A COMPARISON OF OCCUPATIONAL AND EDUCATIONAL ASPIRATIONS AND EXPECTATIONS OF SIXTH GRADE AND TWELFTH GRADE STUDENTS

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ABSTRACT

A COMPARISON OF OCCUPATIONAL AND EDUCATIONAL ASPIRATIONS AND EXPECTATIONS OF SIXTH GRADE AND TWELFTH GRADE STUDENTS

by

Paul Federoff

The Problem

The problem of this study arose out of the concern for the anxieties of adolescents regarding vocational choice and related educational plans. In our culture, entering an occupation is generally seen as a symbol of adulthood and an indication that a young man or woman has reached a stage of some independence and freedom.

The purpose of this study was to examine changes that occurred in the occupational and educational aspirations and expectations of students as sixth and twelfth graders. The data collected identified the association of changes in educational and occupational aspirations and expectations of students in relation to sex, race, socio-economic status, status of living with both parents, and expected achievement in English and mathematics.

The Theory

Various theories indicate a general agreement that vocational choice is a process rather than a single event and that it takes place over a period of years. It takes into account the needs of the

individual and his abilities, aptitudes, attitudes, interests and achievements.

This study has accepted as its basis an assumption that students' aspirations can be viewed as the result of a developmental process, based in social interaction.

Design and Procedures

The sample consisted of 408 students in the public schools of Flint, Michigan. The data were collected in the sixth-grade phase of the study in September, 1959. The twelfth-grade data were collected at the mid-semester of the 1965-66 school year. The differences existing between the sixth-grade and twelfth-grade data were considered to be the change that occurred during the six-year period.

Six hypotheses were applied to each of four basic variables (occupation aspirations, occupation expectations, education aspirations and education expectations). The six hypotheses were stated to examine the associations of the four basic variables to certain other variables (sex, socio-economic status, perceived expected achievement in mathematics, perceived achievement in English, and race).

The cross break chi square statistical analysis was used to determine significance of association between the responses for different combinations of variables. The occupational and educational scales of A. B. Hollingshead's, Two Factor Index to Social Position, was used to classify students into three socio-economic classes and educational levels.

Results

Four of the twenty-two separate hypotheses were found to have a significant association and were, therefore, accepted.

Hypothesis 1-a stated that change between sixth and twelfth grade educational aspirations are positively associated with changes in occupational aspirations. The direction of change for occupational aspiration followed the direction of change for educational aspiration.

Hypothesis 1-b stated that changes between sixth and twelfth grade educational expectations are positively associated with changes in occupational expectations. The direction of change for occupational expectation followed the direction of change for educational expectation.

Hypothesis 2-a stated that changes in occupational aspirations are positively related to sex. The direction of change found for all sub-groups was that males tended to lower their occupational aspirations while females tended to remain unchanged in their occupational aspirations.

Hypothesis 4-d stated that changes in educational expectations are positively associated with differences in students' perception of expected achievement in mathematics in sixth grade and perception of attained rank in mathematics in twelfth grade. Generally, the direction of change for perceived expected achievement in mathematics paralleled the changes in educational expectations.

Discussion

The results of this study support the association between occupational and educational aspirations and expectations. Suggestions are given for the inclusion of occupation information in elementary school programs. Further recommendations are given regarding the importance of the teacher's role in the educational and occupational plans of students. An appeal for more understanding and encouragement by teachers of mathematics can have far reaching effects upon students' educational expectations and related occupational expectations. Finally, the realistic adjustment of boys' occupational aspirations were found to be totally within the normal developmental process of occupational preparation. The task continues to be largely one of adjustment and acceptance of one's occupational choices in relation to one's own needs.

A COMPARISON OF OCCUPATIONAL AND EDUCATIONAL ASPIRATIONS AND EXPECTATIONS OF SIXTH GRADE AND TWELFTH GRADE STUDENTS

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CHAPTER I

INTRODUCTION

The choice of occupation is a very significant factor in a person's life. Differences in income associated with differences in occupation have a direct effect on most aspects of living. The satisfactions obtained from life vary noticeably with different occupations. In our culture social and economic status depend more upon the occupation than upon anything else.

A man's occupation is usually the source of his income which, in turn, provides a style of life. Generally speaking, most Americans believe that income is a fair measure of occupational success--both of the importance of the occupation to the society and of a man's individual skill at the job. It is convenient to substitute income as an index and to assume that it measures accurately the prestige and esteem qualities of the actual work. But occupation stands for more than merely a certain level of income. It indicates a man's education; it hints at the degree of his authority over other people; it suggests the type of associates he comes in contact with on the job; it tells something of the contribution he makes to community welfare.

An occupation can also be described as a social role which illustrates the major work that a person does. We often stratify a population according to occupation.

Entering an occupation is generally seen in our culture as a symbol of adulthood, and an indication that a young man or woman has

reached a stage of some independence and freedom. Having a job in itself carries a measure of esteem.

To some extent the meaning of occupational choice changes with the age or life period with which we are concerned. With elementary school children, "choice" of an occupation may mean something quite different from what it means in high school, and something else again when one is actually faced with the necessity for taking a job. Even then we must consider that sometimes a particular job is intended only as a stop-gap or as a means to an end.

In the past, the making of a sound vocational choice was considered an intellectual process of matching personal assets with job requirements. Today, the emphasis is upon vocational development and eventual decision as a long process placed squarely in the context of total personality development. The adolescent examines several occupations as having potential for the satisfaction of certain needs according to his personality. An adolescent's perception of himself in a possible occupation assumes importance, and vocational development may be viewed in a sense as involving a process of role-playing and other investigative experiences. Ranking high in any list of worries and problems by adolescents are the problems of vocational choice and related educational plans.

It has been suggested that the crucial years are the early ones in preparing for a realistic job orientation by the students. Several

authorities have expressed a concern that possible irreparable damage is now being done in the elementary and high schools in not preparing students for such choices.[1]

A realistic vocational orientation may well include the discussion of success or failure. William James noted "one could as easily increase one's self-esteem by reducing one's aspirations as by increasing one's achievements."[2]

Rosenberg offers that the prospect of success or failure in the occupational realm is dependent upon the relationship between two judgments: (1) what personal qualities are essential for success in a given field; and (2) the degree to which one feels one possesses these particular qualities.[3] His illustration of the young man who is confident of himself and not afraid of failure is likely to throw himself wholeheartedly into his work and to make full use of his creative potentialities. The insecure youngster, on the other hand, is likely to be inhibited by his fear that he will make mistakes.

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[1]A. W. Foshay, "Foundations for Guidance Toward Science," Education (1953), 73, 431-433; R. H. Knapp and H. B. Goodrich, Origins of American Scientists (Chicago: University of Chicago Press, 1952), 75; A. Roe, The Making of a Scientist (New York: Dodd, Mead, 1953), p. 45.

[2]Morris Rosenberg, Society and the Adolescent Self-Image (Princeton University Press, 1956), p. 230.

[3]Ibid.

Herriott's study of some social determinants of educational aspiration indicated that the higher the level of self assessment, the higher the educational aspiration tended to be. It was also shown that the higher the level of expectation the student perceived others hold for him the higher his educational aspiration tended to be.[4]

In general, occupation, education, and income have been found to be three important components of social status. Hieronymus found that in the lowest economic class the adolescent's principle ambition was to quit school, get a job and do as he pleased. A high school education was out of the experience of his parents and beyond the youth's expectancy.[5] Today a great interest is being shown in attempts to raise the levels of aspiration of low aspiration level children. It is well known that the farther young people go in the educational system, the better their chances for higher-class positions. This is especially true in the case of lower-class youths.

Educational requirements for all occupations are increasing, and there are very few except at the lowest level for which a high school education is not now specified as desirable. Whether more years of education contribute to more effective or more satisfying work on the job, or whether a lack of education is detrimental, has not yet been

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[4]Robert E. Herriott, "Some Social Determinants of Educational Aspirations," Harvard Educational Review, 33 (Spring, 1963), 157-77.

[5]A. N. Hieronymus, "Study of Social Class Motivations: Relationships Between Anxiety for Education and Certain Socio-Economic and Intellectual Variables," Journal of Educational Psychology, 42 (April, 1951), 193-205.

determined. The fact is that a large proportion of the population today is getting at least a high school education. Perhaps the occupational requirements are reflecting the educational standards.

The current discussion of American education echoes the concerns of the past and highlights the description of our present status, especially as it affects the future occupations of our citizens. The American society has built an educational system of great dimensions whose goal is educating every citizen to the highest level of his ability. The opportunity for better occupational choices are indeed closely related to the attainment of educational preparation and opportunity.

If higher education now has the major responsibility for providing highly trained individuals, knowledge of which students aspire to higher education is of importance. There is some evidence that aspirations for college are formed some time before the actual college experience.[6] However, little is known about aspirations for college over a period of time, or to what variables these college aspirations might be related. Knowledge of such variables may assist teachers and counselors in their efforts to encourage increased student achievement and a realistic vocational choice.

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[6]W. B. Brookover, Donald Hamachek, and Edsel Erickson, Relationship of Self Concept to Achievement in High School. Cooperative Research Project #2831, U. S. Office of Education, Washington, D.C., and Michigan State University, East Lansing, Michigan, 1964; J. R. Rice, "Changes in the Levels of Educational and Occupational Aspirations Between the Tenth and Twelfth Grades of Capable High School Students in North Florida," Unpublished Ph.D. Dissertation, Florida State University, 1962. (Abstracted in Dissertation Abstracts, Vol. XXIII, No. 6, 1962), p. 1974.

The college and non-college aspirations of sixth grade and twelfth grade students are of concern in this study. It focuses on the differences and changes in these aspirations in relation to occupational aspirations over a six-year period between grade six and twelve.

Statement of the Problem

The general problem of this study is to determine whether significant changes in occupational and educational aspirations and expectations have occurred within a selected population of high school seniors in Flint, Michigan as compared with the same population delimited in Smith's earlier study.[7] Emphasis is placed upon relationships of changes to determine whether certain variables can be identified and related to educational and occupational expectations and aspirations.

Specifically, the purposes of this study are:

1. To determine whether changes occur between sixth and twelfth grade with regard to educational and occupational aspirations and expectations.
2. To identify some of the factors associated with expected changes in expectations and aspirations in education and occupation of sixth and twelfth grade students.
3. To identify some of the combinations of relationships which can be indicators of expectations and aspirations

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[7]Mildred B. Smith, "Interpersonal Influences on the Occupational and Educational Aspirations and Expectations of Sixth Grade Students" (unpublished Ph.D. Dissertation, Michigan State University, 1961).

in education and occupation of sixth and twelfth grade students.

4. To identify some of the differences which may exist in those known relationships which can further identify those indicators of expectations and aspirations in education and occupation of sixth and twelfth grade students.

Background

In the school year 1959-60, a selected group of 850 sixth grade students were studied by Mildred B. Smith. Two questionnaires were developed and administered in pre- (September) and post- (May) test situations over a nine-month period to ascertain change in occupational and educational aspirations in relation to sex and socio-economic status. She also collected data with respect to student perceptions of their relationship with teachers. Some of the results of the study follow.

Associations between socio-economic status and change in occupational and educational aspirations and expectations were not clear-cut. Some significant and some low positive but not quite significant associations were disclosed.[8]

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[8] *Ibid.*, p. 104.

