify their expected levels of educational or vocational attainment in preparation for the jobs which they desired to have. The organized responses to this item are presented in Table 3. Students who either did not respond to this item or who responded with uncertainty were assigned to a "missing data" category and were excluded from these analyses (N=66).

**Construction of Occupational-Educational Maturity**

After reviewing many job descriptions in which job-skill prerequisites were defined, average educational prerequisites for occupational families were determined. The educational or vocational prerequisites for students' occupational aspiration categories are presented in Figure 1. By using the format provided in the first figure the study was then able to determine whether or not students exhibited occupational-educational maturity.

Occupational-educational maturity is a composite variable consisting of the alignment, or goodness of fit, between students' occupational aspirations and their educational expectations. If stu-
<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>All Students</th>
<th>Boys</th>
<th>Girls</th>
<th>Upper-Status</th>
<th>Lower-Status</th>
<th>White</th>
<th>Non-White</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Laborers</td>
<td>5.4%</td>
<td>80</td>
<td>9.3%</td>
<td>68</td>
<td>1.6%</td>
<td>12</td>
<td>4.5%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>9.6%</td>
<td>141</td>
<td>4.9%</td>
<td>36</td>
<td>14.2%</td>
<td>104</td>
<td>14.2%</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>1%</td>
<td>1</td>
<td>1%</td>
<td>1</td>
<td>----</td>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>Operatives</td>
<td>3.7%</td>
<td>55</td>
<td>6.9%</td>
<td>31</td>
<td>3.3%</td>
<td>4</td>
<td>3.9%</td>
</tr>
<tr>
<td>Craftsmen and Foremen</td>
<td>10.0%</td>
<td>146</td>
<td>19.1%</td>
<td>140</td>
<td>5.2%</td>
<td>6</td>
<td>11.7%</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>2.6%</td>
<td>38</td>
<td>1.9%</td>
<td>14</td>
<td>1.0%</td>
<td>3</td>
<td>3.1%</td>
</tr>
<tr>
<td>Office Workers</td>
<td>6.9%</td>
<td>102</td>
<td>2.0%</td>
<td>15</td>
<td>11.8%</td>
<td>87</td>
<td>7.0%</td>
</tr>
<tr>
<td>Managers</td>
<td>2.2%</td>
<td>32</td>
<td>2.9%</td>
<td>21</td>
<td>1.5%</td>
<td>11</td>
<td>1.8%</td>
</tr>
<tr>
<td>Professionals</td>
<td>59.5%</td>
<td>874</td>
<td>52.9%</td>
<td>388</td>
<td>66.3%</td>
<td>606</td>
<td>56.4%</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td>1469</td>
<td>100.0%</td>
<td>734</td>
<td>100.0%</td>
<td>734</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Expected Level of Educational Attainment</th>
<th>Student Social Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All Students</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Quit Now</td>
<td>.8</td>
</tr>
<tr>
<td>Some High School</td>
<td>2.7</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>30.8</td>
</tr>
<tr>
<td>Trade or Secretarial School</td>
<td>6.5</td>
</tr>
<tr>
<td>Some College</td>
<td>12.7</td>
</tr>
<tr>
<td>College Graduate</td>
<td>34.6</td>
</tr>
<tr>
<td>More than College Graduate</td>
<td>11.9</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0</td>
</tr>
</tbody>
</table>
dents' educational expectations were here identified as being satisfactory prerequisites for the types of jobs to which they aspired. If these two variables were not in congruence with each other the students were not identified as exhibiting occupational-educational maturity. Several examples of the presence and absence of occupational-educational maturity are presented.

If an individual student desired to be a lawyer and expected to attend college for more than four years then at least at face value the student was identified as exhibiting occupational-educational maturity. The same kind of congruence between occupational aspirations and educational expectations was present if an individual student desired to become a pipefitter and expected to attend a trade school in order to develop necessary job skills. In each of these two examples the level or type of education was considered as being an adequate prerequisite for entry into each of these types of occupations.

Conversely, if an individual student desired to become a lawyer but did not expect to graduate from high school then the student was not identified as exhibiting occupational-educational maturity. A less-than-high-school education is not normally an adequate preparation to develop necessary legal skills to pass State bar examinations. If another student desired to be a pipefitter and expected to attend college for more than four years then this student was also not identified as exhibiting occupational-educational maturity. Normally, a person can acquire pipe-fitting skills either by attending an appropriate trade school, by entering into a two-year community college
technical curriculum, or by serving as an apprentice under the supervision of a journeyman pipefitter.

The alignment between students' occupational aspirations and their educational expectations formed the dependent variable of this study. Figure 1 presented the actual format that was used in the construction of the dependent variable of occupational-educational maturity.

This study recognized that some jobs require education/training periods which fell outside of these defined criteria for the determination of the presence or absence of occupational-educational maturity. However, when trying to develop bodies of information based upon aggregate sets of data it must be recognized that a margin of error is present. Following are statements justifying the appropriate levels of educational attainment for the several categories of occupational aspirations that were used in this study.

The occupational category of "laborers" generally refers to types of work that do not require specific skills. Several examples of jobs in this category include furniture movers, longshoremen, and such unskilled labor as board-road construction for oil fields. Since these types of work do not normally require specific skill-development training periods a person could get such jobs as these without much formal schooling or training. Therefore, students who identified that they aspired to be laborers and whose educational expectations were either to "quit now," attend high school for a while, or to graduate from high school were identified by this study.

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as exhibiting occupational-educational maturity. Students whose educational expectations exceeded that of graduating from high school were not identified as exhibiting occupational-educational maturity.

The occupational category of "service workers" includes such job titles as police officers, firefighters, mail carriers, cooks, custodians, counter sales workers, and so on. In general, these types of occupations are identified as tertiary industry functions (Robertson, 1977). Some of the jobs in this occupational category do not require much skill development while others do. However, with several exceptions a person could get a job as a service worker without extensive schooling or training. Therefore, those students who indicated that they aspired to have jobs in this occupational category whose educational expectations ranged from "quit now" to "high school graduate" were identified as exhibiting occupational-educational maturity. Students whose educational expectations exceeded this range were not here identified as exhibiting occupational-educational maturity.

The occupational category of "private household workers" includes such types of work as being a chauffeur, a private gardener, a valet, a household cook, a nanny, and so on, for which a wide range of education or training may be required. This particular occupational category provided these analyses with something of an enigma because only one student in the research population indicated that he aspired to have a job in this occupational category. Since work in this occupational category may require some skill development the
appropriate education or training for the determination of the presence or absence of occupational-educational maturity ranged from "quit now" to "some college."

The occupational category of "operatives and kindred workers" includes jobs that require machinery operation in the manufacturing and transportation industries, excluding computer operators. Some jobs in this occupational category such as heavy machine operators require periods of skill development, while other jobs such as taxi-cab drivers do not. Therefore, those students who aspired to be operatives and whose educational expectations ranged from "quit now" to "some college" were identified as exhibiting occupational-educational maturity. Students whose educational expectations exceeded this range were not identified as exhibiting occupational-educational maturity.

Some examples of jobs in the "craftsmen, foremen, and kindred workers" occupational category include bakers, electricians, printers, upholsterers, and enlisted military personnel. In general, these types of jobs require periods of education which range from the minimal completion of high school, to some college training. Students who aspired to have jobs in this occupational category and whose educational expectations were either "high school graduate," "trade or secretarial school," or "some college" were identified as exhibiting occupational-educational maturity. Students whose expected levels of educational attainment were anything less than the completion of high school or exceeded attending college for a while were not identified as exhibiting occupational-educational maturity.
The occupational category of "sales workers" includes both wholesale and retail sales of services and commodities, excluding counter and fountain sales. For jobs in this occupational category a minimum education would include the completion of high school and may require the completion of a college education. Those students who aspired to have jobs in this occupational category whose expected levels of educational attainment ranged from the completion of high school to the completion of college were identified as exhibiting occupational-educational maturity. If students' educational expectations were outside of this range such students were not identified as exhibiting occupational-educational maturity.

The occupational category of "office workers" includes such clerical and kindred workers as bank tellers, vehicle dispatchers, U.S. Customs entry writers, stenographers/secretaries, telephone operators, and so on. Generally speaking, a minimum education of a high school diploma (or, G.E.D. certificate) is required, and some jobs in this occupational category require some college training. Students who aspired to be office workers whose educational expectations ranged from "high school graduate" to "some college" were here identified as exhibiting occupational-educational maturity. Students who aspired to be office workers whose educational expectations were outside of this range were not so identified.

The occupational category of "managers, proprietors, and officials," excluding farm managers/owners, includes such job titles as railroad conductors, postmasters, real estate brokers, cartage contractors and other self-employed people, and so on. In general,
managerial occupations involve the overseeing of a department, business, or business-related activity for which a wide range of skills is often necessary. Students who aspired to have jobs in this occupational category whose educational expectations ranged from the completion of high school to the completion of college were identified by the study as exhibiting occupational-educational maturity. Students who desired to be managers and whose educational expectations fell outside of this range were not identified as exhibiting occupational-educational maturity.

The occupational category of "professionals, technical, and kindred workers" includes such job titles as certified public accountants, clergy, medical and dental doctors, nurses, college professors, athletes, musicians, airline pilots, and so on. With several possible exceptions such as popular music performers and some professional athletes, a minimum education of a college degree is required for entry into these types of jobs. In many cases a graduate-school education is also required for entry. Students who indicated that they aspired to have jobs as professionals whose expected levels of educational attainment were either "college graduate" or "more than college graduate" were identified as exhibiting occupational-educational maturity. Students who aspired to have jobs in this occupational category and whose expected levels of educational attainment were anything less than the completion of a college education were not identified as exhibiting occupational-educational maturity.

This section of the chapter has identified the criteria by which the presence or absence of occupational-educational maturity
was established. Figure 1 was presented to visually comprehend the alignment between students' occupational aspirations and their educational expectations. It must be recalled that the study is evaluating students' expected levels of educational attainment only in terms of developing necessary skills to gain entry into the types of jobs to which the students aspire. The specific methodological techniques by which students' occupational-educational maturity levels were evaluated are now discussed as they pertain to the research objectives of the study.

**Statistical Design**

The primary sets of data that were measured and evaluated in the study were the percentages of students who exhibited occupational-educational maturity. These percentages were calculated by cross-tabulating students' occupational aspirations with their educational expectations via the use of appropriate computer programs within *Statistical Package for the Social Sciences* (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975) in accord with the format presented in Figure 1. The numbers of students in the shaded areas were counted from which the percentages of students who did, and who did not, exhibit occupational-educational maturity were calculated. Since the sets of data were enumerations from a total population of students the findings of the study were considered as being internally valid.

However, in an effort to check the reliability of the data for the second, third, and fourth research hypotheses and for the three
exploratory questions Chi-square values were calculated for these several sets of information. By so doing the study treated these social categories of students' occupational-educational maturity levels as if they were derived from statistical samples.

The sets of data for the second, third, and fourth research hypotheses and the three exploratory questions are presented in matrices for which there is one degree of freedom, each. By using the .05 level of statistical significance a minimum Chi-square value of 3.841 was required in order to make the determination that the findings for each of these research objectives was not likely to be the result of chance occurrence. Discussions concerning the specific means by which each of the four research hypotheses were accepted or rejected now follow.

Research Hypothesis 1

The first research hypothesis predicts that a majority of ninth-grade students exhibit occupational-educational maturity. Its statistical hypothesis states that:

\[ H_{01} : \% \text{students} \text{ OEM} \geq 51\% \]

For this hypothesis if 51% or more of the students exhibited occupational-educational maturity the research hypothesis was accepted. If less than 51% of the students exhibited occupational-educational maturity the research hypothesis was rejected.

Research Hypothesis 2

The second research hypothesis predicts that ninth-grade boys
are more likely than ninth-grade girls to exhibit occupational-educational maturity. Its statistical hypothesis states that:

\[ H_{S2} : \%_{\text{boys OEM}} > \%_{\text{girls OEM}}. \]

This research hypothesis was accepted if the following two criteria were met: (1) The occupational-educational maturity level data supported the statistical hypothesis, and (2) the Chi-square value for these data exceeded 3.841 indicating that such findings were not likely to have resulted from random occurrence within the population. If either or both of these two conditions were not met the research hypothesis was rejected.

Research Hypothesis 3

The third research hypothesis predicts that upper-status students are more likely than lower-status students to exhibit occupational-educational maturity. The third statistical hypothesis states that:

\[ H_{S3} : \%_{\text{upper-status OEM}} > \%_{\text{lower-status OEM}}. \]

The third research hypothesis was also accepted if the following two conditions were met: (1) The occupational-educational maturity level data supported the statistical hypothesis, and (2) the Chi-square value for these findings was sufficiently large to be confident that the results were not likely to have been the product of random occurrence within the population.
Research Hypothesis 4

The fourth research hypothesis predicts that white students are more likely than non-white students to exhibit occupational-educational maturity. The fourth statistical hypothesis states that:

\[ H_4: \%_{\text{white OEM}} > \%_{\text{non-white OEM}} \]

Again, this research hypothesis was accepted if the following two conditions were met: (1) The occupational-educational maturity level data supported the statistical hypothesis, and (2) the calculated Chi-square value for these data was larger than 3.841 indicating that the data would not have resulted from chance occurrence in the population.

Exploratory Question 1

Within the context of the fourth research hypothesis three exploratory questions are raised. The first of these asks:

\[ \text{EQ}_1: \text{What are the occupational-educational maturity levels of black and other-minority students?} \]

In order to answer this question the occupational-educational maturity level data for black and other-minority students were calculated in accord with established procedures.

Once these data were obtained a Chi-square value for them was calculated in order to determine if they were the result of random occurrence in the population. These data were then compared with the occupational-educational maturity level data for the non-white student population as a whole in order to determine if the three
sets of occupational-educational maturity level data were consistent with each other.

**Exploratory Questions 2 and 3**

The second and third exploratory questions of this study ask:

EQ\(_2\): What are the occupational-educational maturity levels of upper-status white and upper-status non-white students?

EQ\(_3\): What are the occupational-educational maturity levels of lower-status white and lower-status non-white students?

The findings for these two exploratory questions were also calculated in accord with established procedures.

Once these sets of data were obtained they were compared with each other partially by their several Chi-square statistics. If the Chi-square values for each of these two exploratory question's data exceeded 3.841 the findings were treated as being statistically significant at the .05 level.

This section of the chapter has identified the specific means by which the occupational-educational maturity levels of ninth-grade students were calculated for evaluation. These research methods were pertinent to each of the four research hypotheses and the three exploratory questions which guided the study.

**Summary**

This chapter has identified the pertinent and identifiable demographic characteristics of the students in the research population of this study. The major features of the students are identified in
Table 4.

Table 4
Demographic Features of the Student Population

<table>
<thead>
<tr>
<th>Gender</th>
<th>Social Status</th>
<th>Ethnic Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>Girls</td>
<td>Upper</td>
</tr>
<tr>
<td>% N</td>
<td>% N</td>
<td>% N</td>
</tr>
<tr>
<td>50.4% 820</td>
<td>49.4% 804</td>
<td>21.8% 354</td>
</tr>
</tbody>
</table>

The population from which these figures were obtained consisted of almost all of the ninth-grade students enrolled in the Grand Rapids public schools in the Spring of 1978.

This chapter has also identified the procedures that were followed in the calculations of the occupational-educational maturity levels of the students. This task was accomplished by describing how the independent variables of gender, social status, and ethnic identity were constructed, and then by addressing the means by which the dependent variable of occupational-educational maturity was constructed. Finally, the statistical design of the study pertaining to the four research hypotheses and the three exploratory questions was discussed.

The third chapter presents the research findings of this study as well as some initial interpretations of the data. Further interpretations of the data generated by the study are presented in the last chapter of this report.
CHAPTER III

FINDINGS

Introduction

The purpose of this chapter is to present the research findings of the study's analyses of ninth-grade students' occupational-educational maturity levels. The data presented pertain to each of the four research hypotheses and the exploratory questions which guided the study. Other data which pertain to each of the specific research concerns of the study are also presented in appropriate contexts. Following these discussions are reviews of the major findings.