In general, change in students' occupational and educational aspirations were not related to socio-economic status. An exception to this occurred for change in girls' aspirations regarding years of school attendance where moderately significant associations were found.[9]

Some associations were found between students' socio-economic status and change in occupational expectations. Low positive but not quite significant associations were found to exist between change in girls' occupational expectations and socio-economic status. Lower-class boys tended to lower their occupational expectations during the sixth grade school year. These findings suggest that boys are more oriented toward occupational goals than are girls. The hypothesized association between occupational expectation change and socio-economic status was supported for boys.[10]

No significant associations were found between change in expectations regarding years of school attendance and socio-economic status. A near significant association among the girls, however, suggested that girls may be slightly more oriented toward years of school attendance goals than are boys at this age level.[11]

Highly significant associations were found between arithmetic grade expectation change and socio-economic status of students.[12]

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[9] *Ibid.*, p. 106.

[10] *Ibid.*, p. 107.

[11] *Ibid.*

[12] *Ibid.*

Significant associations were not found between change in reading grade expectations and socio-economic status.[13]

Lower class boys' "wishes" remained the same during the year, but their actual occupational goals were sometimes reduced. This finding suggests that lower class boys seemed to be realizing that they cannot muster the resources necessary to attain higher occupational positions. They, therefore, were adjusting their occupational expectations toward the norms of their social group.[14]

Moderately significant associations were found to exist between arithmetic grade change among students expressing very friendly relationships with arithmetic teachers. Significant findings were also disclosed between arithmetic grade change and relationship with arithmetic teachers among certain students.[15]

Operational Definitions

Socio-economic status (SES) is defined as the measure of the father's occupational level as classified in Hollingshead Scale. Further reference to Class I, II, and III will be in the definition made by Hollingshead (See page 64).

Occupational aspiration (OA) is defined as the response to the question, "If you were free to choose any job, what job would you choose?" (Twelfth grade questionnaire, Question #5).

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[13] *Ibid.*

[14] *Ibid.*, p. 108.

[15] *Ibid.*, p. 109.

Occupational expectation (OE) is defined as the response to the question, "What job do you expect you really will get?" (Twelfth grade questionnaire, Question #6).

Educational aspiration (EA) is defined as the response to the question, "How far would you like to go in school?" (Twelfth grade questionnaire, Question #7).

Educational expectation (EE) is defined as the response to the question, "How far in school do you expect you really will go?" (Twelfth grade questionnaire, Question #8).

Student perception of expected achievement (PEA) is defined as the response to the question, "What kind of grades do you expect you will get in math and reading?" (Sixth grade questionnaire, Question #24).

Perception of attained rank (PAR) is defined as the response to the question, "Where do you think you rank in your entire high school class in math and English?" (Twelfth grade questionnaire, Question #12).

Aspiration is referred to in this study as the student's "wish."

Expectation is referred to in this study as the student's "plan."

Living with both parents (BP) (Sixth grade questionnaire)

a. Is defined as the response of "both" to the question, "Are your parents living?" (Question #3) and;

b. Is defined as the response of "living together" to the statement, "If both parents are living." (Question #4).

Living with both parents (BP) (Twelfth grade questionnaire)

c. Is defined as the response of "mother and father" to the question, "With whom are you now living?" (Question #2) and;

d. Any other combination of "parents" will be regarded as "other."

Race - Non-white is identified as Negroes classified in Smith's data.

Teacher relationships is defined as the response to, "How you feel toward your teacher." (Sixth and Twelfth grade questionnaire).

Hypotheses

The hypotheses for this study, stated in research form are:

1-a. Changes between sixth and twelfth grade educational aspirations are positively associated with changes in occupational aspirations.

1-b. Changes between sixth and twelfth grade educational expectations are positively associated with changes in occupational expectations.

2-a. Changes in occupational aspirations are positively related to sex.

2-b. Changes in occupational expectations are positively related to sex.

2-c. Changes in educational aspirations are positively related to sex.

2-d. Changes in educational expectations are positively related to sex.

3-a. Changes in occupational aspirations are positively associated with changes in socio-economic status.

3-b. Changes in occupational expectations are positively associated with changes in socio-economic status.

3-c. Changes in educational aspirations are positively associated with changes in socio-economic status.

3-d. Changes in educational expectations are positively associated with changes in socio-economic status.

4-a. Changes in occupational aspirations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

4-b. Changes in occupational expectations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

4-c. Changes in educational aspirations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

4-d. Changes in educational expectations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

5-a. Changes in occupational aspirations are positively associated with differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade.

5-b. Changes in occupational expectations are positively associated with differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade.

5-c. Changes in educational aspirations are positively associated with differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade.

5-d. Changes in educational expectations are positively associated with differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade.

6-a. Changes in occupational aspirations are positively associated with race.

6-b. Changes in occupational expectations are positively associated with race.

6-c. Changes in educational aspirations are positively associated with race.

6-d. Changes in educational expectations are positively associated with race.

Limitations of the Study

This study is limited to the educational and occupational aspirations and expectations of a group of 408 students of the Flint Public Schools.

Information collected in the sixth grade by Smith for which no additional information was collected by this researcher will not be treated in this study. Information collected for the population for which no sixth grade information is available will not be included in this study but will be treated separately as information which may be useful to the Flint Schools. This study will only concern itself with the data for both sixth and twelfth grades and comparisons made in accordance with the hypotheses.

This study will not isolate the subsample of Smith's study of forty boys to compare data with that part of Smith's work.

If a significant relationship is found between aspiration and/or expectation and any of the variables, a cause and effect relationship by no means necessarily exists.

No follow-up of the students has been undertaken to determine if any had in fact embarked upon the direction they reported in the questionnaire. A later study of this group may be feasible for future research. It is not the purpose of the study to determine the degree of congruency between the aspiration and attainment.

The results of this study should have applicability to teachers and counselors who have an interest in understanding more about the educational and vocational goals of elementary and secondary students.

Overview of the Study

In this study, the occupational and educational aspirations and expectations are described. Changes in such aspirations and expectations

are measured and presented for further comparison to determine their significance in a six-year period and the factors which are found important as related to the data.

In Chapter II, the literature which is relevant to this study is reviewed. In Chapter III, the design of the study is presented, including the sample, the instrumentation, and the analysis techniques. The results of the analyses of the data are presented in Chapter IV, and the summary and conclusions of the study appear in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

This review is divided into five sections. First, some evidence is presented regarding the general theory of occupational choice and definitions of levels of aspiration are reviewed. The second section reviews the studies of various forces that influence educational and occupational aspirations and choice. The third section of the chapter deals with the relationship of social class, race and/or sex to aspiration. Fourth, the role of elementary and secondary schools in occupational choice is reviewed, and finally, studies which deal with the consistency of aspiration are discussed.

General Theory and Level of Aspiration

Occupations as a source of need satisfaction are of extreme importance in our culture. It may be that occupations have become so important in our culture just because so many needs are so well satisfied by them.

The need to earn a living is one of the basic needs which most of us seek to meet when we choose an occupation. However, the needs and the demands of individuals are probably as varied and as complex as the individuals themselves. If the individual sees any way in which the choice of an occupation may help to meet his needs, then his needs will affect his choice.

Hoppock's theory of occupational choice is based upon the concept of needs.

1. Occupations are chosen to meet needs.
2. The occupation that we choose is the one that we believe will best meet the needs that most concern us.
3. Needs may be intellectually perceived, or they may be only vaguely felt as attractions which draw us in certain directions. In either case, they may influence choice.
4. Occupational choice begins when we first become aware that an occupation can help to meet our needs.
5. Occupational choice improves as we become better able to anticipate how well a prospective occupation will meet our needs. Our capacity thus to anticipate depends upon our knowledge of ourselves, our knowledge of occupations, and our ability to think clearly.
6. Information about ourselves affects occupational choice by helping us to recognize what we want, and by helping us to anticipate whether or not we will be successful in collecting what the contemplated occupation offers to us.
7. Information about occupations affects occupational choice by helping us to discover the occupations that may meet our needs, and by helping us to anticipate how well satisfied we may hope to be in one occupation as compared with another.

8. Job satisfaction depends upon the extent to which the job that we hold meets the needs that we feel it should meet. The degree of satisfaction is determined by the ratio between what we have and what we want.
9. Satisfaction can result from a job which meets our needs today, or from a job which promises to meet them in the future.
10. Occupational choice is always subject to change when we believe that a change will better meet our needs.[1]

Carter's position is that vocational attitudes develop in the attempt to make a practical adjustment to environmental conditions. The external realities of the individual's familial and social situation, and his own capacities, needs, and motives, limit the possible solutions open to him.[2]

Forer's theory explains occupational choices as largely in the personality and the emotional needs of the individual, often operating unconsciously. His position indicates that vocational choice is not primarily rational or logical, but is a somewhat blind, impulsive, emotional, and automatic process and is not always subject to practical and reasonable considerations.[3]

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[1]Robert Hoppock, "A Theory of Occupational Choice," Occupational Information (McGraw-Hill Book Co., 1957), p. 78.

[2]Harold D. Carter, "Vocational Interests and Job Orientation," Applied Psychology Monograph (Stanford: Stanford University Press, 1944), p. 65.

[3]B. R. Forer, "Personality Factors in Occupational Choice," Educational and Psychological Measurement (Autumn, 1953), p. 361.

Ginsberg, Ginsburg, Axelrad, and Herma found that the process of occupational decision-making could be analyzed in terms of three developmental periods--fantasy, tentative, and realistic choices.[4] In the fantasy period (6-11 years) the youngster thinks about an occupation in terms of his wish to be an adult. He believes that he can be whatever he wants to be without regard for abilities and other requirements.

In the tentative period (12-17 years) the individual begins to recognize the problem of occupational choice. During this period, the translation is still almost exclusively in terms of subjective factors: interests, capacities, and values. Near the end of this period, it is recognized that the approach has been almost too subjective and, therefore, consider the choices as tentative, realizing that reality considerations must be made on the basis of additional experience.

The realistic period (18 plus years) finds the individual in recognition of the needs of a compromise between what he wants and the opportunities which are available to him. This compromise forces a weighing of the actual opportunities and limitations and the extent to which they will contribute to or detract from maximum work satisfaction.

This process takes place over a period of ten years or more. Since each division during adolescence is related to previous experience and has an influence on the future, the process of decision-making

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[4]E. Ginzberg, S. W. Ginsburg, S. Axelrad, and J. L. Herma, Occupational Choice, An Approach to A General Theory (New York: Columbia University Press, 1951), p. 198.

is considered to be irreversible. The quality of compromise involves the balancing of a series of subjective elements of interests, capacities and values with the opportunities and limitations of reality. This theory simplified is that vocational choices are made with greater realism with advancing age.

Super's theory of vocational development points out the many factors that must be considered as determinants of occupational behavior.

1. People differ in their abilities, interests, and personalities.
2. They are qualified, by virtue of these characteristics, each for a number of occupations.
3. Each of these occupations requires a characteristic pattern of abilities, interests, and personality traits, with tolerances wide enough, however, to allow both some variety of occupations for each individual and some variety of individuals in each occupation.
4. Vocational preferences and competencies, the situations in which people live and work, and hence their self concepts, change with time and experience, making choice and adjustment a continuous process.
5. This process may be summed up in a series of life stages characterized as those of growth, exploration, establishment, maintenance, and decline, and these stages may in

turn be subdivided into (a) the fantasy, tentative, and realistic phases of the exploratory stage, and (b) the trial and stable phases of the establishment stage.

6. The nature of the career pattern (that is, the occupational level attained and the sequence, frequency, and duration of trial and stable jobs) is determined by the individual's parental socio-economic level, mental ability, and personality characteristics, and by the opportunities to which he is exposed.
7. Development through the life stages can be guided, partly by facilitating the process of maturation of abilities and interests and partly by aiding in reality testing and in the development of the self concept.
8. The process of vocational development is essentially that of developing and implementing a self concept: it is a compromise process in which the self concept is a product of the interaction of inherited aptitudes, neural and endocrine make-up, opportunity to play various roles and evaluations of the extent to which the results of role playing meet with the approval of superiors and fellows.
9. The process of compromise between individual and social factors, between self concept and reality, is one of role playing, whether the role is played in fantasy, in the counseling interview, or in real life activities such as school classes, clubs, part-time work, and entry jobs.

10. Work satisfactions and life satisfactions depend upon the extent to which the individual finds adequate outlets for his abilities, interests, personality traits, and values; they depend upon his establishment in a type of work, a work situation, and a way of life in which he plays the kind of role which his growth and exploratory experiences have led him to consider congenial and appropriate.[5]

Small's study of a group of adolescents made a comparison of the vocational choices made by adjusted adolescent boys with those of adolescents who were disturbed. He analyzed the reality-fantasy contents of their choices. His major conclusions were:

1. The vocational choices of better adjusted boys are more realistic than those of disturbed boys.
2. The second vocational choice of better-adjusted boys is less realistic than their first choice; whereas the second choice of disturbed boys tends to be more realistic than their first choice.
3. The vocational choices of better adjusted boys are characterized by fantasies that emphasize participation in and involvement with the environment and its inhabitants and objects. The vocational choices of disturbed boys are characterized by fantasies that emphasize removal from

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[5]Donald E. Super, "A Theory of Vocational Development," American Psychologist, VIII (1953), 185.

others and the environment, self-depictation, and the acting out of impulses.[6]

These findings supported the hypothesis that individuals with different ego strengths will show differences in the role played by reality and fantasy in the making of their vocational choices.[7]

Small states that reality factors and fantasy drives operated simultaneously at all the ages studied. Small believes that a theory of vocational choice determination must take account of ego strength. If this could be held constant, it would be possible to test the relative importance of such other factors as interests, aptitutdes, family influence, and so on, with validity.[8]

Bordin states that in filling out an interest form, what is being expressed is the subject's view of himself in terms of occupational stereotypes. He considers interests a byproduct of the personality. He has found that interest test patterns will change whenever the self concept changes or there is a change in knowledge of the occupational stereotype.[9]

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[6]Leonard Small, "Personality Determinants of Vocational Choice," Psychological Monographs, No. 351 (1953), p. 21.

[7]Ibid.

[8]Ibid., p. 22.

[9]E. S. Bordin, "A Theory of Vocational Interests as Dynamic Phenomena," Educational and Psychological Measurement (1943), p. 49-66.

Darley has hypothesized that occupational interest types grow out of the development of the individual personality.[10]

Beilin studied the occupational choices of a lower socio-economic group and concluded that it is through experience that the individual comes to know reality.[11]

Considerable controversy has been provoked by Ginzberg's theory of three developmental periods--fantasy, tentative, and realistic choices.

Super's theory accepts the "fantasy, tentative, and realistic phases" and adds "trial and stable phases." Small, however, reported that he found no evidence of a developmental progression toward greater realism of vocational choice, but much evidence that reality factors and fantasy drives operate simultaneously at all ages in the selection of a vocational goal.

An important question is how central is the tendency; how many persons do go through Ginzberg's three periods or something similar, and how many do not?

It seems obvious that some individuals seem never to have emerged from the fantasy stage. Even after they have found a job and have earned a living, they regard the job as only temporary, but for some what looked to others like fantasy becomes reality.

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[10] J. G. Darley, Relationships Among the Primary Mental Abilities Tests, Selected Achievement Measures, Personality Tests, and Tests of Vocational Interests (University of Minnesota, Studies in Higher Education, 1941), pp. 198-99.

[11] H. Beilin, "Factors Affecting Occupational Choices in a Lower Socio-Economic Group" (unpublished Ph.D. Dissertation, Teachers College, Columbia University, New York, 1952).

Small suggested that ego strengths of a person at any given age determines the extent to which he uses fantasy choices to bolster his ego and that reversals from reality to fantasy choices take place.

Some individuals seem to go straight to a realistic choice at the first attempt. Most of us know at least one person who is successful and satisfied in an occupation which he chose as a small child.

It should not be expected that everyone would make a wise choice at the first attempt, nor should it be expected that some young persons have unrealistic choices and expect some of these choices to change with time.

Small has expressed some difference with Ginzberg regarding the fantasy period in which the youngster thinks about an occupation in terms of his wish to be an adult. Small's findings that "fantasy drives operate simultaneously at all ages" suggests that fantasy may be chosen in an attempt to meet other needs as well.

Ginzberg's conclusion that "the process of decision-making is largely irreversible," has created other concerns. Some occupations require a long period of professional training before admission to practice. A person who has completed a substantial part of such training usually cannot change his objective to a wholly different field without considerable loss. Considerable rewards for long experience are offered other occupations; a person who is reaping such a harvest usually cannot change his occupation without a sacrifice.

However, not all occupations require or reward training or experience. A large number of occupations require no formal education, no experience, and not more than one week of training on the job. Sometimes earnings can often be increased by changing jobs. Perhaps it was intended

that Ginsberg's theory of irreversibility should apply only to those occupations in which large amounts of training is required. It does serve to remind us of the great importance of education which potentially restricts some occupational choices and yet is too valuable to discard.

Combs and Snygg suggest that occasionally people with unrealistic goals are unable to accept their own limitations and continue to strive for impossible objectives for most of their lives.[12]

Many writers state that with a more accurate self concept people can and do select more realistic goals for themselves.[13] Their levels of aspiration are more likely to achieve them. And, of course, the more often goals are achieved, the more positively they feel about self and the more acceptance of and openness to experience become possible for them.

Frank defines level of aspiration as "the level of future performance in a familiar task which an individual explicitly undertakes to reach."[14]

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[12]Arthur W. Combs and Donald Snygg, Individual Behavior: A Perceptual Approach to Behavior (Harper and Row, Publishers, 1949, 2nd Edition, 1959), p. 112.

[13]Irving L. Child and John W. M. Whiting, "Determinants of Level of Aspiration: Evidence for Everyday Life," Journal of Abnormal and Social Psychology, 44 (1949), 393-414; W. J. Cohen, "College Aspirations and the Future Demand for Higher Education," Higher Education, 19 (October, 1962), 4-10; Edgar Z. Friedenberg and Julius A. Roth, Self-Perception in the University: A Study of Successful and Unsuccessful Graduate Students (Chicago: University of Chicago Press, 1954), p. 102.

[14]J. D. Frank, "Some Psychological Determinants of the Level of Aspiration," American Journal of Psychology, 47 (1935), 285-93.

Allport's definition of level of aspiration is when a person generally places his goal at a level not so far above his abilities that he will suffer embarrassment and humiliation if he fails, nor so far below his abilities that he will feel ineffectual and cheap upon accomplishing the task. He usually undertakes that which will keep his self-esteem at a maximum. It is true that some people prefer to make certain of success, and accordingly undertake no more than they can surely achieve. Others, more characteristically daring, bite off more than they can chew, maintaining their self-esteem either through this act of courage or through the closeness with which their accomplishment corresponds to their ambition. However, in most cases, one's level of aspiration betrays in some way the "upward tendency of the ego."[15]

Lewin states that the level of aspiration will be raised and lowered respectively as the academic performance reaches or does not reach the level of aspiration. He uses as a definition, "that task chosen as a goal for the next action,"[16] Lewin mentions four factors as determinants of the level of aspiration: (1) the degree of success and failure; (2) social factors; (3) knowledge of group standards; and (4) degree of realistic judgment about one's own ability.[17]

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[15]Gordon W. Allport, Personality: A Psychological Interpretation (New York: Henry Holt and Company, 1937), p. 169.

[16]Kurt Lewin and others, "Level of Aspiration," Personality and Behavior Disorders, Vol. 1 (New York: Ronald Press, 1944), 335.

[17]Ibid.

Crow and Crow suggest that individuals attain good adjustment through the setting and meeting of goals. "These goals and the extent to which they are met differ widely among individuals. Successful goal attainment depends on a background of appropriate experience, and is inspired by the fulfillment of a felt need, want, urge, or desire. The goals that children set for themselves may have temporary significance, or they may represent the completion of more remote projects or the realization of deep-seated and permanent interests and ambitions. The demands made upon an individual and what may be expected of him by members of his family, friends, or associates exert an impact on his level of aspiration."[18]

The Dictionary of Education defines the level of aspiration as "the level of performance or the goals that a person (or a group) desires or hopes to reach in a specified activity."[19]

The level of aspiration is defined by Wattenberg as "the standard of performance an individual expects of himself." He suggests that the ideal situation for normal children is for their level of aspiration to be just high enough so that they have to put forth effort to reach it, and yet for them to achieve success.[20]

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[18]Lester D. Crow and Alice Crow, Child Development and Adjustment (New York: The MacMillan Company, 1962), p. 427.

[19]C. V. Good (ed.), Dictionary of Education (New York: McGraw-Hill Book Co., Inc., 1959), p. 42.

[20]William W. Wattenberg, "Levels of Aspiration," Michigan Education Journal, 37 (November, 1959), 231.

Sears discovered that the way the child reacted to the level of aspiration situation was determined by his previous experience with success or failure. He concluded that "self-confident children react to the level of aspiration situation in similar ways, whereas unsuccessful children lacking in confidence, may adopt a number of different behavior techniques."[21]

Hilgard points out that success is related to goals in four ways: (1) the goal may be reached; (2) the goal may be missed, but not completely failed; (3) partial success felt through the improvement made; (4) satisfaction achieved through the setting of desirable goals.[22]

Child and Whiting offer the following five results of their study.

1. Failure has a much more varied effect on level of aspiration than does success.
2. Success generally leads to a raising of the level of aspiration, and failure to a lowering.
3. Failure is more likely than success to lead to withdrawal in the form of avoidance of setting a level of aspiration.
4. The stronger the success, the greater is the probability of a rise in level of aspiration; the stronger the failure, the greater is the probability of a lowering.

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[21]Pauline S. Sears, "Levels of Aspiration in Academically Successful and Unsuccessful Children," Journal of Abnormal and Social Psychology, 35 (Winter, 1940), 498, 536.

[22]Ernest R. Hilgard, "Success in Relation to Level of Aspiration," School and Society, 55 (April, 1942), 423-428.

5. Shifts in level of aspirations are in part a function of changes in the subject's confidence in his ability to attain goals.[23]

Cohen lists the circumstances affecting parents' educational expectations for children still in school.

1. Education of head of spend unit.
2. Income.
3. Wife's education.
4. Attitude toward hard work and need-achievement score.
5. Number of living children in family.
6. Difference in education of head and his father.
7. Age of head at birth of eldest living child.
8. Occupation of head.
9. Ratio of college students in the community to population.
10. Migration of head from rural to urban community.
11. Movement of head out of deep south.
12. Age of eldest boy or girls 20 or under.
13. Religious preference and church attendance of head.
14. Race of head.[24]

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[23]Child and Whiting, loc. cit.

[24]Cohen, loc. cit.

Dynes found that "unsatisfactory interpersonal relationships in the family of orientation were significantly related to high aspirational levels and satisfactory relationships were related to lower aspirational levels."[25] Differences in aspiration are more closely related to subtle interpersonal factors than to overt parental pressures.