Research Hypothesis 1

The first general hypothesis of this study states that:

\[ H_0: \text{By the ninth-grade level of schooling many students begin to exhibit occupational-educational maturity.} \]

Its research hypothesis predicts that a majority of ninth-grade students exhibit occupational-educational maturity, for which the first statistical hypothesis is:

\[ H_1: \% \text{students OEM} \geq 51\%. \]

Tables 5 and 6 provide the information for the testing of this hypothesis.

Table 5 provides several sets of information for the evaluation of the first research hypothesis. First, the table presents the
Table 5
Percentage and Frequency Distributions of Students' Occupational Aspirations and Educational Expectations (Tabulated Across)

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now Some High School High School Graduate Trade/Serv'l School Some College College Graduate More than College Graduate Totals</td>
</tr>
<tr>
<td></td>
<td>$X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$ $X$ $N$</td>
</tr>
<tr>
<td>Laborers</td>
<td>2.7% 2 5.4 4 43.2 32 5.4 4 10.8 8 20.3 15 12.2 9 100% 74</td>
</tr>
<tr>
<td>Service Workers</td>
<td>.7% 1 4.3 6 44.2 62 9.3 13 9.3 13 28.6 40 3.6 5 100% 140</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>--- --- --- --- --- --- --- --- --- --- 100.0% 1</td>
</tr>
<tr>
<td>Operators</td>
<td>2.0% 1 8.0 4 42.0 21 16.0 7 12.0 6 18.0 9 4.0 2 100% 50</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>.7% 1 1.4 2 50.4 71 11.3 16 10.6 15 19.9 28 5.7 8 100% 141</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>--- --- 5.4% 2 45.9 17 10.9 4 8.1 3 24.3 9 5.4 2 100% 37</td>
</tr>
<tr>
<td>Office Workers</td>
<td>--- --- 2.0% 2 37.0 37 10.0 10 13.0 13 34.0 34 4.0 4 100% 100</td>
</tr>
<tr>
<td>Managers</td>
<td>--- --- --- --- 28.6% 8 10.7 3 25.0 7 28.6 8 7.1 2 100% 28</td>
</tr>
<tr>
<td>Professionals</td>
<td>.5% 5 1.8 15 21.5 181 3.7 31 13.9 117 42.1 355 16.5 139 100% 843</td>
</tr>
<tr>
<td>Totals</td>
<td>.7% 10 2.5 35 30.3 429 6.2 80 12.9 183 35.3 498 12.1 171 100% 1414</td>
</tr>
</tbody>
</table>

61% OBS Present (N=862)
39% OBS Absent (N=552)
The total number of students whose occupational aspirations were cross-tabulated with their educational expectations (N=1414). Second, the table illustrates that 61% of the students exhibited occupational-educational maturity (N=862). Third, the table shows that the remaining 39% of the students did not exhibit alignment between their occupational aspirations and their educational expectations (N=552). These several findings are presented in summary forms in Table 6.

Table 6
Occupational-Educational Maturity Status
Among All Students

<table>
<thead>
<tr>
<th>Occupational-educational Maturity</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present</td>
<td>61%</td>
<td>862</td>
</tr>
<tr>
<td>Absent</td>
<td>39</td>
<td>552</td>
</tr>
<tr>
<td>Totals</td>
<td>100%</td>
<td>1414</td>
</tr>
</tbody>
</table>

The first research hypothesis of the study was founded on the assumption that by the ninth-grade level of schooling students begin to develop occupational aspirations and educational expectations that are compatible with each other in order for the students to be able to begin to prepare themselves for entry into the labor market of society. Since the study has shown that 61% of the students expected to attain at least the minimal educational or vocational prerequisites for the types of work to which they aspired the first research hypothesis was accepted.

The data presented in Table 5 also yield several other sets of
information pertinent to the students' occupational aspirations and educational expectations. Two of these additional types of data refer to the students who exhibited occupational-educational maturity, while a third type of finding refers to those students who did not exhibit occupational-educational maturity.

The first of these additional sets of findings illustrates that there was a wide range of proportions of students who exhibited occupational-educational maturity when each occupational category was analyzed. These proportional distributions are presented in Table 7.

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborers</td>
<td>51.4%</td>
<td>38</td>
</tr>
<tr>
<td>Service Workers</td>
<td>49.3</td>
<td>69</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>100.0</td>
<td>1</td>
</tr>
<tr>
<td>Operatives</td>
<td>78.0</td>
<td>39</td>
</tr>
<tr>
<td>Craftsmen and Foremen</td>
<td>72.3</td>
<td>102</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>89.2</td>
<td>33</td>
</tr>
<tr>
<td>Office Workers</td>
<td>60.0</td>
<td>60</td>
</tr>
<tr>
<td>Managers</td>
<td>92.9</td>
<td>26</td>
</tr>
<tr>
<td>Professionals</td>
<td>58.6</td>
<td>494</td>
</tr>
<tr>
<td>Overall Distributions</td>
<td>61.0%</td>
<td>862</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
The findings in this table illustrate that while 61% of the students exhibited occupational-educational maturity there were some variations from this value. For example, 92.9% of the students who aspired to have jobs in the "managers" occupational category exhibited occupational-educational maturity (N=26), while the presence of occupational-educational maturity was evident for only 49.3% of the students who aspired to have jobs in the "service workers" occupational category (N=69). This range of occupational-educational maturity levels was interpreted as being attributed to the specific occupational-educational maturity levels of categories of students in the research population.

After comparisons of the sets of data in Tables 5 and 7 were made another feature of the students who exhibited occupational-educational maturity was found. Among the students who exhibited occupational-educational maturity 60.3% aspired to have jobs as either managers or as professionals (N=520). That is, over 60% of the students who exhibited occupational-educational maturity aspired to have upper-status jobs as identified here. This, then, also means that the remaining 39.7% of the students who exhibited occupational-educational maturity aspired to have jobs in the other occupational categories identified by this study as lower-status jobs (N=342). These data are summarized in Table 8.

While the reasons for these types of occupational aspirations may be speculative due to the nature of the questionnaire from which the data were obtained, an attempt is made to explain them in the next chapter. In the meantime, a final set of findings obtained from
Table 8
Social-Status Aspirations of Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Social-Status Aspirations</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper Status</td>
<td>60.3%</td>
<td>520</td>
</tr>
<tr>
<td>Lower Status</td>
<td>39.7</td>
<td>342</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td>862</td>
</tr>
</tbody>
</table>

The data for the first research hypothesis needs to be addressed. The data presented in Table 5 yields other findings pertaining to the students who did not exhibit occupational-educational maturity. Among the students who did not have occupational aspirations and educational expectations aligned with each other 64.5% were identified as expecting to be under-educated or under-trained for the types of jobs to which they aspired (N=356). That is, these students did not expect to attain the minimal educational or vocational requirements for their desired jobs. Also, among the students who did not exhibit occupational-educational maturity 35.5% were identified as expecting to be over-educated or over-trained for entry into occupations of their desires (N=196). That is, these students' educational expectations exceeded those identified here as being satisfactory prerequisites for the occupational categories used in the study. These data are presented in summary forms in Table 9.
Table 9
Status of Educational Expectations Among the Students Who Did Not Exhibit Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Educational Expectations</th>
<th>%</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under-Educated</td>
<td>64.5%</td>
<td>356</td>
</tr>
<tr>
<td>Over-Educated</td>
<td>35.5%</td>
<td>196</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td>552</td>
</tr>
</tbody>
</table>

Since these findings represented enumerations from a total research population it was reasonable to assume that similar types of findings from the data for each of the other research concerns of this study would be found. However, further discussions of this topic are not pursued in this report due to the inability to analytically address the students' reasons for expecting to attain the levels of educational achievement or vocational training they indicated on the questionnaires. Future studies of students' occupational-educational maturity levels should be so constructed as to have students identify why they have their indicated levels of educational or vocational attainment in order to clarify and adequately address this type of unanswered issue in the data derived from the present study.

While several other issues pertinent to the data for the first research hypothesis of this study are presented in the next chapter of this report, data for the second research hypothesis need to be presented and addressed. These discussions follow.
Research Hypothesis 2

The second general hypothesis of this study states that:

\[ H_2 : \text{By the ninth-grade level of schooling boys are more likely than girls to exhibit occupational-educational maturity.} \]

The second research hypothesis predicts that the percentage of boys exhibiting occupational-educational maturity is larger than the percentage of girls exhibiting occupational-educational maturity.

The second statistical hypothesis is:

\[ H_{s2} : \% \text{boys OEM} > \% \text{girls OEM}. \]

Tables 10, 11, and 12 present the information by which this hypothesis was evaluated.

Table 10 presents the total number of boys whose occupational aspirations were cross-tabulated with their educational expectations (N=704). Among the boys 62% exhibited occupational-educational maturity (N=437), while the remaining 38% did not (N=267). Table 11 presents the total number of girls whose occupational aspirations were cross-tabulated with their educational expectations (N=709). Among the girls 60% exhibited occupational-educational maturity (N=425), while the remaining 40% did not exhibit alignment between their occupational aspirations and their educational expectations (N=284).

While Tables 10 and 11 present the cross-tabulations of boys' and girls' occupational aspirations and their educational expectations, the comparative occupational-educational maturity level data the tables contain may be difficult to discern. Therefore, Table 12 presents these findings in their summary forms.
<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Laborers</td>
<td>3.2%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>2.9%</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>---</td>
</tr>
<tr>
<td>Operators</td>
<td>2.2%</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>.7%</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>---</td>
</tr>
<tr>
<td>Office Workers</td>
<td>---</td>
</tr>
<tr>
<td>Managers</td>
<td>---</td>
</tr>
<tr>
<td>Professionals</td>
<td>.5%</td>
</tr>
<tr>
<td>Totals</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

62% of Hr Present (N=437)
38% of Hr Absent (N=261)
### Table II

Percentage and Frequency Distributions of Girls' Occupational Aspirations and Educational Expectations (Tabulated Across)

<table>
<thead>
<tr>
<th>Occupational Aspiration Category</th>
<th>Quit Now</th>
<th>Some High School</th>
<th>High School Graduate</th>
<th>Trade/Sec'1 School</th>
<th>Some College</th>
<th>College Graduate</th>
<th>More than College Graduate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laborers</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>41.7%</td>
<td>8.3%</td>
<td>33.3%</td>
<td>16.7%</td>
<td>100% 12</td>
</tr>
<tr>
<td>Service Workers</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>5.8%</td>
<td>48.1%</td>
<td>24.0%</td>
<td>1.9%</td>
<td>100% 104</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Operatives</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>50.0%</td>
<td>2%</td>
<td>25.0%</td>
<td>1%</td>
<td>100% 4</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>66.6%</td>
<td>16.7%</td>
<td>16.7%</td>
<td>---</td>
<td>100% 6</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>4.2%</td>
<td>11%</td>
<td>20.8%</td>
<td>8.3%</td>
<td>100% 26</td>
</tr>
<tr>
<td>Office Workers</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>2.3%</td>
<td>10%</td>
<td>31.8%</td>
<td>2.3%</td>
<td>100% 85</td>
</tr>
<tr>
<td>Managers</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>33.3%</td>
<td>4%</td>
<td>22.2%</td>
<td>---</td>
<td>100% 9</td>
</tr>
<tr>
<td>Professionals</td>
<td>.6%</td>
<td>1.7%</td>
<td>8%</td>
<td>22.4%</td>
<td>3.7%</td>
<td>42.2%</td>
<td>16.3%</td>
<td>100% 465</td>
</tr>
<tr>
<td>Totals</td>
<td>.6%</td>
<td>2.4%</td>
<td>17%</td>
<td>29.9%</td>
<td>5.8%</td>
<td>36.9%</td>
<td>11.8%</td>
<td>100% 709</td>
</tr>
</tbody>
</table>

60% OHS Present (N=425)
40% OHS Absent (N=204)
Table 12

Occupational-Educational Maturity Status of Boys and Girls

<table>
<thead>
<tr>
<th>Occupational-Educational Maturity</th>
<th>Gender</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Totals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Present</td>
<td>62%</td>
<td>437</td>
<td>60%</td>
<td>425</td>
<td>61%</td>
</tr>
<tr>
<td>Absent</td>
<td>38</td>
<td>267</td>
<td>40</td>
<td>284</td>
<td>39</td>
</tr>
<tr>
<td>totals</td>
<td>100%</td>
<td>704</td>
<td>100%</td>
<td>709</td>
<td>100%</td>
</tr>
</tbody>
</table>

The summary findings in Table 12 illustrate that the percentage of boys who exhibited occupational-educational maturity (62%) was larger than the percentage of girls who exhibited occupational-educational maturity (60%). While the percentage of boys who exhibited occupational-educational maturity was larger than the percentage of girls who also exhibited occupational-educational maturity as the research hypothesis predicts, the difference in these two proportions was slight. In addition, the Chi-square value that was calculated for these data was only .58 which indicated that the occupational-educational maturity levels for boys and girls were not statistically significant at the .05 level.

The second research hypothesis was based on the assumption that boys were more likely than girls to exhibit occupational-educational maturity due to differences in their occupationally-related learning experiences. The findings for the testing of this hypothesis indica-
ted that within the research population of ninth-grade students from Grand Rapids, Michigan, gender was not shown as being an adequate predictor of students' occupational-educational maturity levels. Therefore, the second research hypothesis was rejected.

The summary findings in Table 12 illustrate that while the percentage of boys who exhibited occupational-educational maturity was larger than the percentage of girls who exhibited occupational-educational maturity, such proportional differences were not evident when all occupational categories were evaluated. Table 13 presents the distributions of the percentages of boys and girls who exhibited occupational-educational maturity in all of the occupational categories used in the study.

The findings in this table illustrate that boys were not more apt than girls to exhibit occupational-educational maturity when specific occupational categories are analyzed. For example, while proportionally more boys than girls who aspired to be either laborers, operatives, sales workers, or professionals exhibited occupational-educational maturity, the reverse distributions were found among students who exhibited occupational-educational maturity and who aspired to be either service workers, craftsmen and foremen, office workers, or managers.

The higher proportion of girls than boys who exhibited occupational-educational maturity in the "craftsmen and foremen" and in the "managers" occupational categories may be attributed to male-female role convergence in our society (Lueptow, 1981) which has had the effect of opening numerous job opportunities which have been previously closed.
Table 13
Percentage and Frequency Distributions of Boys and Girls Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Occupational-Aspirations Categories</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Laborers</td>
<td>53.3%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>37.1%</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>100.0%</td>
</tr>
<tr>
<td>Operatives</td>
<td>78.3%</td>
</tr>
<tr>
<td>Craftsmen and Foremen</td>
<td>71.8%</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>92.3%</td>
</tr>
<tr>
<td>Office Workers</td>
<td>40.0%</td>
</tr>
<tr>
<td>Managers</td>
<td>89.5%</td>
</tr>
<tr>
<td>Professionals</td>
<td>58.7%</td>
</tr>
<tr>
<td>Overall Distributions</td>
<td>62.0%</td>
</tr>
</tbody>
</table>

to women. On the other hand, the higher proportion of girls than boys who exhibited occupational-educational maturity who aspired to have jobs as either service workers or as office workers may be a reflection of socialization experiences along lines of traditional perceptions of male-female occupational role stereotypes (Prediger & Cole, 1975; Rosen & Aneshensel, 1978). If these countervailing social forces were both affecting adolescent boys' and girls' occupational and educational ambitions their effects could have contributed to the
inability of the study to successfully predict direction in the occupa-
tional-educational maturity levels of boys and girls in the research
population.

Even though a meager attempt to explain these findings is made in
the last chapter of this report, data of this type require further in-
vestigations beyond the immediate analytical boundaries of the present
study due to the nature of the research device from which such data
were obtained. In the meantime, however, data relevant to another
facet of the information in Tables 10, 11, and 13 need to be addressed.

Additional analyses of the information in these three tables
show that among both boys and girls who exhibited occupational-educu-
tional maturity majorities of them aspired to have jobs as either
managers or as professionals. That is, among the boys who exhibited
occupational-educational maturity 54.7% aspired to have upper-status
jobs (N=239), and 66.1% of the girls who exhibited occupational-educu-
tional maturity also aspired to have upper-status jobs (N=281). The
remaining minorities of both boys and girls who exhibited occupa-
tional-educational maturity indicated that they aspired to have lower-status
jobs in the other occupational categories used here. These data are
presented in their summary forms in Table 14.

Again, however, a complete understanding of the phenomena pre-
sented in Table 14 is impossible due to the nature of the data-
gathering device from which these findings were obtained. Still, an
attempt to do so is made in the next chapter of this report.
Social-status Aspirations of Boys and Girls Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Social-Status Aspirations</th>
<th>Boys</th>
<th>Girls</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
</tr>
<tr>
<td>Upper Status</td>
<td>54.7% 239</td>
<td>66.1% 281</td>
<td>60.3% 520</td>
</tr>
<tr>
<td>Lower Status</td>
<td>45.3% 198</td>
<td>33.9% 144</td>
<td>39.7% 342</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0% 437</td>
<td>100.0% 425</td>
<td>100.0% 862</td>
</tr>
</tbody>
</table>

Data relevant to the testing of the third research hypothesis of the study need to be explored. The third research hypothesis is now reviewed, for which data are presented for analyses.

Research Hypothesis 3

The third general hypothesis of the study states that:

\[ H_{S3} : \text{By the ninth-grade level of schooling upper-status students are more likely than lower-status students to exhibit occupational-educational maturity.} \]

The third research hypothesis predicts that the percentage of upper-status students exhibiting occupational-educational maturity is larger than the percentage of lower-status students exhibiting occupational-educational maturity. The third statistical hypothesis is:

\[ H_{S3} : \%_{\text{upper-status OEM}} > \%_{\text{lower-status OEM}}. \]

The data for the testing of this hypothesis are presented in Tables...
Table 15 presents the total number of upper-status students whose occupational aspirations were cross-tabulated with their educational expectations (N=315). Among upper-status students, 70% exhibited occupational-educational maturity (N=220), and the remaining 30% did not (N=95). Table 16 presents the total number of lower-status students whose occupational aspirations were cross-tabulated with their educational expectations (N=894). Among lower-status students, 59% exhibited occupational-educational maturity (N=527), while the remaining 41% did not exhibit alignment between their occupational aspirations and their educational expectations (N=367).

While Tables 15 and 16 present the occupational-educational maturity level data for both upper-status students and lower-status students, it may be difficult to compare the data in the two tables. Therefore, Table 17 presents the occupational-educational maturity level data for upper-status students and lower-status students in their summary forms.

These summary findings illustrate that the percentage of upper-status students who exhibited occupational-educational maturity (70%) was larger than the percentage of lower-status students who exhibited occupational-educational maturity (59%) as the third research hypothesis predicts. The Chi-square value for these data was 11.4 which at the .05 level of significance was interpreted as meaning that the data were not likely to have resulted from random occurrence.

This research hypothesis was based on the assumption that upper-status students were more likely than lower-status students to ex-
<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Labors</td>
<td></td>
</tr>
<tr>
<td>Operatives</td>
<td></td>
</tr>
<tr>
<td>Service Workers</td>
<td>46.1%</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td></td>
</tr>
<tr>
<td>Operatives</td>
<td>10.0%</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td></td>
</tr>
<tr>
<td>Sales Workers</td>
<td>33.3%</td>
</tr>
<tr>
<td>Office Workers</td>
<td>38.6%</td>
</tr>
<tr>
<td>Managers</td>
<td>25.0%</td>
</tr>
<tr>
<td>Professionals</td>
<td>9.9%</td>
</tr>
<tr>
<td>Totals</td>
<td>16.8</td>
</tr>
</tbody>
</table>

70% Obsn Present (N=220)
30% Obsn Absent (N=95)
Table 16
Percentage and Frequency Distributions of Lower-Status Students' Occupational Aspirations and Educational Expectations (Tabulated Across)

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>Laborers</td>
<td>3.8%</td>
</tr>
<tr>
<td>Service Workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.3%</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Operators</td>
<td>2.5%</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>1.0%</td>
</tr>
<tr>
<td>Sales Workers</td>
<td></td>
</tr>
<tr>
<td>Office Workers</td>
<td></td>
</tr>
<tr>
<td>Managers</td>
<td></td>
</tr>
<tr>
<td>Professionals</td>
<td>0.8%</td>
</tr>
<tr>
<td>Totals</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

59% OBS Present (N=527)
41% OBS Absent (N=367)
Table 17
Occupational-Educational Maturity Status of Upper-Status and Lower-Status Students

<table>
<thead>
<tr>
<th>Occupational-Educational Maturity</th>
<th>Social Status</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upper</td>
<td>N</td>
<td>Lower</td>
<td>N</td>
<td>Totals</td>
</tr>
<tr>
<td>Present</td>
<td>70%</td>
<td>220</td>
<td>59%</td>
<td>527</td>
<td>62%</td>
</tr>
<tr>
<td>Absent</td>
<td>30%</td>
<td>95</td>
<td>41%</td>
<td>367</td>
<td>38%</td>
</tr>
<tr>
<td>Totals</td>
<td>100%</td>
<td>315</td>
<td>100%</td>
<td>894</td>
<td>100%</td>
</tr>
</tbody>
</table>

Habit occupational-educational maturity due to differences in their occupationally-related learning experiences. Since the findings show that proportionally more upper-status students than lower-status students exhibited occupational-educational maturity, as predicted, and because these findings were shown as being statistically significant when subjected to sampling procedures, the third research hypothesis was accepted. Within the research population of ninth-grade students differences in their apparent social-status backgrounds appear to be adequate predictors of the students' occupational-educational maturity levels.

However, upon further investigation of the information provided in Table 15 it became evident that upper-status students' social-status aspirations severely affected the total proportion of them who exhibited occupational-educational maturity. The data in Table 18 illustrate that there was a wide range of proportions of upper-
status and lower-status students who exhibited maturity in the occupa­tional-educational sense when each occupational category was taken into account. In fact, the data presented in this table illustrate that in only three out of nine occupational categories did propor­tionally more upper-status students than lower-status students exhib­it occupational-educational maturity. These three occupational categories were "office workers," "managers," and "professionals."

Table 18
Percentage and Frequency Distributions of Upper-Status and Lower-Status Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Social Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upper</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Laborers</td>
<td>46.2</td>
</tr>
<tr>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Service Workers</td>
<td>32.0</td>
</tr>
<tr>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>-----</td>
</tr>
<tr>
<td></td>
<td>---</td>
</tr>
<tr>
<td>Operatives</td>
<td>60.0</td>
</tr>
<tr>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Craftsmen and Foremen</td>
<td>58.8</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>66.6</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Office Workers</td>
<td>69.2</td>
</tr>
<tr>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Managers</td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Professionals</td>
<td>75.2</td>
</tr>
<tr>
<td></td>
<td>167</td>
</tr>
<tr>
<td>Overall Distributions</td>
<td>70.0%</td>
</tr>
<tr>
<td></td>
<td>220</td>
</tr>
</tbody>
</table>
From the information provided in Tables 15 and 18 it was found that the total proportion of upper-status students who exhibited occupational-educational maturity was seriously affected or distorted by their apparent social-status aspirations. Slightly more than 81% of the upper-status students who exhibited occupational-educational maturity aspired to have upper-status jobs as either managers or as professionals (N=179). Similar social-status aspirations were evident for only 53.1% of the lower-status students who exhibited occupational-educational maturity (N=280). These data are presented in their summary forms in Table 19.

Table 19

Social-Status Aspirations of Upper-Status and Lower-Status Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Social-Status Aspirations</th>
<th>Social Status</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upper</td>
<td>N</td>
<td>Lower</td>
<td>N</td>
<td>Totals</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td></td>
<td>%</td>
<td></td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Upper Status</td>
<td>81.4%</td>
<td>179</td>
<td>53.1%</td>
<td>280</td>
<td>61.4%</td>
<td>459</td>
</tr>
<tr>
<td>Lower Status</td>
<td>18.6%</td>
<td>41</td>
<td>46.9%</td>
<td>247</td>
<td>38.6%</td>
<td>288</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td>220</td>
<td>100.0%</td>
<td>527</td>
<td>100.0%</td>
<td>747</td>
</tr>
</tbody>
</table>

Data of these types suggest that upper-status students were not only more likely than lower-status students to exhibit occupational-educational maturity, but their apparent social-status aspirations differed markedly. A complete understanding of such data was hampered though by the inability of the study to glean from the students' responses on the questionnaires the reasons why they have the
types of occupational aspirations they so indicated. Future studies of students' occupational-educational maturity levels will be made more complete when respondents are given the opportunity to identify on the data-gathering device their reasons for having their occupational and educational ambitions.

Several other discussions relevant to the findings for the third research hypothesis are undertaken in the fourth chapter of this study. Findings pertinent to the testing of the fourth research hypothesis are now presented for their analyses.

Research Hypothesis 4

The fourth general hypothesis of this study asserts that:

\[ H_4 : \text{By the ninth-grade level of schooling white students are more likely than non-white students to exhibit occupational-educational maturity.} \]

The fourth research hypothesis predicts that the percentage of white students exhibiting occupational-educational maturity is larger than the percentage of non-white students exhibiting occupational maturity. This research hypothesis is translated into the fourth statistical hypothesis as:

\[ H_{S4} : \% \text{whites OEM} > \% \text{non-whites OEM} \]

The data for the testing of this hypothesis are presented in Tables 20, 21, and 22.

Table 20 presents the total number of white students whose occupational aspirations were cross-tabulated with their educational expectations (N=918). Among the white students 65% exhibited occupa-
<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
</tr>
<tr>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Laborers</td>
<td>3.3%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>1.0%</td>
</tr>
<tr>
<td>Operatives</td>
<td>---</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>.9%</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>---</td>
</tr>
<tr>
<td>Office Workers</td>
<td>---</td>
</tr>
<tr>
<td>Managers</td>
<td>---</td>
</tr>
<tr>
<td>Professionals</td>
<td>.6%</td>
</tr>
<tr>
<td>Totals</td>
<td>.5%</td>
</tr>
</tbody>
</table>

65% OBS Present (N=600)  
35% OBS Absent (N=318)
Table 21
Percentage and Frequency Distributions of Non-White Students' Occupational Aspirations and Educational Expectations (Tabulated Across)

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Laborers</td>
<td>2.3%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>---</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>---</td>
</tr>
<tr>
<td>operatives</td>
<td>7.1%</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>---</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>---</td>
</tr>
<tr>
<td>Office Workers</td>
<td>---</td>
</tr>
<tr>
<td>Managers</td>
<td>---</td>
</tr>
<tr>
<td>Professionals</td>
<td>1.1%</td>
</tr>
<tr>
<td>Totals</td>
<td>1.0%</td>
</tr>
</tbody>
</table>

5% Off Present (N=260)
47% with Absent (N=234)
tional-educational maturity (N=600), and the remaining 35% did not exhibit maturity in the occupational-educational sense (N=318).

Table 21 presents the total number of non-white students whose occupational aspirations were cross-tabulated with their educational expectations (N=494). Among the non-white students 53% did exhibit occupational-educational maturity (N=260), and the remaining 47% did not exhibit alignment between their occupational aspirations and their educational expectations (N=234).

Once again, the findings in these two tables need to be combined and summarized in order to adequately compare and evaluate the information they contain. This task is accomplished in Table 22.

Table 22

Occupational-Educational Maturity Status of White and Non-White Students

<table>
<thead>
<tr>
<th>Occupational-Educational Maturity</th>
<th>Ethnic Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
</tr>
<tr>
<td>Present</td>
<td>65%</td>
</tr>
<tr>
<td>Absent</td>
<td>35%</td>
</tr>
<tr>
<td>Totals</td>
<td>100%</td>
</tr>
</tbody>
</table>

These summary data illustrate that the percentage of white students who exhibited occupational-educational maturity (65%) was larger than the percentage of non-white students who exhibited occupational-educational maturity (53%), as the fourth research hypothesis predicts. The calculated Chi-square value for these data was 21.94.
This research hypothesis was founded on the assumption that the occupationally-related learning experiences of white students were more conducive to the development of occupational-educational maturity than the occupationally-related socialization experiences of non-white students. The fourth research hypothesis of the study was accepted for two reasons. First, the occupational-educational maturity levels of white and non-white students were in the predicted direction. Second, the Chi-square value for these data was sufficiently large to be confident that the data were not the result of random occurrence. It was concluded, therefore, that ethnic identity was an adequate predictor of students' occupational-educational maturity levels.

The findings in Tables 20, 21, and 22 illustrate that proportionally more white students than non-white students exhibited occupational-educational maturity. Such proportional distributions were not evident, however, for specific occupational categories. The data in Table 23 serve to illustrate this point.

The information in this table illustrates that there were no white students who exhibited occupational-educational maturity and who aspired to have jobs in the "private household workers" occupational category. In fact, there was only one, black, male student who aspired to have a job in this occupational category. This student's primary economic supporter held a job as a private household worker.

The information in Table 23 also illustrates that proportionally more non-white students than white students who aspired to have jobs
Table 23
Percentage and Frequency Distributions of White and Non-White Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Ethnic Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Laborers</td>
<td>60.0%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>55.2</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>----</td>
</tr>
<tr>
<td>Operatives</td>
<td>88.9</td>
</tr>
<tr>
<td>Craftsmen and Foremen</td>
<td>81.4</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>87.0</td>
</tr>
<tr>
<td>Office Workers</td>
<td>67.9</td>
</tr>
<tr>
<td>Managers</td>
<td>95.0</td>
</tr>
<tr>
<td>Professionals</td>
<td>60.8</td>
</tr>
<tr>
<td>Overall Distributions</td>
<td>65.0%</td>
</tr>
</tbody>
</table>

as service workers exhibited occupational-educational maturity. The information in this table illustrates, then, that in all but two occupational categories did more white students than non-white students exhibit occupational-educational maturity. These types of proportional distributions could have also contributed to the ability of the study to successfully predict occupational-educational maturity levels between white students and non-white students in the research population.
The findings in Tables 20, 21, and 23 show additionally that majorities of both white and non-white students who exhibited maturity in the occupational-educational sense aspired to have upper-status jobs as either managers or as professionals. For example, 59.7% of the white students who exhibited occupational-educational maturity aspired to have upper-status jobs (N=358), while the remaining 40.3% aspired to have jobs in the other occupational categories (N=242). Almost 62% of the non-white students who exhibited occupational-educational maturity also indicated that they aspired to have upper-status jobs (N=160), while the remaining 38.5% indicated that they aspired to have lower-status jobs (N=100). These findings are presented in their summary forms in Table 24.

Table 24
Social-Status Aspirations of White and Non-White Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Social-Status Aspirations</th>
<th>Ethnic Identity</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>Non-White</td>
<td>Totals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Upper Status</td>
<td>59.7%</td>
<td>358</td>
<td>61.5%</td>
<td>160</td>
</tr>
<tr>
<td>Lower Status</td>
<td>40.3%</td>
<td>242</td>
<td>38.5%</td>
<td>100</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td>600</td>
<td>100.0%</td>
<td>260</td>
</tr>
</tbody>
</table>

A general attempt to explain these data is made in the next chapter of the study even though such an attempt is incomplete due to the lack of information by which these findings could be adequately interpreted. In the meantime, three exploratory questions are
raised in the context of the fourth research hypothesis. Presenta-
tions of the data for these three other research concerns follow for
their analyses.

Exploratory Question 1

The first exploratory question is:

EQ1: What are the occupational-educational maturity
levels of black and other-minority students?

This question was raised because data in related studies (Ginzberg et
al., 1951) suggested that students' occupational and educational plans
may vary among non-white/minority students. Tables 25, 26, and 27
present the information by which this question is answered and as-
sessed.

Table 25 presents the total number of black students whose occupa-
tional aspirations were cross-tabulated with their educational ex-
pectations (N=425). Among the black students 52% exhibited occu-
pational-educational maturity (N=223), and the remaining 48% did
not (N=202). Table 26 presents the total number of other-minority
students whose occupational aspirations were cross-tabulated with
their educational expectations (N=69). Among the other-minority
students 54% exhibited occupational-educational maturity (N=37), and
the remaining 46% did not exhibit alignment between their occupa-
tional aspirations and their educational expectations (N=32).