Herriott presented a 30-minute precoded questionnaire to 1489 adolescents in one public high school in Western Massachusetts. His analysis indicated a relationship between the level of expectation the student perceived others hold for him, educational aspirations, and the level of self assessment.[26]

The level of aspiration did not vary significantly among boys from the sixth to the eighth grade according to Walter Marzolf.[27]

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[25]Russell R. Dynes, Alfred C. Clarke, and Simon Dinitz, "Levels of Occupational Aspirations: Some Aspects of Family Experience as a Variable," American Sociological Review, 21 (April, 1956), 212-215.

[26]Herriott, loc. cit.

[27]L. M. Walter and S. S. Marzolf, "Relation of Sex, Age, and School Achievement to Levels of Aspiration," Journal of Educational Psychology, 42 (May, 1951), 285-92.

The level of aspiration of academically successful and unsuccessful high school students were studied by J. L. Byers. He concluded that past academic performance tended to help determine the level of academic aspiration.[28]

Festinger's study of college students maintained that changes in the level of aspiration can be explained by whether an individual's performance reaches or does not reach the level of aspiration. In an experiment with college students, his conclusion was that after the subjects attained their level of aspiration, fifty-one percent raised their aspiration, forty-one percent stayed the same, and eight percent lowered their aspiration. After another group had not attained their level of aspiration, seven percent raised their aspiration, twenty-nine percent stayed the same, and sixty-four percent lowered their aspiration.[29]

Influence of Choice

There are few studies which indicate that factors within the family influence levels of occupational and educational aspirations. It is reported that the degree to which the youth's parents are ambitious for his success influences his level of occupational and educational

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[28]Joe J. Byers, "A Study of the Levels of Aspiration of Academically Successful and Unsuccessful High School Students," California Journal of Educational Research, 13 (May, 1962), 209-216.

[29]Leon Festinger, "Theoretical Interpretation of Shifts in Level of Aspiration," Psychological Review, 49 (May, 1942), 235-50.

aspiration.[30] Differences in levels of occupational and educational aspirations may be attributed to differences in socialization. The family is one source of such differences.

Parent Influence

Several writers report that levels of occupational and educational aspirations are positively correlated with the position of the family in the class system.[31]

Table 2.1 shows the results of a compilation of several studies. Peters' sample included over 700 high school seniors in Missouri. Kaplan's sample consisted of 282 replies to a questionnaire sent to graduates of the University of Idaho. Endicott studied 543 boys and 580 girls in high school in 1931. The composite showed that parents were generally rated first in influencing vocational choice.

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[30] A. O. Haller and C. E. Butterworth, "Peer Influences on Levels of Occupational and Educational Aspirations," Social Forces (May, 1960), p. 289.

[31] Joseph A. Kahl, "Educational and Occupational Aspirations of 'Common Man' Boys," Harvard Educational Review, 23 (1953), 186-203; Raymond A. Mulligan, "Socio-Economic Background and College Enrollment," American Sociological Review, 16 (April, 1952), 188-196; Leonard Reissman, "Levels of Aspiration and Social Class," American Sociological Review, 18 (November, 1953), 233-42; William H. Sewell, Archie O. Haller, and Murray A. Straus, "Social Class and Educational and Occupational Aspirations," American Sociological Review, 22 (February, 1957), 67-73.

TABLE 2.1

INFLUENCES AFFECTING VOCATIONAL CHOICE: RANK ORDER (COMPILED FROM PETERS: ENDICOTT: KAPLAN)[32]

	Rank Order				
			Endicott		
	Peters	Kaplan	Boys	Girls	Both
Parents	1		3	1	1
Other relatives	4	2			
Friends or other students	2		7	7	7
Teachers	3	5	6	5	6
People in the vocation		3	1	2	2
Books or magazines			2	6	3
Own abilities			4	4	4
School subjects		1	5	3	5
Tried and liked		4			
Best school marks			8	8	8

Erickson found that no support was in evidence that parents have less ability than friends to influence their children's academic performance. The family-held academic expectations play a major role in the performance of the student. For tenth grade students, parents are most likely to be the significant others for academic performance.[33]

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[32]Anne Roe, The Psychology of Occupations (New York: John Wiley and Sons, Inc., 1956), p. 257; F. S. Endicott, "Factors Influencing High School Students in the Choice of a Vocation," Vocational Guidance Magazine, 10 (1931), 99-101; O. Kaplan, "Age and Vocational Choice," Journal of Genetical Psychology, 68 (1946), 131-34; E. F. Peters, "Factors Which Contribute to Youth's Vocational Choice," Journal of Applied Psychology, 25 (1941), 428-430.

[33]Edsel L. Erickson, "A Study of the Normative Influences of Parents and Friends Upon Academic Achievement" (unpublished Ph.D. Dissertation, Michigan State University, 1965).

Lowe in a study of the educational and occupational aspirations of high school seniors, concluded that the parents tend to be the chief influence on the educational aspirations of the students. No dominant influence on the occupational aspirations was found.[34]

Kahl also studied the educational and occupational aspirations of high school students. His sample was primarily from the lower socio-economic area. His conclusion was that parental pressure was a significant factor in determining educational and occupational aspirations. He also indicated that some children may be atypical for their social class in spite of attitudes of their parents.[35]

Middle-class fathers wanted their sons to have a college education according to Aberle and Naegele. The expectations of the fathers suggest that they consider a college education much more important for the occupational success of boys than of girls although a majority of the fathers planned for their daughters to attend college also.[36]

Berleson and Steiner indicate that in the United States, a person's occupational choice is less a single decision than a series of decisions made mainly during his teens. In general, the choice is made earlier by

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[34]J. L. Lowe, "Educational and Occupational Aspirations of High School Seniors " (unpublished Ph.D. Dissertation, University of Missouri, 1962).

[35]Kahl, op. cit., p. 186.

[36]David F. Aberle and K. D. Naegele, "Middle-Class Fathers' Occupational Role and Attitudes Toward Children," American Journal of Orthopsychiatry, 22 (1952), 366-78.

the brighter young people than by the less bright, and the choice tends to follow the father's occupation, especially in the upper classes.[37] Usually the sons of manual workers enter the job market as manual workers and that only on the basis of a college education can they enter at a non-manual worker position.

Centers collected occupational data for about 650 men and their fathers, classifying them in terms of level on an occupational scale: large business, professional, small business, white collar, skilled manual work, semi-skilled work, unskilled work. Each man's occupation was recorded by the number of steps above or below his father's occupation that his own was placed. His figures gave 58 to 76 percent of the sons' occupations at the fathers' level or one adjacent to it.[38]

Joseph A. Kahl tabulated the father's occupation of 3348 boys who expected to go to college. He discovered that in the highest occupational group, 56 percent of boys in the lowest IQ fifth expected to go to college. In the lowest occupational group only nine percent of boys in the lowest IQ fifth expected to attend college. The highest father occupational group showed 89 percent of boys in the highest IQ fifth had college expectations, while only 29 percent of boys in the same group whose fathers were in the lowest occupations had such expectations.[39]

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[37]Bernard Berelson and Gary A. Steiner, Human Behavior: An Inventory of Scientific Findings (Harcourt, Brace & World, Inc., 1964), p. 404.

[38]R. Centers, "Occupational Mobility of Urban Occupational Strata," American Sociological Review, 13 (1948), 197-203.

[39]Joseph A. Kahl, The American Class Structure (Holt, Rinehart and Winston, 1959), p. 53.

Stouffer says that parental attitudes toward school and parental educational levels are often decisive in college attendance, and that white collar workers are more likely than blue collar workers with similar (or even higher) incomes to send their children to college.[40]

The NEA Research Bulletin indicates that the educational attainment of the family head also appears to have a strong influence on the education of the children (Table 2.2).

Sexton showed that more merit scholarships are awarded children of professional workers than those of manual workers (Table 2.3).[41]

Realism of Choice

Hollingshead and Stephenson found that children tend to name the occupation of their parents or of their parents' friends as the occupation they would like to have when they are adults. While this was true of the upper- and upper-middle class children, Hollingshead found that the lower-class children's occupational choices were in sharp contrast. He reported that forty-one percent of them had no idea at all about their future vocation, or they listed highly romantic, dramatic or freak occupations, such as wild animal trainers or jugglers in a carnival.[42]

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[40]Samuel A. Stouffer, "The Student--Problems Related to the Use of Academic Ability," The Identification and Education of the Academically Talented Student in the American Secondary School (National Education Association, The Conference Report, February, 1958), p. 158.

[41]Patricia Sexton, Education and Income (New York: The Viking Press, Inc., 1961), p. 161.

[42]August B. Hollingshead, Elmtown's Youth (New York: J. Wiley Publishing Company, 1949), p. 78; Richard M. Stephenson, "Mobility Orientation and Stratification: A Study of One Thousand Ninth Graders " (unpublished Ph.D. Dissertation, Columbia University, 1956).

TABLE 2.2

EDUCATIONAL ATTAINMENT OF FATHERS AND SONS[43]

Father's educational attainment	Years of school completed by sons, age 20-24 years, March, 1962				
	Less than 8 years	8 years of elementary to 3 years of high school	4 years of high school	College	
				1-3 years	4 years or more
Less than 8 years	14.4%	39.3%	33.3%	10.9%	2.4%
8 years of elementary to 3 years of high school . . .	3.8	26.9	42.0	21.2	6.1
4 years of high school.	0.6	12.2	43.4	34.3	9.6
1 year or more of college	. . .	5.5	19.8	55.3	19.4

[43]National Education Association, NEA Research Bulletin, Vol. 44, No. 3, October, 1966, p. 94; U. S. Department of Commerce, Bureau of the Census, Educational Change in a Generation, March, 1962. Current Population Reports, Population Characteristics, Series P-20, No. 132. (Washington, D.C.: Government Printing Office, September 22, 1964), p. 9.

TABLE 2.3

WORKERS REQUIRED TO PRODUCE MERIT SCHOLARS[44]

MAJOR U.S. CENSUS OCCUPATIONAL GROUPS, RANKED IN ORDER OF PRODUCTIVITY OF MERIT SCHOLARS	NUMBER OF SCHOLARS REPORTING THIS GROUP AS FATHER'S OCCUPATION, 1956	NUMBER OF MALE WORKERS REQUIRED TO PRODUCE ONE MERIT SCHOLAR
Professional, technical, kindred workers	234	12,672
Managers, official proprietors	115	37,153
Sales workers	34	77,632
Clerical and kindred	28	95,380
Craftmen, foremen, and kindred	56	140,112
Operatives and kindred	27	313,731
Service workers	7	366,270
Farmers, farm managers, laborers, and foremen	16	389,643
Laborers, except farm and mine	1	3,581,370

[44]Sexton, loc. cit.

A study by Nauss showed that male college freshmen of high ability are not different from those of near high ability in accuracy of self-concept and adequacy of occupational planning more when accuracy of self-concept and adequacy of occupational planning are considered together. Both groups were determined to be realistic in selecting a level of occupational choice appropriate to their occupational ability.[45]

Kinnane used a sample of twelfth grade boys in a study of aspirations. He found that the realism of their aspirations tended to be positively related to favorable self attitudes.[46]

Korner felt that unrealistic vocational goals stem from such outside sources as encouragement by school personnel or family pressure, or from emotional factors within the person. She indicates that the origin is usually multiple and that motivation is mixed.[47] Lewin has stressed the point that when anxiety over social status is a major determinant of occupational choice (as it too frequently is in our society) inappropriate goals are likely to be selected.[48]

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[45]A. H. Nauss, "Scholastic Ability, Self-Concept, and Occupational Plans," Dissertation Abstracts, 21 (1961), 2596.