As before, these data need to be presented in their summary
forms in order to facilitate their comparative analyses. Table 27
accomplishes this task.
Table 25
Percentage and Frequency Distributions of Black Students' Occupational Aspirations and Educational Expectations (Tabulated Across)

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Quit Now</th>
<th>Some High School</th>
<th>High School Graduate</th>
<th>Trade/Sec't School</th>
<th>Some College</th>
<th>College Graduate</th>
<th>More than College Graduate</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>Laborers</td>
<td>2.6%</td>
<td>1</td>
<td>2.6</td>
<td>1</td>
<td>35.9</td>
<td>14</td>
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<td>15.4</td>
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<td></td>
<td>25.6</td>
<td>10</td>
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<td>17.9</td>
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<td>14</td>
<td>7</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>39</td>
</tr>
<tr>
<td>Service Workers</td>
<td>---</td>
<td>---</td>
<td>4.9</td>
<td>2</td>
<td>31.7</td>
<td>13</td>
<td>4.9</td>
<td>14.6</td>
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<td>39.0</td>
<td>16</td>
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<td></td>
<td></td>
<td>100%</td>
<td>41</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>---</td>
<td>---</td>
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<td>---</td>
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<td>100%</td>
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<td></td>
<td></td>
<td>36.3</td>
<td>4</td>
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<td>9.1</td>
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<td></td>
<td></td>
<td>100%</td>
<td>11</td>
</tr>
<tr>
<td>operatives</td>
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<td>---</td>
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<td>---</td>
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<td>---</td>
<td>100%</td>
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<td></td>
<td></td>
<td></td>
<td>36.3</td>
<td>4</td>
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<td>9.1</td>
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<td></td>
<td></td>
<td>100%</td>
<td>11</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>---</td>
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<td>---</td>
<td>---</td>
<td>---</td>
<td>37.6</td>
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<td>16</td>
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<td></td>
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<td>2.9</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>35</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>45.6</td>
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<td>25.0</td>
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<td></td>
<td></td>
<td>100%</td>
<td>40</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>47.5</td>
<td>19</td>
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<td></td>
<td></td>
<td></td>
<td>9.1</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>11</td>
</tr>
<tr>
<td>Office Workers</td>
<td>---</td>
<td>---</td>
<td>5.0</td>
<td>2</td>
<td>25.0</td>
<td>10</td>
<td>12.5</td>
<td>5</td>
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<td></td>
<td></td>
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<td>10.0</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>40</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>47.5</td>
<td>19</td>
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<td></td>
<td></td>
<td></td>
<td>4.9</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>40</td>
</tr>
<tr>
<td>Managers</td>
<td>---</td>
<td>---</td>
<td>14.3</td>
<td>1</td>
<td>14.3</td>
<td>1</td>
<td>14.3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>42.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>7</td>
</tr>
<tr>
<td>Professionals</td>
<td>1.3%</td>
<td>3</td>
<td>.8</td>
<td>2</td>
<td>21.7</td>
<td>52</td>
<td>5.4</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39.6</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>37</td>
</tr>
<tr>
<td>Totals</td>
<td>.9%</td>
<td>4</td>
<td>1.6</td>
<td>7</td>
<td>25.9</td>
<td>110</td>
<td>5.9</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14.9</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39.0</td>
<td>166</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>100%</td>
<td>425</td>
</tr>
</tbody>
</table>

52% OEH Present (N=223)
48% OEH Absent (N=202)
Table 26
Percentage and Frequency Distributions of Other-Minority Students' Occupational Aspirations and Educational Expectations (Tabulated Across)

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Laborers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20.0%</td>
</tr>
<tr>
<td>Service Workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Household Workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Operatives</td>
<td>33.3%</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales Workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>33.3%</td>
</tr>
<tr>
<td>Office Workers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>57.1%</td>
</tr>
<tr>
<td>Managers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6.9%</td>
</tr>
<tr>
<td>Totals</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

54% OIH Present (N=37)
46% OIH Absent (N=32)
Table 27
Occupational-Educational Maturity Status
Of Black and Other-Minority Students

<table>
<thead>
<tr>
<th>Occupational-Educational Maturity</th>
<th>Ethnic Identity</th>
<th>Black</th>
<th>Other-Minority</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>% N</td>
<td>%</td>
</tr>
<tr>
<td>Present</td>
<td></td>
<td>52%</td>
<td>223</td>
<td>54%</td>
</tr>
<tr>
<td>Absent</td>
<td></td>
<td>48</td>
<td>202</td>
<td>46</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>100%</td>
<td>425</td>
<td>100%</td>
</tr>
</tbody>
</table>

These summary data illustrate that the percentage of black students who exhibited occupational-educational maturity (52%) was slightly smaller than the percentage of other-minority students who exhibited occupational-educational maturity (54%). These two proportions were consistent with the percentage of all of the non-white students who exhibited occupational-educational maturity (53%), as shown for research hypothesis four in an earlier portion of the chapter. Because these three findings were derived from the same research population of students it was reasonable to expect that the occupational-educational maturity levels of non-white students, black students, and other-minority students would be nearly identical, which they were.

The data presented in Tables 25, 26, and 27 illustrate that while the percentages of black students and other-minority students who exhibited occupational-educational maturity were nearly identical,
such data were not statistically significant at the .05 level. The Chi-square value for the occupational-educational maturity levels of black students and other-minority students was .066, which gave further indication that their occupational-educational maturity levels were not too different from each other. It was not likely, then, that the study would have been able to successfully predict direction in the occupational-educational maturity levels of black students and other-minority students, had such a prediction been made. It was, therefore, concluded that among non-white/minority students ethnic identity was not an adequate predictor of students' occupational-educational maturity levels, given that which was known about the students.

The information in Table 28 provides the means by which it was made possible to examine and evaluate another dimension of the occupational-educational maturity levels of black students and other-minority students. The data presented in this table illustrate that there was a wide range of occupational-educational maturity levels for them when each occupational aspiration category of the study was taken into account.

The findings in this table illustrate that there were neither any significant patterns of occupational-educational maturity levels for black students and other-minority students, nor were there any unexpected or unusual findings for these students' occupational-educational maturity levels. Based upon these distributions it was concluded that the occupational-educational maturity levels for black students and other-minority students varied according to in-
dividual student's interests, rather than being affected by any identifiable, patterning variables.

Table 28

Percentage and Frequency Distributions of Black and Other-Minority Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Ethnic Identity</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>Other-Minority</td>
<td></td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Laborers</td>
<td>41.0</td>
<td>16</td>
<td>80.0</td>
</tr>
<tr>
<td>Service Workers</td>
<td>36.6</td>
<td>15</td>
<td>33.3</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>100.0</td>
<td>1</td>
<td>----</td>
</tr>
<tr>
<td>Operatives</td>
<td>54.5</td>
<td>6</td>
<td>33.3</td>
</tr>
<tr>
<td>Craftsmen and Foremen</td>
<td>51.4</td>
<td>18</td>
<td>25.0</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>90.9</td>
<td>10</td>
<td>100.0</td>
</tr>
<tr>
<td>Office Workers</td>
<td>47.5</td>
<td>19</td>
<td>71.4</td>
</tr>
<tr>
<td>Managers</td>
<td>87.5</td>
<td>6</td>
<td>100.0</td>
</tr>
<tr>
<td>Professionals</td>
<td>55.0</td>
<td>132</td>
<td>48.8</td>
</tr>
<tr>
<td>Overall Distributions</td>
<td>52.0</td>
<td>223</td>
<td>54.0</td>
</tr>
</tbody>
</table>

The sets of findings in Tables 25, 26, and 28 illustrate that majorities of both black students and other-minority students who exhibited occupational-educational maturity aspired to have upper-status jobs. That is, 61.9% of the black students who exhibited maturity in the occupational-educational sense aspired to have jobs as either managers or as professionals (N=138). Of the remaining black students who exhibited occupational-educational maturity 38.1%
aspired to have jobs in the other occupational categories identified here as lower-status ones (N=85). Among the other-minority students who exhibited occupational-educational maturity 59.5% aspired to have upper-status jobs (N=22), and the remaining 40.5% aspired to have other types of jobs (N=15). These findings are presented in their summary forms in Table 29.

Table 29

Social-Status Aspirations of Black and Other-Minority Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Social-Status Aspirations</th>
<th>Ethnic Identity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>Other-Minority</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Upper Status</td>
<td>61.9%</td>
<td>138</td>
</tr>
<tr>
<td>Lower Status</td>
<td>38.1%</td>
<td>85</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0%</td>
<td>223</td>
</tr>
</tbody>
</table>

A complete understanding of the students' reasons for having jobs of these sorts was not known. Nonetheless, an attempt to speculate on such possible reasons is made in the next chapter.

The fourth research hypothesis of the present study also contained two more exploratory questions. Due to the nature of these research concerns the findings for them are presented in tandem.

Exploratory Questions 2 and 3

In an endeavor to determine whether or not there was any statistically significant interaction between social status and ethnic

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identity which might have affected students' occupational-educational maturity levels the second and third exploratory questions are asked.

\[ \text{EQ}_2: \text{ What are the occupational-educational maturity levels of upper-status white and upper-status non-white students?} \]

\[ \text{EQ}_3: \text{ What are the occupational-educational maturity levels of lower-status white and lower-status non-white students?} \]

By using social status and ethnic identity as co-independent variables it was possible to determine what possible effects they had on students' occupational-educational maturity levels. Tables 30, 31, and 32 present the findings by which the second exploratory question is answered.

Table 30 presents the total number of upper-status white students whose occupational aspirations were cross-tabulated with their educational expectations (\(N=254\)). Among these students 71% exhibited occupational-educational maturity (\(N=181\)), and the remaining 29% did not exhibit occupational-educational maturity (\(N=73\)). Table 31 presents the total number of upper-status non-white students whose occupational aspirations were cross-tabulated with their educational expectations (\(N=59\)). Among these students 63% exhibited occupational-educational maturity (\(N=37\)), while the remaining 37% did not (\(N=22\)).

In order to adequately compare these data they need to be presented together in their summary forms. Table 32 presents these summary data.
<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
</tr>
<tr>
<td></td>
<td>X N</td>
</tr>
<tr>
<td>Laborers</td>
<td>--- ---</td>
</tr>
<tr>
<td>Service Workers</td>
<td>--- ---</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>--- ---</td>
</tr>
<tr>
<td>Operators</td>
<td>--- ---</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>--- ---</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>--- ---</td>
</tr>
<tr>
<td>Office Workers</td>
<td>--- ---</td>
</tr>
<tr>
<td>Managers</td>
<td>--- ---</td>
</tr>
<tr>
<td>Professionals</td>
<td>--- ---</td>
</tr>
<tr>
<td>Totals</td>
<td>--- ---</td>
</tr>
</tbody>
</table>

71% ORH Present (N=181)
29% ORH Absent (N=71)
<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quit Now</td>
<td>Some High School</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td>Laborers</td>
<td></td>
</tr>
<tr>
<td>Service Workers</td>
<td></td>
</tr>
<tr>
<td>Private Household Workers</td>
<td></td>
</tr>
<tr>
<td>Operatives</td>
<td></td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td></td>
</tr>
<tr>
<td>Sales Workers</td>
<td></td>
</tr>
<tr>
<td>Office Workers</td>
<td></td>
</tr>
<tr>
<td>Managers</td>
<td></td>
</tr>
<tr>
<td>Professionals</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td></td>
</tr>
</tbody>
</table>

63% OBS Present (N=37)
37% OBS Absent (N=22)
Table 32
Occupational-Educational Maturity Status
Among Upper-Status Students

<table>
<thead>
<tr>
<th>Occupational-Educational Maturity</th>
<th>Upper Status</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>%</td>
<td>N</td>
<td>Non-White</td>
<td>%</td>
</tr>
<tr>
<td>Present</td>
<td>71%</td>
<td>181</td>
<td></td>
<td>63%</td>
<td>37</td>
</tr>
<tr>
<td>Absent</td>
<td>29%</td>
<td>73</td>
<td></td>
<td>37%</td>
<td>22</td>
</tr>
<tr>
<td>Totals</td>
<td>100%</td>
<td>254</td>
<td></td>
<td>100%</td>
<td>59</td>
</tr>
</tbody>
</table>

The summary data in Table 32 illustrate that the percentage of upper-status white students who exhibited occupational-educational maturity (71%) was larger than the percentage of upper-status non-white students who exhibited occupational-educational maturity (63%). However, the Chi-square value for these findings was only 1.57 which was interpreted as meaning that such data were not statistically significant at the .05 level.

This exploratory question did not attempt to predict what the occupational-educational maturity levels of upper-status white students and upper-status non-white students might be. Based upon the data that were obtained in order to answer the research question it was concluded that although proportionally more upper-status white students than upper-status non-white students exhibited occupational-educational maturity it would have been difficult to successfully predict the occupational-educational maturity levels of the students given available knowledge of them.
Further assessments of the occupational-educational maturity level data for these two categories of students showed that there was a wide range of proportions of students who exhibited such maturity in specific occupational aspiration categories. These distributions are presented in Table 33.

Table 33

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Upper Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Laborers</td>
<td>50.5%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>31.8%</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>----</td>
</tr>
<tr>
<td>Operatives</td>
<td>66.7%</td>
</tr>
<tr>
<td>Craftsmen and Foremen</td>
<td>66.7%</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>100.0%</td>
</tr>
<tr>
<td>Office Workers</td>
<td>66.7%</td>
</tr>
<tr>
<td>Managers</td>
<td>100.0%</td>
</tr>
<tr>
<td>Professionals</td>
<td>76.2%</td>
</tr>
<tr>
<td>Overall Distributions</td>
<td>71.0%</td>
</tr>
</tbody>
</table>

The data in this table illustrate that even though majorities of both upper-status white students and upper-status non-white students exhibited occupational-educational maturity, such proportions were not

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evident in all occupational categories. For example, only 31.8% of upper-status white students who exhibited this type of maturity aspired to be service workers (N=7), and only 40% of upper-status non-white students who exhibited occupational-educational maturity aspired to have jobs in the "craftsmen and foremen" occupational category (N=2). However, there is need for caution in deriving conclusions from these findings for two reasons.

First, the overall occupational-educational maturity level data for upper-status white students and upper-status non-white students were not found to be statistically significant. Second, the size of the upper-status non-white student population for which occupational-educational maturity level data were obtained was so small (N=59) that it is difficult to make generalizations about these students' occupational and educational plans for the future.

In accord with previous presentations of data, the information in Tables 30, 31, and 33 also indicate that majorities of both upper-status white students and upper-status non-white students who exhibited occupational-educational maturity aspired to have upper-status jobs. That is, over 80% of the upper-status white students who exhibited occupational-educational maturity aspired to have either managerial or professional jobs (N=148). Slightly more than 78% of the upper-status non-white students who exhibited occupational-educational maturity also desired to have jobs in either the "managers" or in the "professionals" occupational categories (N=29). The remaining minorities of each of these categories of students aspired to have jobs in the other, lower-status, occupational categories.
These data are presented in their summary forms in Table 34.

Table 34
Social-Status Aspirations Among Upper-Status Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Social-Status Aspirations</th>
<th>Upper Status</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White N</td>
<td>%</td>
<td>Non-White N</td>
<td>%</td>
<td>Totals %</td>
</tr>
<tr>
<td>---------------------------</td>
<td>--------------</td>
<td>-----</td>
<td>-------------</td>
<td>-----</td>
<td>-----------</td>
</tr>
<tr>
<td>Upper Status</td>
<td>148</td>
<td>81.8%</td>
<td>29</td>
<td>78.4%</td>
<td>177</td>
</tr>
<tr>
<td>Lower Status</td>
<td>33</td>
<td>18.2</td>
<td>8</td>
<td>21.6</td>
<td>41</td>
</tr>
<tr>
<td>Totals</td>
<td>181</td>
<td>100.0%</td>
<td>37</td>
<td>100.0%</td>
<td>218</td>
</tr>
</tbody>
</table>

Several other discussions concerning the findings for the second exploratory question of the study are presented in the next chapter. One of these discussions concerns speculation on why students would desire to have jobs of different social-status levels. Data relevant to the third exploratory question of this study are now presented for discussion.

The third exploratory question sought to determine what interaction effects the co-independent variables of lower social status and ethnic identity might have on students' occupational-educational maturity levels. The findings by which this question is answered are presented in Tables 35, 36, and 37.

Table 35 presents the total number of lower-status white students whose occupational aspirations were cross-tabulated with their educational expectations (N=579). Among lower-status white students 63% exhibited occupational-educational maturity (N=365), and the re-
Table 35
Percentage and Frequency Distributions of Lower-Status White Students’ Occupational Aspirations and Educational Expectations (Tabulated Across)

<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
<td>Some High School</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------</td>
<td>------------------</td>
</tr>
<tr>
<td>Laborers</td>
<td>5.6%</td>
<td>1</td>
</tr>
<tr>
<td>Service Workers</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Operatives</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>1.2%</td>
<td>1</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Office Workers</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Managers</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Professionals</td>
<td>0.6%</td>
<td>2</td>
</tr>
<tr>
<td>Totals</td>
<td>0.7%</td>
<td>4</td>
</tr>
</tbody>
</table>

63% OBS Present (N=355)
37% OBS Absent (N=214)
<table>
<thead>
<tr>
<th>Occupational Aspiration Categories</th>
<th>Expected Levels of Educational Attainment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quit Now</td>
</tr>
<tr>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Laborers</td>
<td>2.9%</td>
</tr>
<tr>
<td>Service Workers</td>
<td>---</td>
</tr>
<tr>
<td>Private Household Workers</td>
<td>---</td>
</tr>
<tr>
<td>Operatives</td>
<td>9.1%</td>
</tr>
<tr>
<td>Craftsmen or Foremen</td>
<td>---</td>
</tr>
<tr>
<td>Sales Workers</td>
<td>---</td>
</tr>
<tr>
<td>Office Workers</td>
<td>---</td>
</tr>
<tr>
<td>Managers</td>
<td>---</td>
</tr>
<tr>
<td>Professionals</td>
<td>1.1%</td>
</tr>
<tr>
<td>Totals</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

51% OEH Present (N=162)
49% OEH Absent (N=153)
remaining 37% did not exhibit this type of maturity (N=214). Table 36 presents the total number of lower-status non-white students whose occupational aspirations were cross-tabulated with their educational expectations (N=315). Among these students 51% exhibited occupational-educational maturity (N=162), while the remaining 49% did not exhibit alignment between their occupational aspirations and their educational expectations (N=153). In order to be able to make adequate comparisons of these data they are presented in their summary forms in Table 37.

Table 37

Occupational-Educational Maturity Status Among Lower-Status Students

<table>
<thead>
<tr>
<th>Occupational-Educational</th>
<th>Lower Status</th>
<th>White</th>
<th>Non-White</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>% N</td>
<td>% N</td>
<td>% N</td>
</tr>
<tr>
<td>Present</td>
<td>63% 365</td>
<td>51% 162</td>
<td>59% 527</td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>37% 214</td>
<td>49% 153</td>
<td>41% 367</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>100% 579</td>
<td>100% 315</td>
<td>100% 894</td>
<td></td>
</tr>
</tbody>
</table>

These summary data serve to illustrate that the percentage of lower-status white students who exhibited occupational-educational maturity (63%) was larger than the percentage of lower-status non-white students who also exhibited occupational-educational maturity (51%). The Chi-square value for these data was 11.7 which was statistically significant at the .05 level when analyzed in terms of sampling procedures.
As with the second exploratory question this one did not attempt to predict what possible interaction effects the co-independent variables of social status and ethnic identity might have on students' occupational-educational maturity levels. If this study had predicted that lower-status white students would be more likely than lower-status non-white students to exhibit occupational-educational maturity, such a prediction would have been successfully made, given knowledge about the students.

Additional investigations into the information provided in Tables 35 and 36 illustrate that there was a wide range of proportions of lower-status white and lower-status non-white students who exhibited occupational-educational maturity when each occupational category was taken into consideration. The data in Table 38 serve to illustrate this point.

A review of the findings in this table illustrates that several interesting patterns of occupational-educational maturity level data are present. First, in addition to the review of the overall proportions of lower-status white students and lower-status non-white students who exhibited occupational-educational maturity, the data in the table also illustrate that majorities of lower-status white students who exhibited this type of maturity aspired to have jobs in all occupational categories. Such proportional distributions were not found among lower-status non-white students who exhibited occupational-educational maturity. For example, minorities of lower-status non-white students who exhibited this trait aspired to have jobs in either the "laborers," "service workers," or "craftsmen and
Second, the data in Table 38 illustrate that in all occupational categories but one, "sales workers," proportionally more lower-status white students than lower-status non-white students exhibited occupational-educational maturity. These two sets of information contained in Table 38 further led the researcher to conclude that these occupational-educational maturity levels could have been predicted reasonably well.
Once again, additional investigations into the occupational-educational maturity level data for lower-status white students and lower-status non-white students revealed that majorities of both of these categories of students aspired to have upper-status jobs. That is, 50.1% of lower-status white students who exhibited occupational-educational maturity aspired to have jobs as either managers or as professionals (N=183), while the remaining 49.9% desired to have other types of jobs (N=182). Among the lower-status non-white students who exhibited occupational-educational maturity 59.9% aspired to have upper-status jobs (N=97), whereas 40.1% aspired to have lower-status jobs (N=65). These data are presented in their summary forms in Table 39.

Table 39
Social-Status Aspirations Among Lower-Status Students Who Exhibited Occupational-Educational Maturity

<table>
<thead>
<tr>
<th>Social-Status Aspirations</th>
<th>Lower Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White % N</td>
</tr>
<tr>
<td>Upper Status</td>
<td>50.1% 183</td>
</tr>
<tr>
<td>Lower Status</td>
<td>49.9% 182</td>
</tr>
<tr>
<td>Totals</td>
<td>100.0% 365</td>
</tr>
</tbody>
</table>

Additional discussions concerning the data in Table 39 are presented in the last chapter of this report. In the meantime, however, some discussions concerning comparisons of the data for the second and third exploratory questions of this study need to be presented.
From the several findings for the second and third exploratory questions which partially guided this study it was concluded that social status was only partially associated with statistically significant variations in the occupational-educational maturity levels of white students and non-white students in the research population. This conclusion was derived from several sources of information. First, the percentage of lower-status white students who exhibited occupational-educational maturity (63%) was larger than the percentage of lower-status non-white students who exhibited occupational-educational maturity (51%) even though these data were not shown as being statistically significant at the .05 level when subjected to sampling statistics. Second, the proportional differences between lower-status white students and lower-status non-white students who exhibited occupational-educational maturity were shown as being statistically significant when also subjected to statistical sampling procedures. Therefore, this study was unable to conclude that the interaction between social status and ethnic identity had any significant effect on ninth-grade students' occupational-educational maturity levels. From this conclusion it appears that future studies of students' occupational-educational maturity levels will have to determine the reliability of these findings by using other research populations.

Several other discussions concerning the findings for the three exploratory questions are presented in the next chapter of this report. A review of the major findings for the four research hypotheses and the three exploratory questions is now presented.
Summary

This chapter has presented the findings of the study's analyses of ninth-grade students' occupational-educational maturity level data. Occupational-educational maturity is a composite variable consisting of the alignment, or goodness of fit, between students' occupational aspirations and their educational expectations. The findings of the study were obtained by cross-tabulating students' occupational aspirations with their educational expectations, and then by calculating the percentages of students who did, and who did not, exhibit alignment between their occupational aspirations and their educational expectations.

Table 40 reviews the percentage and frequency distributions of students' occupational-educational maturity level data. Following this table is Figure 2 (a histogram) which graphically illustrates the percentages of students who exhibited occupational-educational maturity.

The percentage distributions of students who did, and who did not, exhibit occupational-educational maturity were gathered in order to test the four research hypotheses and the three exploratory questions of the study. The four research hypotheses of the study predicted that: (1) A majority of ninth-grade students exhibit occupational-educational maturity, (2) boys are more likely than girls to exhibit occupational-educational maturity, (3) upper-status students are more likely than lower-status students to exhibit occupational-educational maturity, and (4) white students are more likely...
Table 40
Review of Occupational-Educational Maturity Status Among Ninth-Grade Students (Tabulated Across)

<table>
<thead>
<tr>
<th>Student Categories</th>
<th>Occupational-Educational Maturity Status</th>
<th>Present %</th>
<th>N</th>
<th>Absent %</th>
<th>N</th>
<th>Totals %</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Students</td>
<td></td>
<td>61%</td>
<td>862</td>
<td>39%</td>
<td>552</td>
<td>100%</td>
<td>1414</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td>62%</td>
<td>437</td>
<td>38%</td>
<td>267</td>
<td>100%</td>
<td>704</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td>60%</td>
<td>425</td>
<td>40%</td>
<td>284</td>
<td>100%</td>
<td>709</td>
</tr>
<tr>
<td>Upper-Status</td>
<td></td>
<td>70%</td>
<td>220</td>
<td>30%</td>
<td>95</td>
<td>100%</td>
<td>315</td>
</tr>
<tr>
<td>Lower-Status</td>
<td></td>
<td>59%</td>
<td>527</td>
<td>41%</td>
<td>367</td>
<td>100%</td>
<td>894</td>
</tr>
<tr>
<td>White</td>
<td></td>
<td>65%</td>
<td>600</td>
<td>35%</td>
<td>318</td>
<td>100%</td>
<td>918</td>
</tr>
<tr>
<td>Non-White</td>
<td></td>
<td>53%</td>
<td>260</td>
<td>47%</td>
<td>234</td>
<td>100%</td>
<td>494</td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td>52%</td>
<td>223</td>
<td>48%</td>
<td>202</td>
<td>100%</td>
<td>425</td>
</tr>
<tr>
<td>Other-Minority</td>
<td></td>
<td>54%</td>
<td>37</td>
<td>46%</td>
<td>32</td>
<td>100%</td>
<td>69</td>
</tr>
<tr>
<td>Upper-Status White</td>
<td></td>
<td>71%</td>
<td>181</td>
<td>29%</td>
<td>73</td>
<td>100%</td>
<td>254</td>
</tr>
<tr>
<td>Upper-Status Non-White</td>
<td></td>
<td>63%</td>
<td>17</td>
<td>37%</td>
<td>22</td>
<td>100%</td>
<td>59</td>
</tr>
<tr>
<td>Lower-Status White</td>
<td></td>
<td>63%</td>
<td>365</td>
<td>37%</td>
<td>214</td>
<td>100%</td>
<td>579</td>
</tr>
<tr>
<td>Lower-Status Non-White</td>
<td></td>
<td>51%</td>
<td>162</td>
<td>49%</td>
<td>153</td>
<td>100%</td>
<td>315</td>
</tr>
</tbody>
</table>

than non-white students to exhibit occupational-educational maturity. The three exploratory questions of the study were raised in order to determine and evaluate the occupational-educational maturity level data of: (5) black and other-minority students, (6) upper-status white students and upper-status non-white students, and (7) lower-status white students and lower-status non-white students. Based
Figure 2: Histogram illustrating the Percentages of Students Exhibiting Occupational-Educational Maturity.
upon the data that the study generated the outcomes of these seven research concerns are reviewed in Table 41.

Table 41

Reviews of the Outcomes for the Research Hypotheses and the Exploratory Questions

<table>
<thead>
<tr>
<th>Research Hypotheses and Exploratory Questions</th>
<th>Statistically Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$: %students OEM &gt; 51%.</td>
<td>Yes</td>
</tr>
<tr>
<td>$H_2$: %boys OEM &gt; % girls OEM.</td>
<td>No</td>
</tr>
<tr>
<td>$H_3$: %upper-status OEM &gt; % lower-status OEM.</td>
<td>Yes</td>
</tr>
<tr>
<td>$H_4$: %whites OEM &gt; % non-whites OEM.</td>
<td>Yes</td>
</tr>
<tr>
<td>$E_{Q1}$: %black OEM, % other-minority OEM.</td>
<td>No</td>
</tr>
<tr>
<td>$E_{Q2}$: %upper-status white OEM,</td>
<td></td>
</tr>
<tr>
<td>%upper-status non-white OEM.</td>
<td>No</td>
</tr>
<tr>
<td>$E_{Q3}$: %lower-status white OEM,</td>
<td></td>
</tr>
<tr>
<td>%lower-status non-white OEM.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

This chapter has presented the research findings of the study, as well as initial interpretations of the data. The next chapter presents additional discussions of the findings, recommendations as to how to improve future studies of students' occupational-educational maturity levels, as well as discussions as to how the research topic developed in the present study can be used in secondary schools.
CHAPTER IV

REVIEWS, DISCUSSIONS AND CONCLUSIONS, AND IMPLICATION

Introduction

This final chapter has several purposes. It reviews the findings and research procedures of the study. It then presents several discussions pertaining to evaluations of the theoretical foundations and research objectives which guided the study. Included in these discussions are recommendations as to how future studies of students' occupational-educational maturity levels might reformulate the research hypotheses and exploratory questions in light of the data that were generated by this study. Finally, some implications of the study's research topic and procedures are made for future studies, as are several implications for career-education programs in secondary schools. A chapter and project summary then concludes the report.

Reviews

Findings

The purpose of the study was to determine if ninth-grade, public-school students are likely to exhibit occupational-educational maturity. The study tested and confirmed the research hypotheses that: (1) A majority of students (61%) exhibit occupational-educational maturity, (2) the percentage of upper-status students (as determined

114

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by primary economic supporter occupational status) who exhibit occupa-
tional-educational maturity (70%) is larger than the percentage of
lower-status students who exhibit alignment between their occupa-
tional aspirations and their educational expectations (59%), and
(3) the percentage of white students who exhibit maturity in the
occupational-educational sense (65%) is larger than the percentage
of non-white students who exhibit occupational-educational maturity
(53%). The study tested and rejected the research hypothesis that
the percentage of boys who exhibit occupational-educational maturity
(62%) is larger than the percentage of girls who exhibit occupa-
tional-educational maturity (60%).

The study also sought empirical answers to three exploratory
questions. The data for the answering of these questions illustrated
that: (1) There are no statistically significant differences in the
percentage of black students who exhibit occupational-educational
maturity (52%) and the percentage of other-minority students who
exhibit this trait (54%), (2) there are no statistically significant
differences in the percentage of upper-status white students who
exhibit maturity in the occupational-educational sense (71%) and the
percentage of upper-status non-white students who exhibit alignment
between their occupational aspirations and their educational expecta-
tions (63%), and (3) there are statistically significant differences
in the percentage of lower-status white students who exhibit this
trait (63%) and the percentage of lower-status non-white students who
exhibit occupational-educational maturity (51%).
In addition to the data that were generated for the primary research concerns of the study, other information about the students' occupational aspirations and educational expectations led the researcher to understand that there is a wide range of proportions of students who exhibit occupational-educational maturity in all of the occupational aspiration categories that were used in the study. Still other data illustrated that majorities of all categories of students who exhibit occupational-educational maturity aspired to have jobs as either managers or as professionals, here identified as "upper-status" jobs.

This discussion has reviewed the major findings of the study. The following discussions relate the means by which these data were calculated.

Procedures

In order for the study to obtain its occupational-educational maturity level data the students' occupational aspirations were cross-tabulated with their expected levels of educational attainment using computer programs within Statistical Package for the Social Sciences according to the format presented in Figure 1 of this report. This cross-tabulation procedure provided the means by which the study calculated the percentages of students who did, and who did not, exhibit maturity in the occupational-educational sense.

Once the occupational-educational maturity level data for the students under study were obtained, the statistical means by which the research hypotheses were accepted or rejected were established.
For the first research hypothesis (H₁) a majority (> 51%) of students who exhibited occupational-educational maturity was required for the hypothesis to be accepted. For the remaining research hypotheses (H₂, H₃, and H₄), if the students' occupational-educational maturity levels were in the predicted directions (that is, if the percentages of boys, upper-status students, and white students who exhibited occupational-educational maturity were larger than the percentages of girls, lower-status students, and non-white students who exhibited occupational-educational maturity, respectively), and if the Chi-square values for each of these hypotheses' data were statistically significant at the .05 level, the hypotheses were accepted.

The means by which the occupational-educational maturity level data for the three exploratory questions were assessed varied somewhat from the evaluation methods used for the second, third, and fourth research hypotheses. Since the exploratory questions did not attempt to predict which categories of students were more likely than others to exhibit occupational-educational maturity, only differences in the findings for the questions were addressed using Chi-square values to determine whether or not the data were statistically significant at the .05 level.