[46]John F. Kinnane, "The Relationship of Personal Adjustment to Realism to Expressed Vocational Preference," Unpublished Ph.D. Dissertation, Columbia University, 1958. (Abstracted in Dissertation Abstracts, Vol. XIX, No. 1, 1958, p. 172).

[47]A. G. Korner, "Origin of Impractical or Unrealistic Vocational Goals," Journal of Consulting Psychology, 10 (1946), 328-334.

[48]Lewin, op. cit., p. 337.

Trow asked 161 boys and 169 girls, in grades 8, 10, and 12, in Detroit to indicate what vocations they considered to be: (1) probable; (2) possible; and (3) favorite fantasy for themselves. He compared the results with the census data for their city. For almost half of the subjects there was found no discrepancy between what they would probably do and what they would like to do. He concluded that the children are on the whole realistic in their vocational outlook and generally satisfied with their occupational possibilities.[49]

Class and Families

Sexton reports that children tend to be cast in the image of their parents and that a child is very likely to become what his father is. She identifies this as "social class" and says:

> The position which families occupy in society and the very strong tendency for children to be molded into the same position by influences in the home, the community, and the school.[50]

She makes a strong point for the fact that family income is one index to social class. A "lower-class" family will tend to have a low income, lower status (and lower-paying) occupations, poor housing, and low educational levels.

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[49]W. D. Trow, "Fantasy and Vocational Choice," Occupation, 20 (1941), 89-93.

[50]Sexton, op. cit., p. 11.

The October, 1966 NEA Research Bulletin illustrates a strong positive relationship exists between education and income as found in the chart of the median years of school completed by the head of the family and family income.

Berleson and Steiner indicate that if upward mobility occurs, it is most directly influenced by one's experience within the family.

> . . . stress in early training for independence and responsibility, especially when coupled with the capacity to defer gratifications and to consider people instrumentally, the more desire for upward mobility.
>
> . . . the more the child is involved with his parents or other adults and the less with his peers, the more likely his upward mobility. . . the smaller the family, the more likely the mobility of the children.[51]

However, at the other end of the scale the lower-class children get less encouragement from their families to continue their education. In the case of lower-class youths it is educational achievement which provides the greatest opportunities for upward mobility.

A number of studies show a positive correlation between the youth's levels of educational and occupational prestige status aspirations on the one hand and various measures of the social status of the family.[52]

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[51]Berleson and Steiner, op. cit., p. 471.

[52]Carter, op. cit., p. 50; Kahl, op. cit., p. 98; Robert Kroger and C. M. Louttit, "Influence of Father's Occupation on the Vocational Choices of High School Boys," Journal of Applied Psychology, 19 (April, 1935), 203; J. Richard Porter, "Predicting Vocational Plans of High School Senior Boys," Personnel and Guidance Journal, 33 (December, 1954), 215-218; Sewell, Haller and Straus, op. cit., p. 68.

This correlation has been attributed to educational and occupational achievement values that are presumed to be directly influenced by the family's position in the status structure. Or said differently, the educational and occupational values specific to the status milieu in which one is reared influences to a large degree one's achievement motivation.

Lowe, studying the educational aspirations of high school seniors, found that the proportion of seniors aspiring to enter higher vocations increased as the socio-economic status of the parents rose. Students at higher status levels received higher grades and participated more in school activities than did students of lower socio-economic categories. Chief recipients of college degrees were those whose fathers were in the white collar classification.

Parents at all levels were permissive toward specific vocations for their children although the parents in the white collar category planned for their children to enter white collar occupations. Parents in the higher status positions in larger proportions took a greater interest in school activities and encouraged their offsprings to acquire higher education than the parents at lower levels.[53]

Stephenson's findings show that the higher the social class position of the parents, the larger was the proportion of children who aspired to the high occupational position. He also found that large

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[53]Lowe, op. cit.

proportions of children whose parents were in the lower-class also aspired to the high occupation position.[54] However, these lower-class ninth graders later adjusted their plans to the norms of their social group tending to plan not to go to college and choose the industrial arts and general curricula instead.

Knupfer's study of low status people which he calls the "underdog" shows low levels of aspiration for that group . . . "he is also limited in what he permits himself to wish for." He found that closely linked with economic underprivilege were habits of submission, little access to sources of information, lack of verbal facility, and an unwillingness to participate in middle-class culture which she termed psychological underprivilege.[55]

Mulligan, in a study of male students at Indiana University, stratified his sample according to father's occupation. He suggests that talented students not attending college whose fathers are in farming, a semi-skilled or unskilled occupation is due, on the whole, to cultural factors rather than to purely economic factors. He concluded that the chance a child has of attending college increased as the father's occupational status increased.[56]

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[54]Richard M. Stephenson, "Mobility Orientation and Stratification: A Study of One Thousand Ninth Graders," Unpublished Ph.D. Dissertation, Columbia University, 1956. (Abstracted in Dissertation Abstracts, Vol. XVI, No. 1, 1956, p. 2478).

[55]Genevieve Knupfer, "Portrait of the Underdog," Public Opinion Quarterly (Spring, 1947), p. 103-114.

[56]Raymond A. Mulligan, "Socio-Economic Background of College Enrollment," American Sociological Review, 16 (April, 1951), 188-196.

Fink studied 521 eighth and ninth graders and re-examined the group when they became sixteen years old. The results tend to give support to current literature regarding the GPA, IQ, and over ageness of school dropouts and seem to add new dimensions by showing the significance of occupational aspirations and parental educational aspirations in school holding power. However, the claimed importance of a pupil's socio-economic status in determining school persistence seems to be denied by the study.[57]

Kahl investigated the educational and occupational aspirations of a sub-group of 24 high school students whose IQ scores were high enough for college work and primarily were from the lower socio-economic families. He concluded that parental pressure was a significant factor in determining educational and occupational aspirations. He further indicated that some children may be atypical for their social class in spite of the less encouraging attitudes of their parents.[58]

Contrary to the previous findings, Empey's study indicates that the data do not support the hypothesis that high school male seniors from lower strata are more inclined than those from middle- and upper strata to reduce their occupational aspirations significantly when faced with the

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[57]Donald D. Fink, "The Efficiency of Certain Criteria in Predicting School Drop Outs," Educational Dictionary, 23 (1962), 1555.

[58]Kahl, op. cit., p. 200.

necessity of choosing between their preferred and anticipated occupations.[59]

These findings do not support two important schools of thought regarding lower class youth: (1) lower-class youth have limited their occupational aspirations to the class horizon; or (2) that lower-class youth did not have the same lofty occupational aspirations as those from upper strata. Lower-class youth did aspire to get ahead and did anticipate higher occupational stratuses than their fathers.

Binder suggests that her study shows the self expectations were not significantly related to socio-economic status, father's education, or mother's education. Binder concluded that non-intellective factors show great potential as contributors to the explanation of variation in the grade point average. "Together with knowledge of the academic aptitude of the individual, the use of these non-intellective factors might improve the predictive power of those concerned with the academic progress and future of high school youth."[60]

Smith found that changes in students' educational and occupational aspirations were not related to socio-economic status.[61]

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[59]LaMar T. Empey, "Social Class and Occupational Aspirations," American Sociological Review, 21 (1956), 703.

[60]Dorothy M. Binder, "Relationships Among Self-Expectations, Self-Concept, and Academic Achievement" (unpublished Ph.D. Dissertation, University of Wisconsin, 1965), p. 109.

[61]N. Smith, "An Empirical Scale of Prestige Status of Occupations," American Sociological Review (1943-48), p. 185.

Nicklas studied the educational aspirations of a sample of poorly achieving high school students and found that they were not significantly lower than a sample of higher schieving students. The parents of these students tended to have higher educational and vocational aspirations and held marks in more high regard than their children.[62]

The Race Question

In the urban communities it is generally conceded that lower-class status is usually synonymous with the Negro race.

Sexton indicates the weight of evidence seems to be that nowhere in a stratified society are equal opportunities open to all people. Opportunities are usually open to students or closed to them in accordance with their social class position; but adds that today the Negro community is becoming increasingly aware of its rights and particularly its rights to equal educational opportunities.[63]

Kvaraceus reminds us that Negro youth are responding to their caste position and selecting lower goals and lower standards for themselves, even when their family, socio-economic position, and innate

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[62]J. M. Nicklas, "Aspirations of Poorly Achieving High School Pupils in a Predominately College Preparatory School," Unpublished Ph.D. Dissertation, University of Washington, 1961. (Abstracted in Dissertation Abstracts, Vol. XXII, No. 10, 1962, p. 3551).

[63]Sexton, op. cit., p. 16-17.

capacities would indicate higher achievement motivation. Negro youth are almost totally ignorant of the vocational and educational opportunities available in the community.[64]

Patterson's article presents a clear introduction to the problems of employment of Negro youth as viewed through their eyes. While they are largely still in school, job opportunities available to them are speculated upon, recognizing that "additional education will be of small value for the kinds of jobs they will be forced to take."[65] For others the route of upward mobility is via a college education. Patricia Sexton's description of the "slum child" in her introduction to Education and Income indicates a truism in the following:

> With luck the slum child may manage to hang on in college. When he does, he may finish teachers' college or the school of social work, and with his degree move up into the ranks of the lowest paid professionals in the field. If this happens, he will be among the relatively few ones in his class.[66]

She continues, "The importance or possibility of a continuing education is seldom even mentioned in lower income schools. Upper income students usually know about college through their family or friends, and they are driven to perform well in school in order to win this coveted prize, a college education. Lower income students do not compete because they

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[64]William C. Kvaraceus (ed.), Negro Self-Concept (New York: McGraw-Hill, Inc., 1965), p. 56.

[65]Frederick D. Patterson, "Negro Youth," Values and Ideals of American Youth (New York: Columbia University Press, 1961), p. 219.

[66]Sexton, op. cit., p. 1.

usually do not know what the prize is, what it is worth, or how one goes about getting it . . . ." Their parents and friends, typically, have not been to college or even inside a college classroom. Thus, they cannot give directions or show them the way. The upper-income student, on the other hand, learns the way from his parents, who have usually been there before. He is headed in the right direction early in his life, equipped with a rather complete blueprint of the route to school success. If boys and girls cannot go beyond high school, except under most unusual circumstances, they cannot make a free choice of occupations because there are many occupations which require a higher education. As yet, it is not literally true that anyone who wishes to can get a college education in this country.[67]

Sex

Walter and Marzolf observe that the school is most likely to reward feminine virtues of docility and submissiveness. They continue by suggesting that boys may generally have more of their behavior go unrewarded, by more frequently frustrated, and consequently set higher aspiration levels.[68]

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[67] Sexton, loc. cit.

[68] L. M. Walter and S. S. Marzolf, "Relation of Sex, Age, and School Achievement to Levels of Aspiration," Journal of Educational Psychology, 42 (May, 1951), 285-92.