This portion of the chapter has reviewed the means by which the occupational-educational maturity level data for each of the specific research concerns of the study were calculated and evaluated. The following discussions review the theoretical foundations of the study, and they then relate the foundations to the research objectives of the study.
Discussions and Conclusions

Given the assumptions underlying the specific objectives of the research hypotheses and exploratory questions, attention is first drawn to the theoretical foundations of the study. Attention is then directed to the relationships between such foundations and the students' occupational-educational maturity levels.

Theoretical Foundations

Two major functionalist theories provided the social foundations for the present study. The first theory attempted to define the process of occupational development in terms of a series of personal changes and self evaluations throughout one's life span (Super, 1953). The second theory attempted to identify the origins and functions of social stratifications systems within industrialized societies (Davis & Moore, 1945; Tumin, 1953).

The two theories contained several points of convergence, some of which included: (1) the real or perceived rewards built into specific occupational titles, (2) the necessity for people to make occupational and educational choices for themselves, (3) the ability of people to acquire the educational or vocational prerequisites for entry into their chosen occupations, (4) the availability of occupationally-related information for all potential workers, and (5) the perceptions of rewards that people will receive upon entry into their chosen occupations. These points of convergence assume that the labor structure and social stratification system of society
are open, that all people have equal access to jobs, and that all people have similar opportunities for social mobility within the labor structure of society. Another assumption of these points of convergence is that all people are similarly socialized into the world of work, from which their occupational and educational ambitions are developed. There is, however, an abundance of research literature illustrating that these aspects of society do not really exist, and that there is a great deal of social differentiation both inside and outside of the labor structure of society.

The socialization process by which the students learn about the world of work and how they relate to it is called "career education." This process involves such diversified occupationally-related learning experiences as exposure to the mass media, part-time and after-school employment, as well as personal conversations with people who pass on their knowledge about the labor structure of society. Several agents in this aspect of one's socialization experiences include parents, teachers and school counselors, role models as seen on television, parents of friends, and so on.

All of the occupationally-related experiences to which adolescent students have been exposed have had (theoretically, at least) some effect on the development of their occupational and educational ambitions, of which the presence or absence of occupational-educational maturity was but one possible outcome variable. This portion of the chapter now relates the study's research findings to its theoretical foundations.
Research Hypothesis 1

The data for the first research hypothesis affirmed the assumption that a majority of students exhibited this occupational-educational maturity (61%). That is, most of the students under study who indicated that they had formulated occupational and educational ambitions for themselves exhibited alignment between their occupational aspirations and their educational expectations. They anticipated to attain the minimal level of education or vocational training here identified as appropriate prerequisites for entry into the occupations they desired to have.

The assumptions upon which the first research hypothesis was based were derived from theoretical and research evidence which concerned the possible effects of occupationally-related learning experiences of adolescent students in an industrialized society. That is, if one of the goals of such learning experiences includes the development of students' perceptions of "reality" about the job market and how they relate to it, then these learning experiences are here identified as being successful for a larger majority of ninth-grade, public-school students. The data for the first research hypothesis confirmed the related research data of O'Dell et al. (1975), who suggested that by the ninth-grade level of schooling adolescent students were beginning to develop their occupational and educational ambitions for the future.

However, a large proportion of students (39%) did not exhibit occupational-educational maturity. A significant proportion of the
students who indicated that they had developed occupational and educational ambitions for themselves did not exhibit alignment between their occupational aspirations and their educational expectations. That is, they did not expect to attain the minimal educational or vocational-training prerequisites here identified as being sufficient to gain entry into different occupational categories. The findings on the percentages of students who did not exhibit occupational-educational maturity are the focal concerns of the following discussions.

While many scholars have identified the ninth-grade as an especially important grade level in the development of students' occupational and educational ambitions for the future (Mason, Haines, & Furtado, 1981; Super, 1960a; Tolbert, 1973), there is research evidence which suggests that early-adolescent students may not need to make firm commitments to their future occupational and educational goals (Ginzberg et al., 1951; Super, 1960a; Super & Bohn, 1970; Tolbert, 1973). Since socialization is a potentially life-long process during which people are exposed to new learning environments, to new agents of socialization, and to new bodies of information upon which self concepts and plans for the future are built, it may not be necessary for students at this age level to lock themselves into crystallized occupational and educational plans.

Social researchers have often conceptualized the process of human growth and social development in terms of sequences or stages through which people will eventually pass (Havighurst, 1972; Robertson, 1977). For example, Form and Miller (1962) identified the following
major stages, or work periods, in the process of occupational development.

1. **The Initial Work Period.** All part-time or full-time jobs an individual holds until the time he completes his formal education are classified as belonging to the initial work period. These jobs are often quasi choices, are before-and-after-school jobs, jobs taken only as stopgaps until the completion of education.

2. **The Trial Work Period.** Usually after school is completed the perspective worker 'shops around' for a job. He may have to go through a number of training jobs first, somewhat as an apprentice.

3. **The Stable Work Period.** A stable job is any job in which the worker remains within a given occupation in a work [environment] for three years or more. It is assumed that the worker has found a relatively permanent job and that he has 'settled down' (Form & Miller, 1962, p. 288).

Ninth-grade students may be considered as belonging in the "initial work period" stage of occupational development, though most people who work are, at one time or another, in this stage of occupational development. Work experiences for students at about this grade level, if they have even worked at all, may have been exploratory ones by which they have acquired money for personal use, and through which they may have had opportunities to learn about occupational alternatives, job tasks, job-entry requirements, and so on. However, by the age of 14.7 years (the mean age of the population) not all students could reasonably be expected to have had sufficient work experiences upon which firm occupational and educational ambitions would be made. If the students' jobs were of either part-time or after-school ones, jobs which often do not entail much responsibility and/or skill development (Form & Miller,
1962; Mason et al., 1981), many of the students should not have exhibited occupational-educational maturity.

Another variable may have partially contributed to the finding that 39% of the students did not exhibit occupational-educational maturity. Since not all students could reasonably be expected to have been similarly socialized into society (Clark, 1968; Spring, 1976), such dissimilar occupationally-related learning experiences may have produced higher levels of occupational-educational maturity for some students than for others. Attributions of stereotyped social-category characteristics to individual students could have effectively limited students' occupational and educational horizons. This means that even if similarly socialized, individual students would not necessarily have aspired to have the same types of occupational and educational ambitions than other students due to different self concepts of ability and interests that have developed throughout students' socialization experiences.

Several examples will serve as illustrations of this point. An adolescent boy may have been socialized to be a college professor, whereas an adolescent girl may have been socialized to become a "housewife," even though they have had somewhat similar occupationally-related learning experiences. A lower-status student or non-white student may have been socialized to want to be a local-delivery truck driver, while an upper-status student or white student classmate may have been socialized to want to own or manage the cartage company. If these types of occupationally-related learning experiences have occurred they could have affected the occupa-
tional-educational maturity levels of specific social categories of adolescent students. Discussions relevant to the other research hypotheses of the study which explored these posibilities now follow.

Research Hypothesis 2

The second research hypothesis of the study predicted that the percentage of boys who exhibited occupational-educational maturity would be larger than the percentage of girls who exhibited occupational-educational maturity. The hypothesis was based on the assumption that boys and girls have not had similar occupationally-related learning experiences upon which their occupational and educational ambitions for the future were based. It was anticipated that presumed difference in their occupationally-related learning experiences would have produced higher occupational-educational maturity levels for boys than for girls. The data for the hypotheses illustrated, however, that the percentage of boys who exhibited occupational-educational maturity (62%) was only slightly larger than the percentage of girls who exhibited this type of maturity (60%). While majorities of both boys and girls exhibited occupational-educational maturity such proportions were not statistically significant at the .05 level.

Related theoretical and empirical research has suggested that there may not be any significant differences between the occupational and educational ambitions of adolescent boys and girls (Astin, 1958; Cole, 1971) while alternative evidence refutes such a
conclusion (Prediger & Cole, 1975; Rosen & Aneshenel, 1978). The data for the hypothesis have given partial support to the former conclusion because there were no statistically significant differences in the occupational-educational maturity levels of boys and girls under study.

The present study found that 60% of the girls exhibited occupational-educational maturity. According to Neely (1980), data of this magnitude may "...reflect premature closure on fewer 'acceptable' and thus easier [occupational] choices..." (p. 115) that exist for girls but not for boys. There is some evidence in the research data which support such a conclusion because proportionally more girls than boys who aspired to have jobs as either service workers or as office workers — occupations traditionally dominated by women — exhibited maturity in the occupational-educational sense. If the data reflected division of labor values they give some credence to the assertion that girls should have been more likely than boys to exhibit occupational-educational maturity because girls would have been socialized to have jobs in fields traditionally dominated by women.

Previous discussions in these pages have suggested, though, that current role convergence in American society may have produced the findings that proportionally more girls than boys who exhibited occupational-educational maturity desired to have jobs as either craftsmen or foremen, or as managers. Future studies should be able to provide adequate explanations of these apparent contradictions in the data.
However, there is need to further interpret the data concerning the occupational-educational maturity level data for boys in the study. These interpretations follow.

It has been fairly well documented in theoretical and research literature that the occupational and educational ambitions of early-adolescent students were often based upon fantasy choices rather than upon such practical considerations as developing social and work skills in order to get a job when schooling was terminated. To illustrate, Wolmot et al. (1976) concluded that this fantasy period ranged from ages four to about eleven, while Gingzberg et al. (1951), and Super (1960a), stated that this fantasy period extended into the early teen-age years (to about the average age of ninth-grade students). If the occupational aspirations and educational expectations of boys in the study reflected such fantasy choices, it may be rather surprising that the percentage of boys who exhibited occupational-educational maturity was as large as the study determined. It may be even more surprising that the percentage of boys who exhibited this type of maturity was larger than the percentage of girls who also exhibited occupational-educational maturity if some girls experienced earlier closure on their occupational and educational ambitions than some boys.

Based upon the data and alternative interpretations of them, the researcher concluded that differences in the occupational-educational maturity levels of ninth-grade boys and girls should not have been predicted. Future studies of boys' and girls' occupational-educational maturity levels should predict that such levels
will be nearly identical, and that majorities of boys and girls will exhibit maturity in the occupational-educational sense.

These conclusions are derived from several sources of information. First, related studies have not provided consistent and definitive data on possible differences between the occupational and educational ambitions of adolescent boys and girls upon which to build future predictions that such differences will exist in other research populations. Second, current role convergence for boys and girls which has been partially supported by recent civil rights laws in American society has contributed to the elimination of some deterrents to career entry and occupational opportunities for women. Third, the present study did not find the percentages of boys and girls who exhibited maturity in the occupational-educational sense as being statistically significant. Fourth, the present study determined that majorities of boys and girls under study exhibited occupational-educational maturity.

When additional studies of students' occupational-educational maturity levels use the conclusions derived from the present study an understanding of the concept of "occupational-educational maturity," as an effect of students' occupationally-related learning experiences, will be enhanced by the recommendations made here. The following discussions now concern the third research hypothesis of the study and its supporting data.
Research Hypothesis 3

The third research hypothesis predicted that the percentage of upper-status students who exhibited occupational-educational maturity would be larger than the percentage of lower-status students who exhibited occupational-educational maturity. The hypothesis was based on the assumption that upper-status students and lower-status students have not had similar occupationally-related learning experiences upon which their occupational and educational ambitions were built. The presumed differences in the occupationally-related information to which the students have been exposed were anticipated to produce higher occupational-educational maturity levels for upper-status students than for lower-status students. The data for the hypothesis illustrated that the percentage of upper-status students who exhibited occupational-educational maturity (70%) was larger than the percentage of lower-status students who exhibited occupational-educational maturity (59%), as the hypothesis predicted. The majority proportions of upper-status students and lower-status students who exhibited alignment between their occupational aspirations and their educational expectations were statistically significant at the .05 level. Several additional interpretations of the data for the hypothesis are now presented.

Related theoretical and research evidence has provided inconclusive data which measured the possible effects of students' social-status backgrounds on their occupational and educational ambitions for the future. For example, in separate studies Ginzberg et
al. (1951) and Buslin (1974), suggested that upper-status students were in more enviable positions than lower-status students to develop a sense of occupational-educational maturity because of differential access to the occupationally-related information upon which such ambitions would be based. The data for the hypothesis partially supported this assertion as evidenced by the larger proportion of upper-status students than lower-status students who exhibited occupational-educational maturity.

On the other hand, some scholars (Ginzberg et al., 1951; Osipow, 1973) have concluded that lower-status students have often been compelled to enter the labor market of society earlier than upper-status students, thus providing a sense of occupational-educational maturity but for different types of jobs. While specific reasons are likely to vary, early entry into the job market is often prompted by such an economic consideration as the need to supplement a family income, the possible lack of information about available occupational and educational options, and/or by the absence of deferred gratification as a dominant behavioral norm. According to this line of thought lower-status students would develop early foci on the nature of the available job market.

If this idea is correct and applicable to the present study many lower-status students should have exhibited occupational-educational maturity. The data for the hypothesis partially supported this assertion because a statistically significant majority of lower-status students did exhibit maturity in the occupational-educational sense, even though this proportion was smaller than the proportion of upper-

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status students who exhibited occupational-educational maturity.

While the data for the hypothesis provided general support to its predictions and to several interpretations of them, any further conclusions regarding the data need to be made with caution. In the first place, majorities of both upper-status and lower-status students exhibited this type of maturity, so there was not a clear distinction in this aspect of the data. In the second place, the data for upper-status and lower-status students may have been artifacts of two related conditions: (1) the accuracy of the information which the students provided identifying the occupations of their primary economic supporters, which could then have affected (2) the assignments of students to the "upper-status" and "lower-status" categories. An explanation of how these two conditions may have affected the outcome for the hypothesis is now in order.

For purposes of illustration, if a student identified the occupation of his or her primary economic supporter as "working construction," the student's economic supporter was classified as belonging in the "laborers" occupational category because no other information about this person was available. Errors in occupational and social-status assignments could have been made if the economic supporter either managed or owned a construction company, rather worked as a laborer or as a craftsman for one. In several such instances the researcher made calculated estimates about work activities which affected the occupational statuses of students' primary economic supporters, and the subsequent social-status assignments of the students. Where possible, future studies of students' occupational-
educational maturity levels should personally interview students or their primary economic supporters in order to eliminate such possible errors.

Based upon the data for the third research hypotheses and the several conclusions that were derived from them, future studies of the concept developed and measured in the present study could predict reasonably well that differences in the occupational-educational maturity levels of upper-status students and lower-status students will be evident. The future studies should also predict that majorities of upper-status students and lower-status students will exhibit this type of maturity. However, the future studies should also be able to obtain more accurate and complete information on the students' social-status backgrounds than was available for the present study.

The future studies which use this additional social-background information could then construct three social-status categories - "lower status students," "middle status students," and "upper-status students" - by which to measure and assess occupational-educational maturity level data. By so doing such social-status categories would be more attuned to the popular conception of three major social-status categories in American society in which there are alleged differences in social values and behavioral norms affecting students' occupational and educational ambitions for the future.

This portion of the chapter has reviewed the third research hypothesis and has presented several additional interpretations of the data for it. The following discussions review the fourth re-
search hypothesis and the data which supported it.

Research Hypothesis 4

The fourth research hypothesis predicted that the percentage of white students who exhibited occupational-educational maturity would be larger than the percentage of non-white students who exhibited occupational-educational maturity. The hypothesis was also based on the assumption that white students and non-white students have not had similar occupationally-related learning experiences upon which their occupational and educational ambitions were based. Such presumed differences were anticipated to produce higher occupational-educational maturity levels for white students than for non-white students. The data for the hypothesis indicated that there was a statistically significant difference in the percentage of white students who exhibited occupational-educational maturity (65%) and the percentage of non-white students who exhibited this type of maturity (53%), as the hypothesis predicted. By looking at the data further it was observed that majorities of white students and non-white students exhibited maturity in the occupational-educational sense. The following discussions focus on the occupational-educational maturity level data among the non-white/minority students under study.