Sexton reported that in Big City three times as many boys as girls are failed and that failures are mostly found in lower income groups. She reports that the superiority of girls in school, however, does not always exist in upper income schools, where boys tend to be highly motivated to do well in school.[69]

Tenenbaum found that girls' attitudes toward school were more favorable than boys' among children in grades six to eight. Children in general took a serious attitude toward school.[70]

Lehman and Witty gave a Vocational Attitude Quiz to 26,878 school children aged 8 to 18. In a list of 200 occupations the children checked those which they would be willing to engage in as a life work. Both sexes and all ages made their choices for the following reasons, in order: money, social approval, and easy life. Girls chose the more sedentary and aesthetic occupations while the boys chose the movement and travel occupations. Boys also more often preferred occupations involving giving commands, and their attitudes changed more with age than did those of girls.[71]

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[69]Sexton, op. cit., p. 81.

[70]Samuel Tenenbaum, "Uncontrolled Expression of Children's Attitudes Toward School," Elementary School Journal, 40 (May, 1940), 670-678.

[71]H. C. Lehman and P. A. Witty, "A Study of Vocational Attitudes in Relation to Pubescence," American Journal of Psychology, 43 (1931), 93-101.

Bordua generally found early school superiority of girls might be a background factor that would help account for the striking fact that our female respondents are more likely to be college oriented to all socio-economic levels given medium to high levels of parental stress. He also suggests that at lower middle-upper lower class levels many parents begin to emphasize college only after their sons have shown evidence of good performance at school.[72]

Grigg and Middleton studied the occupational aspirations of 26,313 white ninth grade students in Florida. He found a positive association between size of community of orientation and occupational aspirations for the males but not females (because of housewife choices). The higher aspirations of urban males over those reared in rural areas also suggest the reason for greater mobility of the urban bred youth.[73]

Today the woman who is not running a home is increasingly likely to work, and not only for economic reasons. After both world wars many women who went to work were reluctant to return to a non-working status. The pay check has proved to be a minor incentive as compared to the dissatisfaction of the woman whose only function is the care of a small home, without children.

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[72]David J. Bordua, "Educational Aspirations and Parental Stress on College," Social Forces, 38 (March, 1960), 262.

[73]Charles M. Grigg and Russell Middleton, "Community of Orientation and Occupational Aspirations of Ninth Grade Students," Social Forces (May, 1960), 303-8.

Studies by Manson,[74] and by Hogg,[75] with independently developed occupational scales indicate that generally women select their occupations more casually than men do since for so many of them the occupation is not of primary importance.

The job of housewife-mother encompasses in one person occupations which separately would be classified in many levels. There seems to be no other occupation requiring as many different kinds of skills or as many different kinds of decisions. However, it is the employed woman who is studied on occupational studies.

Choices While in Elementary and Secondary Schools

Concerning future occupations, Miles found that the vocational preference of sixth grade boys tended to reflect the occupational status of their group. Lower status boys chose manual, protective or service jobs, while the higher status boys chose professional jobs.[76]

Colleges and comprehensive high schools are often chosen in light of career objectives. It is natural for parents and teachers to be concerned about the student who must make these choices before he knows what his occupational objective is to be.

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[74] G. W. Manson, "Occupational Interests and Personality Requirements of Women in Business and Professions," Michigan Business Studies, Vol. 3, No. 2 (1931), 231.

[75] M. I. Hogg, "Occupational Interests of Women," Personnel Journal, 6 (1928), 331-337.

[76] Logan Troy Miles, "Children's Preferences for School and Out of School Activities" (unpublished Ed.D. Dissertation, University of California, 1954).

Seventeen is about the age at which Strong has found the scores on his vocational interest blank beginning to show signs of stability.[77] If a final choice is not made by the age of seventeen, Hoppock cautions that there is nothing unusual about the child's indecision.[78]

Weigand demonstrated that among his sample of high school students, those who expressed definite goal aspirations received higher grade point averages than those whose aspirations were indefinite.[79]

Students usually enter high school when they are fourteen or fifteen. Sexton has suggested that at fourteen most students know very little about college or about the occupational possibilities open to them. They are too young to make an informed and free choice of curriculums; as a consequence the choice is very heavily influenced, if not actually made in most cases, by teachers and counselors, and in upper income groups especially by parents. Curriculum assignments are often made on the basis of social class factors. Boys from working class homes who fail to make really good grades in the seventh and eighth grades are seldom advised to take a college prep course. While this is not equally true of boys from white collar homes.[80]

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[77]E. K. Strong, Vocational Interests of Men and Women (Stanford: Stanford University Press, California, 1943).

[78]Hoppock, op. cit., p. 77.

[79]G. Weigand, "Goal Aspiration and Academic Success," Personnel and Guidance Journal, 31 (April, 1953), 458-61.

[80]Sexton, op. cit., p. 175.

She further recommends that the educational and occupational aspirations of lower income students should be raised by convincing them that they can and should continue to go to school--even into college. Students should be convinced that education can be extremely useful and valuable to them in later life, and that advanced levels of education are usually necessary to qualify for many of the rewards of adult life (higher income, easier and more rewarding work, greater prestige, more security, broader participation in social culture, and intellectual life, etc.[81]

Heath's study showed that aspiration levels are tied in a positive, but differential manner, to vocations. His findings further emphasized the importance of additional formal training after high school. Those respondents who did not experience additional schooling after twelfth grade were largely destined for low status, mostly unskilled occupations.[82]

In Sandeen's study the college aspirers had significantly higher group mean scores on self concept of ability, perceived parental evaluation, grade point average, and social class than the non-college aspirers and the disparity group. This relationship held in each grade level

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[81]Sexton, op. cit., p. 176.

[82]Brian Reginald G. Heath, "The Prediction of Occupational Status for Non-College Going High School Graduates," (unpublished Doctoral Dissertation, University of Wisconsin, 1965).

from seven to ten. The study also indicated that the students' aspirations for college were fairly stable over the four-year period.[83]

Consistency of Choice and Aspiration

Hoppock suggests that choices may change as frequently as a person's awareness of his needs change or as frequently as he discovers that another occupation might better meet his needs. Some persons choose early and never change--like Mozart who was playing the piano at the age of four and composing at seven. Some persons never do find an occupation which meets enough of their needs to give them any real feeling of satisfaction.[84]

Porter found a high consistency between what high school senior boys prefer to do, what they plan to do, and what they actually begin to do six months later. A vocational plan was found to be a better indication of what the person will actually do than vocational preference. Planned occupations were not found to be on a higher average prestige level than those of their fathers.[85]

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[83]Carl Arthur Sandeen, "Aspirations for College Among Male Secondary School Students From Seventh to Tenth Grade " (unpublished Doctoral Dissertation, Michigan State University, 1965).

[84]Hoppock, op. cit., p. 82.

[85]Porter, op. cit., p. 69.

Rice studied changes in the levels of educational and occupational aspirations between the tenth and twelfth grades of capable students.[86] Over fifty percent of the students remained stable in their aspirations over two-year period. The students who fluctuated in their aspirations tended to perform not as well academically and were from lower socio-economic status groups than those who remained constant in the educational and occupational aspiration levels.

Walter and Marzolf found that the level of aspiration did not vary significantly among boys from the sixth to the eighth grade. They also noted that the level of scholastic achievement had almost no effect upon level of aspirations.[87]

Schmidt and Rothney found in a group of 347 Wisconsin high school sophomores, the choices of 35 percent of the students were consistent over the three school years, and 67 percent of these (24 percent of the total group) were engaged in that field after graduation. During the one-year intervals from tenth to eleventh and from eleventh to twelfth grades, 18 and 14 percent, respectively, were consistent in their choices. Students who were inconsistent in their choices in all three years comprised 34 percent of the total group. Thus, 49 percent were inconsistent

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[86]J. R. Rice, "Changes in the Levels of Educational and Occupational Aspirations Between the Tenth and Twelfth Grades of Capable High School Students in North Florida " (unpublished Doctoral Dissertation, Florida State University, 1962).

[87]Walter and Marzolf, op. cit., p. 287.

in their vocational choices at a time when such choices may have influenced their electives.[88]

Frank found that subjects who are ego-involved do not change their estimates with every little variation in their performance. They make many attempts before trimming their aspirations. However, subjects not ego-involved were found to yield quickly and lowered their aspiration level to the realities of the situation.[89]

Kohout indicated that there was no significant degree of consistency in occupational choices by a sample of high school students over a period of years. The conclusions were:

> (1) No periods for subjects were better indicators of ten-year occupational activities than others; (2) intensively counseled students did not differ significantly from non-counseled students in consistency of specific choices and aspirations and category of occupational choices and aspirations over an extended period of time; and (3) superior students did not allow greater variability than consistency in occupational choice and aspirations.[90]

Chapter V contains additional pertinent references with respect to recommendations for program changes in current school curricula. These recommendations include references to preceeding reviews as well as new references.

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[88]John L. Schmidt and John W. M. Rothney, "Variability of Vocational Choices of High chool Students," Personnel Guidance Journal, 34 (1955), 142-46.

[89]Frank, loc, cit.

[90]V. A. Kohout, "A Longitudinal Study of the Consistency of the Occupational Choices of Two Samplings of Youth" (unpublished Ph.D. Dissertation, University of Wisconsin, 1963).

CHAPTER III

DESIGN OF THE STUDY

The study was concerned about the differences and changes that occurred in the aspirations and expectations of students as sixth and twelfth graders. These data collected identify the association of changes in educational and occupational aspirations and expectations of students in relation to sex, race, socio-economic status, status of living with both parents, and expected achievement in English and math. These data were collected in the sixth grade phase of the study in September, 1959. The twelfth grade questionnaire was designed to elicit the status of the same students' educational and occupational aspirations and expectations in relation to the same variables listed above. The twelfth grade data were collected at the mid-term of the 1965-66 school year. The difference existing between the sixth grade and twelfth grade test data was the change that occurred during the interim.

Identifying the Population

Complete cooperation and use of files, lists and other data were given by Dr. Mildred B. Smith and the Flint School District.

The original sample consisted of a 30 percent sample selected by school classes of the approximate 2,900 sixth grade students who were enrolled in Flint Public Schools in September, 1959.[1]

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[1]Number of sixth grade students enrolled in Flint Public Schools, Flint, Michigan, on October 2, 1959.

The 35 elementary schools in the sixth grade study were classified according to socio-economic status of families in each school community. School communities were likewise classified according to socio-economic status. Schools were further classified according to racial composition of students. These data were compiled by the Research Office of the Flint Public Schools.

Socio-economic status of families and racial composition of students for each school community were identified in Table 3.1. The 35 public elementary schools were further classified into five category types (Table 3.2).

In the 35 elementary schools there were 99 classes of sixth grade students. The schools were selected so that a representative proportion of the total number of sixth grade classes in each category type was selected. Table 3.3 shows the selected school, the number of classes, and the number of pupils in each of the category types of selected schools.

The lists of subjects from the 1959-60 study were compared with the 1965-66 Flint School records. The pupil personnel files indicated that 545 of the original 966 subjects were enrolled in Flint's four public high schools. Each enrolled student was then identified by the enrollment records in the individual high schools. Of the original 966 population, approximately 166 moved while in the sixth grade. After the sixth grade, approximately 100 had moved to other school districts in Genesee and neighboring counties but outside of the City of Flint.