Several closely-related social conditions may have contributed to the finding that a majority of non-white students exhibited this type of maturity. For example, recent history in American society has shown that many changes have occurred by which non-white/minority students have received opportunities to develop job skills and attain
higher levels of educational achievement which previous generations of non-white/minority students have not had. Training programs such as ones subsidized by the Comprehensive Employment Training Act (C.E.T.A.) or Youth Opportunities Unlimited (Y.O.U.), work study programs, educational and sports scholarships, and so on, have provided expanded possible occupational and educational horizons not previously accessible to many non-white/minority students.

To illustrate, several summers ago a black, female, high-school student worked as a Y.O.U. aide at the Child Development Center of Western Michigan University's Psychology Department. As a result of this summer job by which she learned about child development, child psychology, and behavioral psychology, she eventually enrolled as a psychology major at the university and proceeded to become a monitor of other psychology students who were enrolled in a required class at the day care facility where she had previously worked.

However, as Clark (1960) and Spring (1976) have noted, social forces which "cool-out" or "sort" students may effectively expand the occupational and educational horizons of some students by limiting the occupational and educational horizons of other students. This dual expansion-and-closure process may affect white students and non-white students, alike. Future studies of students' occupational-educational maturity levels should provide us with more insight into the possible effects of any countervailing social forces and social attitudes which affect white students' and non-white students' occupational and educational ambitions for the future.

Based upon the findings for the fourth research hypothesis it
was concluded that future studies of students' occupational-educational maturity levels may hypothesize differences in the occupational-educational maturity levels of white students and non-white students in other research populations. Future studies may also predict that majorities of white students and non-white students will exhibit alignment between their occupational aspirations and their educational expectations.

Reformulations of the Research Hypotheses

The previous discussions have reviewed and commented upon the major data that were gathered for the four research hypotheses of the present study. Several suggestions for improving such hypotheses in future studies were also offered. The future studies of students' occupational-educational maturity levels should recast the research hypotheses in the following manners.

\( H_1: \) By the ninth-grade level of schooling a majority of students exhibit occupational-educational maturity.

\( H_2: \) By the ninth-grade level of schooling the percentages of boys and girls exhibiting occupational-educational maturity are nearly identical, and majorities of boys and girls exhibit occupational-educational maturity.

\( H_3: \) By the ninth-grade level of schooling upper-status students are more likely than lower-status students to exhibit occupational-educational maturity, and majorities of upper-status and lower-status students exhibit occupational-educational maturity.

\( H_4: \) By the ninth-grade level of schooling white students are more likely than non-white students to exhibit occupational-educational maturity, and majorities of white students and non-white students exhibit occupational-educational maturity.
It should be noted, though, that if future studies of students' occupational-educational maturity levels no longer yield data to support such research structures, appropriate changes in research predictions should be made.

Within the context of the fourth research hypothesis three exploratory questions were raised for which preliminary empirical answers have been presented. Reviews of these questions and additional interpretations of their derived data are now presented.

**Exploratory Question 1**

The first exploratory question sought to determine what the occupational-educational maturity levels of black students and other-minority students were as a means of determining if there were any significant similarities or differences in this aspect of maturity among non-white/minority students, as Super and Bohn (1970) have alluded. The data for the answering of the question illustrated that the percentages of black students who exhibited occupational-educational maturity (52%) was nearly identical to the percentage of other-minority students who exhibited this type of maturity (54%). Although majorities of black students and other-minority students exhibited alignment between their occupational aspirations and their educational expectations, these proportions were not statistically significant at the .05 level.

While the findings for the fourth research hypothesis illustrated that there were statistically significant differences between the occupational-educational maturity levels of white students and
non-white students under study, no such statistically significant
differences in the occupational-educational maturity level data for
black students and other-minority students were present. There is
need, therefore, to evaluate possible variables which may have ac­
counted for the data for the first exploratory question.

Karnes, Zehrbach, and Jones (1971) have identified several areas
in which many "disadvantaged"/minority students differed from "ad­
vantaged"/majority students in American society. These areas of
difference which may affect students' life styles, social values,
and behavioral norms are: (1) self concept development, (2) motiva­
tion, (3) social behavior, (4) language, (5) intellectual function­
ing, and (5) physical fitness. To this list, and as a partial re­
sult of its items, differences in students' occupationally-related
learning experiences may be added. It is reasonable to assume that
such social differences as these, or other ones, may have resulted
from general social discrimination directed toward non-white/minority
students, as a whole; or, as the result of specific social dis­
crimination directed toward Blacks, Hispanics, Asians/Orientals, or
native Americans/North American Indians.

If it can be assumed that black students and other-minority stu­
dents are generally deprived of opportunities to develop occupa­
tional-educational maturity then it becomes a partial task of
schools to assist students to overcome their socially-imposed handi­
caps, and then to help students develop clear understandings about
the nature of the job sector of the economy. This task is espe­
cially important if it is considered that many black students and
other-minority students are more likely than white students to be affected by an inability to adapt to the changing labor market. Several means by which this task can be accomplished are discussed in a later section of the chapter.

Future studies of students' occupational-educational maturity levels can now change the first exploratory question into a testable research hypothesis. This hypothesis could predict that the percentages of black students and other-minority students who exhibit occupational-educational maturity are nearly identical, and that majorities of black students and other-minority students exhibit such maturity.

This discussion has centered around the first exploratory question of the study. The following discussions center around the second and third exploratory questions together.

**Exploratory Questions 2 and 3**

The second exploratory question of the study sought to determine if there were any significant similarities or differences in the occupational-educational maturity levels of upper-status white students and upper-status non-white students. The data for the question illustrated that the percentage of upper-status white students who exhibited occupational-educational maturity (71%) was larger than the percentage of upper-status non-white students who exhibited this type of maturity (63%). Although majorities of upper-status white students and upper-status non-white students exhibited occupational-educational maturity, these data were not statistically significant.
at the .05 level.

The third exploratory question sought to determine if there were any significant similarities or differences in the occupational-educational maturity levels of lower-status white students and lower-status non-white students. The data for the question illustrated that the percentage of lower-status white students who exhibited occupational-educational maturity (63%) was larger than the percentage of lower-status non-white students who exhibited occupational-educational maturity (51%). The majorities of lower-status white students and lower-status non-white students who exhibited occupational-educational maturity were statistically significant when measured as statistical samples.

The second and third exploratory questions were raised as endeavors to ascertain if there were any social-status and ethnic-identity interactions which may have patterned adolescent students' occupational-educational maturity levels as previous discussions in this paper have suggested. When the data for these two exploratory questions were compared it was found that social-status membership had different statistical effects on white and non-white students' occupational-educational maturity levels. Some of the data for the study illustrated that upper-status did not have a statistically significant effect on white students' and non-white students' occupational-educational maturity levels, whereas other data illustrated that lower-status had such an effect on the occupational-educational maturity levels of white students and non-white students. Based on these several data it was concluded that lower-status, non-white stu-
dents were the least likely of all students analyzed here to exhibit occupational-educational maturity.

This conclusion was not particularly surprising if it is considered that lower-status, non-white students have two social handicaps working against them - their lower social status and their minority status - in the development of their occupational and educational ambitions. In combination these two variables are likely to compound the social "deficiencies" identified by Karnes et al. (1971). However, these deficiencies may not be insurmountable ones.

By having access to such occupational-educational maturity information as developed and presented in these pages schools are in advantageous positions to help lower-status, non-white students to overcome their socially-imposed handicaps in order for them to develop "realistic" orientations about how they relate to the world of work. This is an especially important task if it is considered that lower-status, non-white/minority students are likely to enter the job force of society on full-time bases earlier than almost all other categories of students under study.

Again, however, there is need for caution in deriving conclusions from the data for the second and third exploratory questions. The occupational-educational maturity levels of the students may have also been artifacts of the accuracy of the information which the students provided on the questionnaires which served as the bases for social-status assignments as previous discussions in this report have identified.

The second and third exploratory questions of the present study
can now be reformulated into testable research hypotheses in future studies of students' occupational-educational maturity levels. The second exploratory question could be recast into a research hypothesis predicting that the occupational-educational maturity levels of upper-status white students and upper-status non-white students are not statistically different from each other, and that majorities of upper-status white students and upper-status non-white students exhibit occupational-educational maturity. The third exploratory question could be recast into a research hypothesis predicting differences in the occupational-educational maturity levels of lower-status white students and lower-status non-white students, and that majorities of lower-status white students and lower-status non-white students will exhibit occupational-educational maturity.

**Reformulations of the Exploratory Questions**

The preceding discussions have presented additional interpretations of the data for the three exploratory questions which partially guided the present study. These three research concerns were presented as exploratory questions within the fourth research hypothesis, rather than as research hypotheses themselves, because of the inability of the researcher to predict their possible outcomes. Now that these research questions have been answered specific research hypotheses can be developed from them for use in future studies of adolescent students' occupational-educational maturity levels.

To the four other, reformulated, research hypotheses three more are added.
H₅: By the ninth-grade level of schooling the percentages of black students and other-minority students exhibiting occupational-educational maturity will be nearly identical, and majorities of black students and other-minority students will exhibit occupational-educational maturity.

H₆: By the ninth-grade level of schooling there are no statistically significant differences in the occupational-educational maturity levels of upper-status white students and upper-status non-white students, and majorities of upper-status white students and upper-status non-white students will exhibit occupational-educational maturity.

H₇: By the ninth-grade level of schooling lower-status white students are more likely than lower-status non-white students to exhibit occupational-educational maturity, and majorities of lower-status white students and lower-status non-white students will exhibit occupational-educational maturity.

Again, however, if future studies do not confirm these predictions the hypotheses will have to be reformulated, accordingly.

The three exploratory questions of the study were raised in the context of the fourth research hypothesis in order to determine if occupational-educational maturity levels varied among non-white students, and as a possible result of social-status and ethnic-identity interactions. From the data that were derived in the present study it was concluded that there were several variations in students' occupational-educational maturity levels when ethnic identity and social status were used as independent variables, even though some of these variations were not statistically significant at the .05 level.

Future studies of adolescent students' occupational-educational maturity levels are needed to empirically determine if there are any
identifiable differences in the life styles and socialization experiences of students which could account for variations in their occupational-educational maturity levels. For the time being, however, it must be estimated that such differences affected students' occupational and educational ambitions, and that the students' occupational-educational maturity levels varied as the result of presumed differences in the students' lives.

Several additional recommendations for future studies of this topic are made in a later portion of the chapter. If these recommendations are followed other studies will be able to improve the quality of their findings, as well as their interpretations of the data.

Besides providing data for the specific research objectives of the present study other findings were set forth in this report. Attempts to interpret these data are now presented.

**Other Findings**

The information presented in Chapter III for each of the research objectives of the study also illustrated that: (1) There were many variations in students' occupational-educational maturity levels when each occupational aspiration category was taken into account, and (2) majorities of all categories of students who exhibited occupational-educational maturity aspired to have jobs as either managers or as professionals. Regarding the first of the additional findings it was determined that though variations in occupational-educational maturity levels were present in all occupational cate-
there did not appear to be any identifiable or universal patterns in these variations. Future studies need to address these phenomena more adequately than the present study was able to do.

Regarding the other findings it was concluded that most of the students who exhibited occupational-educational maturity aspired to have upper-status jobs. While specific reasons for such occupational aspirations were likely to have varied from one student to another, it was assumed that the students' occupational aspirations were attributed to their desires to receive the perceived perquisites that either managerial or professional jobs may offer. Future studies of this research topic need to delve further into this possibility, as is discussed in a later portion of the chapter.

Now that the study has related the research findings to its social foundations, there is need to evaluate the data. This task is undertaken in the next series of discussions.

Evaluations of the Findings

While a primary purpose of career education is to socialize people into society and its labor structure there is theoretical and research evidence which illustrates that adolescent students' occupationally-related learning experiences are not similar. A measured consequence of such differences in learning experiences was the presence or absence of occupational-educational maturity among ninth-grade, public-school students.

The present study was based on grounded research, in that previous studies have alluded to the concept of "occupational-educational..."
tional maturity," but the topic was neither addressed nor measured in previous research. The four research hypotheses and the three exploratory questions that were used in the present study were based on similar research objectives in the previous studies, even though the data in the prior research were not always consistent.

The present study anticipated that occupational-educational maturity levels would vary as the result of presumed differences in the students' occupationally-related learning experiences. The study predicted that occupational-educational maturity levels would vary according to the students' gender, social status, and ethnic identities. For the most part, the present study was reasonably successful in its predictions.

While several earlier statements addressed the need to be cautious in deriving conclusions from the data generated here there is further need for caution. For example, the study was unable to evaluate the accuracy of the information which the students provided on the questionnaires. Research agreements with the school system which provided the questionnaires ensured confidentiality of the students' responses, and affirmed the aggregate use of the data. Had the researcher been able to interview students, certain ambiguities in their responses, such as those discussed in previous pages, could have been clarified.

The researcher was also hampered by an inability to assess the quality or the quantity of the occupationally-related information to which the students have been exposed. Even though most of the students indicated that they had developed occupational and educational
plans for themselves, the researcher was unable to learn from the students the circumstances from which such plans were developed, nor was he able to learn from the students which agents of socialization figured most prominently in the development of their occupational aspirations and their educational expectations. To illustrate, the following questions remained unanswered in the present study:

1. Were the students pursuing occupational roles consistent with those of their primary economic supporters? (2) Were the students pursuing occupational roles consistent with those portrayed by role models in the mass media? (3) Were the students pursuing occupational roles consistent with those of part-time or after-school work supervisors? (4) Were the students following advice given to them by school counselors or teachers? (5) Were the students pursuing occupational roles identified as appropriate ones for them by various aptitude or interests tests? Future studies should have students provide answers for such questions.

Even though the researcher assumed that the students under study have received career-educational information from the school system in which they were enrolled at the time when the information for the study was obtained, such an assumption could have been wrong for some of the respondents. It would have been possible for a student to enter into the school system from another one which did not have an organized career-education curriculum just several days prior to the administration of the questionnaire. In addition, the researcher was unable to empirically evaluate the occupationally-related information to which the students have been exposed outside

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of the school system.

If the present study had access to such information there would have been an empirical basis for understanding why some students exhibited greater degrees of occupational-educational maturity than other students. For example, if some students have had extensive career-education instruction in schools it would have been reasonable to predict they would be more likely to exhibit occupational-educational maturity than other students who have not had such instruction. As it was, the researcher was only able to assume that students under study have had dissimilar occupationally-related learning experiences upon which their occupational-educational maturity levels were based.

Even though the present study encountered certain difficulties in the research process, and had limited knowledge of the demographic and social-background characteristics of students in the research population, it confirmed most of the research hypotheses that students would exhibit different degrees of occupational-educational maturity. It is because of these research problems that several recommendations are made for future studies of students' occupational-educational maturity levels.

Implications

This section of the chapter has several purposes. First, it identifies several methodological refinements which need to be made in future studies of the topic. Second, it identifies several uses of the concept of "occupational-educational maturity" for career-
education programs at the secondary level.

Implications for Future Research

This discussion centers around several refinements which need to be made in future studies of the occupational-educational maturity levels of adolescent students. These recommended refinements are: (1) using interview schedules instead of questionnaires, (2) using statistical samples, (3) restructuring of the data-gathering device by adding several questions to it, and (4) using longitudinal studies.

Use of Interview Schedules

The study used information provided by students who responded to the questionnaires administered to them by the Grand Rapids public school system. Questionnaires are impersonal research tools, and the accuracy of the information provided by respondents is sometimes in doubt. Respondents may provide insufficient information for research goals, or, they may wilfully provide inaccurate information.

Even though it is often more economical to use questionnaires rather than interview schedules, especially when dealing with a research population as large as the one under study here, the use of interview schedules may improve the accuracy of research findings. On a face-to-face basis when respondents provide insufficient answers the interviewer can then query the respondent further in order to elicit desired information. For example, questions or ambiguities concerning primary economic supporters' occupations as discussed in
earlier pages of this study can be quickly clarified with one or two additional questions.

Similarly, responses can be further elicited when a respondent identifies an occupational aspiration as "working construction." The interviewer can then ask the respondent if he or she wants to be an unskilled board-road construction laborer, a skilled craftsman, a heavy equipment operator, or the owner of a construction company. Such additional information can be used by the researcher to make more accurate assessments as to whether or not the student exhibits occupational-educational maturity.