Table 3.1 Composition of student population in Flint Public elementary school communities.[2]

Schools	Socio-economic Status			Racial Composition		
	Middle	Mixed	Lower	White	Mixed	Mostly Negro
1. Civic Park	x			x		
2. Clark		x				x
3. Cody		x		x		
4. Cook	x			x		
5. Coolidge	x			x		
6. Cummings	x			x		
7. Dewey		x			x	
8. Dort		x			x	
9. Doyle		x			x	
10. Durant-Tuuri-Mott		x		x		
11. Fairview			x			x
12. Freeman	x			x		
13. Garfield	x			x		
14. Gundry			x	x		
15. Hazelton			x	x		
16. Homedale			x	x		
17. Jefferson			x			x
18. Lewis			x	x		
19. Lincoln		x			x	
20. Longfellow	x			x		
21. Martin			x		x	
22. McKinley		x		x		
23. Merrill		x		x		
24. Oak		x		x		
25. Parkland			x			x
26. Pierce		x		x		
27. Pierson			x	x		
28. Potter			x	x		
29. Roosevelt			x			x
30. Selby		x		x		
31. Stevenson		x		x		
32. Stewart		x			x	
33. Walker		x			x	
34. Washington	x			x		
35. Zimmerman	x			x		

[2]Smith, op. cit., p. 36.

Table 3.2 Classification of Flint Public elementary schools into category types.[3]

Type	No. of Schools	Racial Composition	Socio-Economic Status
A	11	All White	Middle
B	6	All White	Middle and Lower
C	5	White and Negro	Middle and Lower
	1[a]	Mostly Negro	Middle and Lower
D	6	All White	Lower
E	2	White and Negro	Lower
	4	Mostly Negro	Lower

[a]This school was grouped with the preceding five schools because the socio-economic status is similar.

Table 3.3 Schools selected for sampling.[a][4]

Type	No. of Schools	No. of Classes	No. of Students	Totals
A	Civic Park		121	
	Freeman		91	
	Coolidge	9	58	271
B	Cody		83	
	Selby	5½	94	177
C	Dewey		89	
	Stewart	5½	71	160
D	Homedale		101	
	Lewis	5	63	164
E	Martin		94	
	Jefferson	6	100	194
Totals	11	31		966

[a]All classes of sixth grade students in the 11 selected schools comprised the sample.

[3]Smith, op. cit., p. 37 [4]Smith, op. cit., p. 38.

No specific information is available concerning 130 students who left school. Of the remaining 545 students to whom twelfth grade questionnaires were given, 408 responded.

This study was limited to those 408 twelfth graders who: (1) remained in the Flint Public School System; (2) were in the system for both sixth and twelfth grades; (3) attended twelfth grade in Flint's four public schools; (4) were present and responded to the twelfth grade questionnaires; and (5) responded to Smith's sixth grade questionnaires.

Designing the Instrumentation

Flint Student Study - 1
Sixth Grade Questionnaire

Smith's Questionnaire (Appendix A) was devised so that it could be mass administered to collect information about sixth grade students' occupational and educational aspirations and expectations, socio-economic status of each student's family, and expressed relationship with reading and arithmetic teachers.

Structured questions were dichotomous and multiple choice. Some open-end questions were also used since it was felt that such questions were useful for collecting information that forced answers might not provide. This questionnaire was pre-tested and revised before it was mass administered to 31 classes of students.[5]

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[5]Smith, op. cit., p. 42.

The questionnaire used in the pre-test phase was revised for the post-test phase of Smith's study. The family was regarded as having retained its status position for a one-year period after any change in the occupation of the wage earner. The second sixth grade questionnaire repeated questions about students' occupational and educational aspirations and expectations and expressed relationship with selected teachers and was administered to each of the 31 classes of students.

Flint Student Study - 2
Twelfth Grade Questionnaire

Smith's pretested instrument was used essentially unchanged for the twelfth grade study (Appendix A). It incorporated all pertinent questions found on Smith's instrument of 1959 and was supplemented by additional questions deemed pertinent by the Flint Research Department in a study of their high school seniors. Though collected at this time, the tabulation of the supplemental data will be delayed for a subsequent report.

Collecting the Data

Approval was granted for both the sixth grade and twelfth grade studies by the Research Director of the Flint Public Schools for the data to be collected.

The Sixth Grade Study

Smith administered The Flint Study - 1 Questionnaire in September, 1959, to the 31 classes of grade six students. Nine hundred and sixty-six pupils completed the questionnaire.

The Twelfth Grade Study

The writer administered the questionnaire to the identified seniors, in single sessions, in each high school auditorium during the week of January 15, 1966. This procedure was recommended by the high school principals as being the most feasible. No retest was considered for the absentees or those whose responses were not usable.

The time prior to mid-semester was selected so that the "intention to quit school" item on the questionnaire might still be held valid as an "educational aspiration or educational expectation."

Classifying the Data

Classifying Students by Occupational Goals and Socio-Economic Status

The occupational scale of A. B. Hollingshead's, Two Factor Index to Social Position, was used to classify students into the three socio-economic classes. The seven-point occupational scale is listed below.

The Occupational Scale

1. Higher executives of larger concerns, proprietors, and major processional.

2. Business managers,proprietors of medium-sized businesses, and lesser professional.

3. Administrative personnel, owners of small businesses, and minor professional.

4. Clerical and sales workers, technicians, and owners of little businesses (value under $6,000).

5. Skilled manual employees.

6. Machine operators and semi-skilled employees.

7. Unskilled employees.

8. Housewives.

Three socio-economic classes are designated throughout this study. Class I represents occupations 1, 2, and 3; Class II represents occupations 4; and Class III represents occupations 5, 6, and 7 on the preceding occupational scale. Students in the sample were classified according to father's occupation.[6]

Classifying Students' Years of School Attendance Expectations

Hollingshead's educational scale was used to classify student's educational plans. The seven-point scale and descriptions follow.

The Educational Scale

1. Graduate Professional Training. Persons who have completed a recognized professional course leading to graduate degree.

2. Standard College or University Graduation. All persons who completed four-year college or university course were assigned this position.

3. Partial College Training. Individuals who completed one year but not a full college course were assigned this category.[7]

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[6]A. B. Hollingshead, Two Factor Index of Social Position (New Haven: Yale University, 1957); Smith, op. cit., p. 50.

[7]Ibid.; Ibid., p. 52.

4. High School Graduates. Graduates from private school, trade, or parochial schools were assigned the same value.

5. Partial High School. Individuals who completed the tenth or eleventh grade, but did not complete the high school were assigned this score.

6. Junior High School. Individuals who completed the ninth grade were assigned this position.

7. Less Than Seven Years of School. Individuals who have not completed the seventh grade were given this score, irrespective of the amount of education received.[8]

Classifying Grade Expectations

In the sixth grade all students were asked to indicate the alphabet letter grade they expected they would earn in selected school subjects. The letter grades were translated into a numerical value scale as follows:

The Grade Expectation Scale

A. 1
B. 2
C. 3
D. 4
E. 5

In the twelfth grade all students were asked to indicate where they thought they ranked in the entire high school class in selected subjects. The responses were translated into a numerical value scale as follows:

Attained Rank Scale

Among the Best - 1
Above Average - 2
Average - 3
Below Average - 4
Among the Poorest 5

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[8] Smith, op. cit., p. 52, Scale 3 in the twelfth grade study was divided to include trade or business school. Scale 5, 6 and 7 were not applicable and were omitted in the twelfth grade instrument.

Classifying Teacher-Student Expressed Relationships

Teacher-student expressed relationships were classified into the following five-point scale:

The Teacher-Student Expressed Relationship Scale

1. Very friendly
2. Friendly
3. Neither friendly nor unfriendly
4. Unfriendly
5. Very unfriendly

Determining Direction of Change in Aspirations and Expectations

Change in aspiration and expectation were determined by comparing the sixth grade response with the twelfth grade response to ascertain if the student's level of aspiration and expectation had changed or remained the same. If a student's aspirations or expectation was in the same classification for both tests, his aspiration or expectation was considered the "same." If the student's twelfth grade aspiration or expectation was higher than the sixth grade classification, the direction of change was considered "up." The direction of change was "down" if the student's twelfth grade aspiration or expectation was lower than the sixth grade classification. Change was computed for occupational aspirations and expectations, educational aspirations and expectations, perceived expected achievement for reading and arithmetic in the sixth grade and perceived attained rank in English and math in the twelfth grade, and socio-economic status for all students in the sample.

Analyzing the Data

In order to determine the nature of association between change in students' aspirations and expectations, the chi square test was employed. Calculations for the chi square were made according to procedures outlined by Kerlinger.[9]

All of the data were punched on I.B.M. cards, and after separation into appropriate groups, the analysis was completed on the C.D.C. 3600 Computer.

In this study a probability was considered significant at the five percent level for analysis of sixth grade and twelfth grade data collected to ascertain certain relationships to change in aspirations and expectations.

In presenting the findings, unless otherwise indicated, frequently used qualifying adjectives are utilized to describe certain probability levels:

.05 - significant

.01 - highly significant

.001 - extremely significant.

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[9]Fred N. Kerlinger, Foundations of Behavioral Research: Educational and Psychological Inquiry (Holt, Rinehart, and Winston, 1966), p. 640.

CHAPTER IV

PRESENTATION OF DATA

Several hypotheses were set forth in Chapter I regarding change in occupational and educational aspirations and expectations. These hypotheses are presented and discussed according to the findings of the study. To facilitate the analysis, each of the six hypotheses shall be restated and discussed in relation to each of the sub groups studied. The second part of the chapter will present a general discussion of the highlights of the findings.

It should be noted that only tables of significant relationships will be found in the appendix of the study. A summary of all tables will be presented at the conclusion of this chapter so that total relationships may be viewed by the reader. Where no relationship was found in the data the statistical sum will be presented in parentheses.

Hypothesis 1-a

Changes between sixth and twelfth grade educational aspirations are positively associated with changes in occupational aspirations.

During the sixth and twelfth grade phases of this study, all students in the sample listed the jobs they would "most like" to have if they were free to choose any job. This was compared with the responses of the same sample to the question, "How far in school would you like to go," if they were free to go as far as they wanted to. Support is given to the hypothesis that changes in educational aspirations are

extremely significant as they are associated with changes in occupational aspirations (Table 5.1). The positive association indicates that generally when educational aspirations are raised, occupational aspirations are also raised and generally when educational aspirations are lowered, occupational aspirations are also lowered.

Hypothesis 1-b

Changes between sixth and twelfth grade educational expectations are positively associated with changes in occupational expectations.

During the sixth and twelfth grade phases of this study, all students in the sample listed the jobs they "expect they would really get." This was compared with the responses of the same sample to the question, "How far in school do you expect you really will go?" Support is given to the hypothesis that changes in educational expectations are extremely significant as they are associated with changes in occupational expectations (Table 5.5). The positive association indicates that generally when educational expectations are raised, occupational expectations are also raised and generally when educational expectations are lowered, occupational expectations are also lowered.

Hypothesis 2-a

Changes in occupational aspirations are positively related to sex.

According to the data presented, support is given to the hypothesis that changes in occupational aspirations are extremely significant as they are related to sex (Table 5.2). Analysis of the data shows that male students tended to lower their occupational aspirations more often than did

female students. The female students' occupational aspirations generally stayed the same more often than did male students.

This same pattern held true for all of the following variables: White students (Table 5.9); Non-white students (Table 5.10); Those students living with both parents in the sixth and twelfth grades (Table 5.21); Those students who did not live with both parents in the sixth and twelfth grades (Table 5.24); Those students who had a very friendly relationship with their math teacher in the sixth and twelfth grades (Table 5.26); Those students who had less than a very friendly relationship with their math teacher in the sixth and twelfth grades (Table 5.30); Those students who were in the socio-economic status Group III in the sixth and twelfth grades (Table 5.50).