However, the process of interviewing a large number of students and coding their responses in preparation for data analyses is a task which is both expensive and time consuming. In order to expedite the research process the use of statistical samples drawn from a research population may provide several benefits.

Use of Statistical Samples

The research population for the present study consisted of 1626 ninth-grade, public-school students. When the students' questionnaires were sent to Dr. Edsel L. Erickson it took the researcher, his wife, and a paid associate two weeks to code all of the questionnaires for the study.

Instead of using information from an entire research population as was done here, statistical samples drawn from the population could be used. The samples would contain proportions of social categories of students as such categories are distributed in the population.
For example, in the present study the 820 boys represented 50.4% of the population and the 804 girls represented 49.9%. By using random samples such equal proportions of boys and girls would be used without having to code all of the questionnaires. This procedure would reduce the likelihood of coding error due to fatigue and monotony.

Also, the use of statistical samples from several research populations would allow researchers to compare similar data from several school systems which are more or less comparable in composition. Such comparative data would serve as both validity and reliability checks of the research topic, the research instrument and the data-gathering device, and the derived data. The comparative data would then allow researchers to make generalizations about their findings beyond those made for specific research populations.

There is another benefit which would result from the use of data drawn from statistical samples when used in conjunction with data as enumerations from a total research population. Researchers could compare the several sets of information in order to determine if the data are consistent. If gross discrepancies in data are evident a determination of the source(s) of error could be made in order to evaluate the cause.

However, in order to be most effective the data-gathering device needs to be restructured. Discussions concerning recommended changes in the research tool now follow.
Restructuring the Questionnaire/Interview Schedule

The questionnaire from which the data were obtained for the present study was not specifically designed by the researcher to measure and evaluate students' occupational-educational maturity levels. By including several additional items into future studies' data-gathering devices our ability to measure and assess this type of maturity will be greatly improved. Several of these needed changes and benefits to be derived from them are now discussed.

First, the questionnaire/interview schedule should be so revised as to have the students identify their primary economic supporters' levels of educational attainment and their approximate incomes, rather than just their occupations, alone. As discussed in previous pages of this report only two social-status categories were used here, partially because only information on students' primary economic supporters' occupations was available. Social-status assignments could be more accurately made with such additional information because one's social status is not based on occupation, alone. Rather, one's social status is founded on a combination of variables including occupation, education, income, life style, and so on. The present study realizes, however, that information on these other variables may be difficult to obtain. Where they are made available they should be used to their fullest analytical advantage.

Second, future studies need to have students identify:

1. When, where, how, and through whom their occupational aspirations and their educational expectations were developed.
2. Their reasons for having these ambitions.

3. Their perceptions of the levels of educational attainment or types of vocational training that are necessary for entry into their desired occupations, and, how these perceptions were developed.

4. Their perceptions of whether or not they can reasonably expect to obtain these such prerequisites, and, why they feel they can attain them.

5. Their perceptions of whether or not they reasonably expect to get jobs in their chosen occupations when they meet the necessary requirements.

6. Their perceptions of what rewards they can reasonably expect to acquire if and when they gain entry into their chosen occupations.

Because of the manner in which the questionnaire was constructed, the present study did not have such information available and was required to make the assumption that the students perceived that their educational expectations were functionally related to their occupational aspirations. If these several items are added to the future studies' data-gathering devices we will be better able to assess students' perceptions of how they relate to the world of work, thus improving our knowledge about occupational-educational maturity.

The fourth recommendation for change in future studies concerns the use of longitudinal data. These discussions follow.

Use of Longitudinal Data

The present study was a cross-sectional one which used information that was originally gathered in April, 1978, which was then prepared for analyses here in the Spring of 1979. Future studies of students' occupational-educational maturity levels should be con-
ducted on longitudinal bases.

Longitudinal studies provide social researchers with: (1) continued refinements of research concepts, research variables, and research instruments, which (2) contribute to greater reliability and validity of data, concerning (3) changing social attitudes, and changing behavioral norms and behavioral patterns of people as they grow and develop through the life cycle. When future studies of students' occupational-educational maturity level data are made social researchers and teachers will then be able to learn more about how students relate to the world of work as they have more exposure to it.

This information can then aid teachers and school counselors to better understand the changing needs and desires of adolescent students so that career-education programs can be revised or developed. For example, a ninth-grade student may desire to be a firefighter, but at the twelfth-grade level the student may desire to be a cultural anthropologist. School counselors need to understand why the transition in occupational aspirations has occurred because such transitions are likely to happen to other students, too. By understanding the kinds of variables that are involved in the process of changing occupational desires, school counselors will then be able to assist other students as they, too, have new learning experiences in the life cycle.

There is an additional reason to use longitudinal studies in the measurement and evaluation of students' occupational-educational maturity levels. Social attitudes toward women and members of
minority groups are rapidly and continually changing in American society. Through the use of a concept such as the one developed here future studies will be used as barometers of changing social attitudes by determining what possible effects they have on students' occupational and educational ambitions.

Even though the present study had several limitations to it as the preceding discussions have illuminated, the data contained in this report can be useful to schools. The following portion of the chapter identifies several methods by which schools can use the concept of "occupational-educational maturity," and the study's derived data to meet the occupational and educational needs of adolescent students.

Implications for Career-Education Programs in Schools

The idea that students would exhibit occupational-educational maturity was developed from related theoretical and research evidence which suggested that students' occupational aspirations and their educational expectation developed from a complex interplay between: (1) dominant social values, such as a work ethic, (2) various agents of socialization, such as parents, teachers, role models portrayed in the mass media, work supervisors, and so on, (3) diverse learning environments, such as school classrooms and work sites, (4) such personal attributes as manual dexterity, and skills in logic and problem-solving, and (5) social heritage (Super, 1960b; Tolbert, 1973). The career-education process involves exposure to occupationally-related information in formal, informal, and non-
formal learning environments. While the researcher recognized that there is little likelihood that mass-media role models or many work supervisors will be affected by the data contained here, the information in this report can be useful to schools in numerous ways, several of which are now discussed.

Relevance to Secondary Education

The study cited several social researchers' attitudes that the ninth-grade level of schooling is a crucial period in the lives of adolescent students. This level of schooling is considered by such social researchers as the beginning of the transition from childhood to adulthood, in which personal and occupational development:

(1) ...proceeds from random, undifferentiated activity to goal-directed specific activity, (2) ...is in the direction of increasing awareness and orientation to reality, and (3) ...is from dependence to independence (Super & Overstreet, 1960, p. 32).

In order for schools to meet the developmental needs of students instructional media and curricula could be developed to assist them in the transition from childhood to adulthood, and into the world of work (McMinn, 1973). Career-education programs in schools are intended to expose students to occupationally-related information in order to help them to make plans for both short- and long-term goals which many of them begin to develop in their early teen-age years.

Super (1960a) and Super and Overstreet (1960) have illustrated, however, that many students in the ninth grade were not ready to make firm commitments to their occupational and educational careers. Since it is reasonable to assume that many students at this grade
level are still exploring occupational and educational alternatives, a problem may ensue. While on the one hand schools are required to meet State-defined educational requirements that are intended to prepare students to pursue their occupational and educational ambitions many students in the ninth grade are not ready to make such commitments. Indeed, there is a strong argument in favor of not locking oneself into firm plans in order to pursue life's other pleasurable pursuits; but, many students still seem to be ill-prepared to know how these pleasures can be attained.

Through the administration of a research tool similar to the one developed and measured here school administrators can identify either individual students, or social categories of students, who are not apt to exhibit a sense of occupational-educational maturity. Through such identification procedures school career-education coordinators can then assist the students to either focus on, or learn more about: (1) occupational and educational alternatives that are currently or locally available, (2) specific work tasks for the jobs in which the students show some interest, and (3) educational or vocational-training prerequisites for the jobs in which the students show interest. There are several benefits as well as pitfalls to programs such as these, about which some discussions follow.

Early-adolescent students are in potentially enviable positions in society for several reasons. Since they are not legally able to leave home or have full-time jobs they can pursue their interests as they desire. These learning experiences can be beneficial to them both as areas of academic inquiry, as well as providing the founda-
tions for such practical considerations as getting jobs.

Early-adolescent students are also in potentially vulnerable positions in society, though, while they are in the process of developing their occupational and educational plans. While occupational and educational choices may be considered as personal decisions, such choices are often strongly affected by the students' agents of socialization. For example, students who are uncertain about which occupational and educational choices they should make, or who are the "wrong" social identity, may be subjected to overt or covert manipulation(s) which channel or (re-)direct them into pursuits commensurate with stereotyped skills and aptitudes, regardless of what the students' personal interests may be (Clark, 1968; Spring, 1976). An illustration will help to clarify this point.

The author of the present study, whose father owned a cartage company in Chicago, wanted to go to college after the completion of high school but was told by a school counselor that college should not be considered as a viable, personal option. In her opinion, the author did not have the necessary academic or social skills that were needed to ensure a successful college career. Consequently, after several years of college and work in the cartage and foreign-trade industries, which were then followed by two years in military service, the author was almost twenty-four years old before he decided upon a career in higher education.

Not only may discrimination be a variable affecting the development of students' occupational and educational ambitions, but schools' career-education programs may be inadequate to acquaint
students with occupational and educational alternatives that are currently available. Another example from the author's high-school years may serve to illustrate this point.

The high school which he attended in a Chicago suburb did have "career days" in which students "learned" about occupational and educational alternatives upon which future career decisions would eventually be made. However, these career-day activities lasted the length of one school day, one school day a year. Clearly, in this length of time students could not learn much about the multifaceted foreign-trade industry, for example, which was then developing in the fresh-water port of Chicago. Career-education programs in schools need to be continuous activities if they are to be most successful, rather than hit-or-miss ones such as in the illustration presented here.

As Super (1955b) illustrated that vocational maturity can be developed through appropriate occupationally-related learning experiences, so can occupational-educational maturity be developed among adolescent students. While specific forms of career-education programs in schools vary, occupational-educational maturity can be fostered through effective career counseling, and through such programs as cooperative occupational education.

**Cooperative Occupational Education**

Cooperative occupational education is a form of non-formal education which was originally developed by Herman Schneider in 1906 for engineering students at the University of Cincinnati
(Woolridge, 1971). Since then it has been expanded in scope to in-clude other areas of study, and is now used in other levels of schooling. This form of occupationally-related learning experiences combines formal classroom presentations of subject matter (or, "theory") with related job-site work experience (or, "practice").

While there are many definitions of this type of educational program (Law, 1970; Mason et al., 1981; Mitchell, 1977) the one devised by Woolridge is used here. Cooperative occupational education is:

a plan of educational development designed to enhance self-realization and self-direction by integrating class-room study with planned and supervised experience in educational, vocational, or cultural learning situa-tions outside of the formal classroom environment (Woolridge, 1971, p. 438).

One of its unique qualities that is relevant for the study, and important for adolescent students, is the intention to ease students along in the transition from school to work at a time when many stu-dents need to begin to make occupational and educational plans for themselves. As an aid in this transition process there are numerous benefits to be derived for students, for communities, and for the na-tional economy, alike. A list of some of the benefits to coopera-tive occupational educational programs for students was also pro-vided by Woolridge (1971):

First: By coordinating work experience with the [school's] educational programs, theory and practice are more closely related. Students find out that their studies have greater meaning [for them].

Second: Coordination of work and study improves student motivation. As the students see the relation-ship between the jobs they hold and the princi-ples they are studying [in schools], greater interest in academic work develops.
Third: Most students in cooperative educational [programs] develop a greater understanding of other people and greater human relation skills. These come about because their work experience involves them with co-workers who come from a variety of backgrounds and because success at their jobs requires constructive relationships with colleagues.

Fourth: Cooperative education helps markedly to orient...students to the world of work. It provides students with opportunities for exploring their own values in correlation with real jobs. Students are exposed to direct means of gaining vocational information and guidance, not only about the occupation in which they are employed [and interested], but in a number of related fields as well.

Fifth: Cooperative education makes [continued] education possible and attractive to many young people who [may] not otherwise [have the opportunity to continue their formal education].

Sixth: For many students, work experience brings a greater sense of responsibility, a greater dependence upon their own judgments, and a corresponding maturity. (Emphasis added)

Seventh: Cooperative education gives the student contacts which are useful in later occupational placement (Woolridge, 1971, p. 441).

In order to be most beneficial for many students, cooperative occupational education programs take many forms, depending on the kinds of work desired by students, the skills of the school coordinators, and the economic resources and training stations that are made available for students by participating business communities. In general, there are several major kinds of cooperative occupational education programs, as Law (1970) identified.

1. Commercial cooperative occupation - designed primarily to develop among students office operation and clerical skills.
2. Distributive education - designed primarily to develop among students sales and merchandising skills.

3. Industrial cooperative education - designed primarily to develop among students industrial and technical skills.

4. Diversified occupations - "catch-all" or "try-all" programs for students who do not have firm occupational and educational ambitions for themselves (Law, 1970, pp. 3-6).

By participating in cooperative occupational education programs, adolescent students can develop understandings about the job sector of the economy, their interests and aptitudes, and the interrelationships that exist between themselves and the labor market. By working on part-time bases for which they receive school credits, and by attending schools on part-time bases, simultaneously, they can begin to develop occupational-educational maturity in order to fulfill their occupational and educational goals.

However, cooperative occupational education programs are neither just part-time jobs, nor are they work-study programs. While complete distinctions between these types of work experiences was provided by Mason et al. (1981), the present study reviews some of the major features of cooperative occupational education programs.

1. Established career objectives by students.

2. Classroom instruction related to career objectives.

3. Established training stations and close supervision by schools.

4. On-the-job training programs.

5. Paid employment.

6. Advisory committees are used.
7. Student vocational organizations correlated with instruction.

While both part-time and work-study jobs also provide students with some knowledge about the world of work, such occupationally-related learning experiences may not be directly coordinated around students' occupational and educational ambitions. For example, a part-time job at a fast-food hamburger chain franchise provides a student with money for personal expenditures; but, the job may not be of direct benefit to learning how to become a petroleum engineer. The same can be said about a student who desires to be a pharmacist and who has a work-study job in a school administrator's office as a messenger, commonly known as a "go-fer."

In order to be most beneficial to the development of occupational-educational maturity, occupational and educational learning experiences need to be closely coordinated with each other. Having part-time or after-school jobs solely to earn money may not contribute to developing abilities to attain long-term occupational and educational goals.

While there are many benefits to be derived from cooperative occupational education programs, not all schools at the secondary level have them. Such programs involve numerous personnel, as well as large expenditures of money, time, and effort, for schools and businesses, alike. Where possible, though, school counselors and teachers should encourage qualified students (Mitchel, 1977) to
make the fullest use of such programs. These same agents of socialization should be especially mindful of the benefits that cooperative occupational education programs can provide for lower-status, non-white/minority students.

By participating in cooperative occupational-education programs adolescent students can learn about the occupations in which they show real interest, and the educational or vocational-training prerequisites to gain entry into these jobs. At the same time the students are learning more about themselves, while fulfilling State-defined educational requirements, and earning money, too. By participating in cooperative occupational education programs when such programs are available, adolescent students can ease themselves through the transition from the world of schooling into the world of work.

Summary Discussions

This chapter has reviewed the major findings of the study of adolescent students' occupational-educational maturity levels. It also presented discussions which related the findings to its theoretical and social foundations from which several conclusions were drawn. Both general and explicit recommendations for future studies of students' occupational-educational maturity levels were set forth. Finally, the chapter discussed how the information contained in these pages could be useful in secondary schools, and then recommended that adolescent students make use of cooperative occupational education programs when such programs are available.
The concept of "occupational-educational maturity" was developed from related studies which alluded to it, but did not measure it. The present study which assessed ninth-grade, public-school students' occupational-educational maturity levels is best understood as a pilot study which can serve as a foundation for future studies of this topic. Future studies will use different research populations, and conceptual and methodological refinements will be made in them. By building upon this present study social researchers may generate expanded bodies of information by which to better understand the process of career development, and the possible effects of students' socialization experiences upon their patterns of occupational choices and the awareness of the educational prerequisites for attaining such goals. In conclusion, the research objectives of this study have now been achieved.
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