For those students who expressed less than a very friendly relationship with the reading teacher in the sixth grade and English teacher in the twelfth grade, the males went up in occupational aspirations while the females stayed the same.

Hypothesis 2-b

Changes in occupational expectations are positively related to sex.

According to the data presented, no significant association exists between changes in occupational expectations and sex (X^2 = 1.770; P .50). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 2-c

Changes in educational aspirations are positively related to sex.

According to the data presented, no significant association exists between changes in educational aspirations and sex (X^2 = 0.925; P .70). However, a significant association was found for the two variables when considering those who were in Class II in both sixth and twelfth grades (Table 5.46), and for those who were in Class III in sixth grade and Class I in twelfth grade (Table 5.44). For those who remained in Class II (N=8), the males stayed the same or went up while the females went down. For those who changed from Class III to Class I (N=30), the males went up while the females went down in educational aspirations.

Hypothesis 2-d

Changes in educational expectations are positively related to sex.

According to the data presented, no significant association exists between changes in educational expectations and sex (X^2 = 4.116; P .20). However, a significant association was found for the two variables when considering those who expressed a very friendly relationship with their math teachers in both sixth and twelfth grades (Table 5.27) and those who were in Class II in the sixth grade and Class I in the twelfth grade (Table 5.42). For those who expressed a very friendly relationship with their math teachers, the males tended to remain the same while the females lowered their educational expectations. For those who were in Class II in the sixth grade and Class I in the twelfth grade (N=17), the males also tended to remain the same while females lowered their educational expectations.

Hypothesis 3-a

Changes in occupational aspirations are positively associated with changes in socio-economic status.

According to the data presented, no significant association exists between changes in occupational aspirations and changes in socio-economic status (X^2 = 2.736; P .50). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 3-b

Changes in occupational expectations are positively associated with changes in socio-economic status.

According to the data presented, no significant association exists between changes in occupational expectations and changes in socio-economic status (X^2 = 6.433; P .10). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 3-c

Changes in educational aspirations are positively associated with changes in socio-economic status.

According to the data presented, no significant association exists between changes in educational aspirations and changes in socio-economic status (X^2 = 2.230; P .70). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 3-d

Changes in educational expectations are positively associated with changes in socio-economic status.

According to the data presented, no significant association exists between changes in educational expectations and changes in socio-economic status (X^2 = 3.127; P .50). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 4-a

Changes in occupational aspirations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

According to the data presented, no significant association exists between changes in occupational aspirations and differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade (X^2 = 4.125; P .30). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 4-b

Changes in occupational expectations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

According to the data presented, no significant association exists between changes in occupational expectations and differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade (X^2 = 1.173; P .80). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 4-c

Changes in educational aspirations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

According to the data presented, no significant association exists between changes in edueational aspirations and differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade (X^2 = 4.116; P .30). However, a significant association was found for the two variables above when considering those students who were in socio-economic Group I in both sixth and twelfth grades (Table 5.41). For this group (N=30), both variables were generally found to remain unchanged.

Hypothesis 4-d

Changes in educational expectations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

According to the data presented, support is given to the hypothesis that changes in educational expectations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade (Table 5.4). Support was also given to the association of the above variables to certain other variables such as: White students (Table 5.6); the male students (Table 5.14); those students who lived with both parents in sixth and twelfth grades (Table 5.22); and for those students who expressed less than a very friendly relationship with their math

teacher in either sixth or twelfth grade (Table 5.31).

Hypothesis 5-a

Changes in occupational aspirations are positively associated with differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade.

According to the data presented, no significant association exists between changes in occupational aspirations and differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade (X^2 = 1.766; P .70). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 5-b

Changes in occupational expectations are positively associated with differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade.

According to the data presented, no significant association exists between changes in occupational expectations and differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade (X^2 = 4.206; P .30).

However, a significant association was found for the two variables above in relation to those students who had a very friendly relationship with the math teachers in both sixth and twelfth grades (Table 5.28); and those who were in socio-economic status Group I in both the sixth and twelfth grades (Table 5.39).

Hypothesis 5-c

Changes in educational aspirations are positively associated with differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade.

According to the data presented, no significant association exists between the changes in educational aspirations and differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade (X^2 = 9.458; P .10).

However, a significant association was found for the two variables above in relation to those students who expressed less than a very friendly relationship with the reading teacher in the sixth grade or the English teacher in the twelfth grade (Table 5.38).

Hypothesis 5-d

Changes in educational expectations are positively associated with differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade.

According to the data presented, no significant association exists between changes in educational expectations and differences in students' perception of expected achievement in reading in sixth grade and perception of attained rank in English in twelfth grade (X^2 = 4.725; P .50). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 6-a

Changes in occupational aspirations are positively associated with race.

According to the data presented, no significant association exists between changes in occupational aspirations and race (X^2 = 0.113; P .80).

However, a highly significant association was found for white students between sex and changes in occupational aspirations (Table 5.9). Within this group the males tend to lower their occupational aspirations. The females tend to raise their occupational aspirations or remain unchanged in occupational aspirations. For non-white students a highly significant association was found between changes in occupational aspirations and sex (Table 5.10). Within this group the males tend to lower their aspirations while the females tend not to change their occupational aspirations.

Hypothesis 6-b

Changes in occupational expectations are positively associated with race.

According to the data presented, no significant association exists between changes in occupational expectations and race (X^2 = 1.737; P .20). No significant association was found for the two variables in relation to any other variables studied.

Hypothesis 6-c

Changes in educational aspirations are positively associated with race.

According to the data presented, no significant association exists between changes in educational aspirations and race (X^2 = 1.174; P .30).

However, a significant association was found between changes in educational aspirations with race when considering males only (Table 5.15).

Educational aspirations of the white males tend not to change between sixth and twelfth grades while non-white males tend to raise their educational aspirations.

Hypothesis 6-d

Changes in educational expectations are positively associated with race.

According to the data presented, no significant association exists between changes in educational expectations and race (X^2 = 3.567; P .10). However, for the white students a highly significant association was found to exist between changes in educational expectations and the differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade (Table 5.6). For the same group, an extremely significant association was found between changes in occupational expectations and changes in educational expectations (Table 5.8). For the non-white students, an extremely significant association was found between changes in occupational expectations and changes in educational expectations (Table 5.11).

Generalizations

In review of tables 4.1 - 4.11 certain generalizations were found. A definite relationship was found between changes in occupational aspirations and changes in educational aspirations. A definite relationship was found between changes in occupational expectations and educational expectations.

The summary tables found on pages 87 to 92 indicate significant relationships between the variables studied. They are as follows.

For all students (Table 4.1) a significant association was found between educational aspirations and occupational aspirations, educational expectations and occupational expectations, sex and occupational aspirations, perceived expected achievement in math and educational expectations, and status of living with both parents and occupational expectations.

For white students (Table 4.2) a significant association was found between educational aspirations and occupational aspirations, educational expectations and occupational expectations, sex and occupational aspirations, perceived expected achievement in math and educational expectations.

For non-white students (Table 4.3) a significant association was found between occupational expectations and educational expectations, and occupational aspirations and sex.

For male students (Table 4.4) a significant association was found between educational aspirations and occupational aspirations, educational expectations and occupational expectations, perceived expected achievement in math and educational expectations, and race and educational aspirations.

For female students (Table 4.5) a significant association was found between educational aspirations and occupational aspirations, educational expectations and occupational expectations, and status of living with both parents and occupational expectations.

For students living with both parents (Table 4.6) a significant association was found between educational aspirations and occupational aspirations, educational expectations and occupational expectations, occupational aspirations and sex, perceived expected achievement in math and educational expectations.

For students not living with both parents (Table 4.7) a significant association was found between educational expectations and occupational expectations and occupational aspirations and sex.

For students expressing a very friendly relationship with math teachers (Table 4.8) a significant association was found between educational expectations and occupational expectations, occupational aspirations and sex, perceived expected achievement in English and occupational expectations, and educational expectations and sex.

For students expressing less than a very friendly relationship with math teachers (Table 4.9) a significant association was found between educational aspirations and occupational aspirations, educational expectations and occupational expectations, occupational aspirations and sex, status of those living with both parents and occupational expectations, and perceived expected achievement in math and educational expectations.

For students expressing less than a very friendly relationship with English teachers (Table 4.11) a significant association was found between educational aspirations and occupational aspirations, educational expectations and occupational expectations, occupational aspirations and sex, perceived expected achievement in English and educational aspirations, and status of living with both parents and occupational expectations.

Summary

Since it was the purpose of this study to consider the associations of changes between sixth and twelfth grade responses to questions regarding educational and occupational aspirations and expectations, all such associations were compared with other variables in the form of hypotheses predicting positive associations. The data reported earlier in the chapter indicates that only four of the twenty-two separate hypotheses were found to have a significant association and were, therefore, accepted. A restatement of the hypotheses follows:

Hypothesis 1-a

Changes between sixth and twelfth grade educational aspirations are positively associated with changes in occupational aspirations.

Hypothesis 1-b

Changes between sixth and twelfth grade educational expectations are positively associated with changes in occupational expectations.

Hypothesis 2-a

Changes in occupational aspirations are positively related to sex.

Hypothesis 4-d

Changes in educational expectations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade.

In hypotheses 1-a and 1-b the direction of change was found to be the same. When occupational aspirations went up, educational aspirations went up and when occupational aspirations went down, educational

aspirations went down. When occupational expectations went up, educational expectations went up and when occupational expectations went down, educational expectations went down.

Hypothesis 2-a was accepted. It was found that occupational aspirations were significantly associated with sex, regardless of race, regardless of status of living with both parents, regardless of relationship with math teachers, and those who were in the lowest socio-economic group (Group III). Generally, the direction of change found for all sub-groups was that males lowered their occupational aspirations and females generally remained unchanged in their occupational aspirations. No evidence was found to support Smith's statement that "boys are more highly oriented toward occupational goals than are girls."[1]

It seems necessary to point out that for boys a probable reality quality can be found in these results. The necessary adjustment to one's capabilities and expectations is in fact a reality recognition. This is totally in keeping with Ginsberg's theory and supported by Super.

Girls, on the other hand, tended to be more restrictive in occupation choices and could more easily select those occupations which are clearly classified for them. Little or no changes occurred in the six-year period regarding this condition so it can be expected that such choices may well remain the same.

Hypothesis 4-d was accepted indicating a positive association was found to be significant between changes in educational expectations and differences in students' perception of expected achievement in math

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[1] Smith, op. cit., p. 107.

in sixth grade and perception of attained rank in math in twelfth grade. This same association was found for white males, living with both parents in both sixth and twelfth grades, and those who expressed less than a very friendly relationship with their math teachers in either sixth or twelfth grade. Generally, the direction of changes were found that when perceived expected achievement went up, educational expectations went up and when perceived expected achievement went down, educational expectations went down. Interestingly, this was the only relationship to educational plans found among the PEA group for either math or English. The fact that the perception of achievement or attainment in math would have occurred at all in respect to educational plans may indicate that it is possible that a closer look at math achievement in the total school experience may become potentially an indicator of educational expectation.

Even though the other eighteen hypotheses were not accepted, certain value can be gained by looking at them in relation to other variables studied. In considering changes in socio-economic status, it was found that no relationship existed between it and the four major variables. It is interesting to note that the larger socio-economic status group in this study of the Flint community was in Group III. However, no evidence was found which could be related to the occupational and educational choices of certain socio-economic groups as identified by this study. Smith also found no support to her hypothesis that there would be a relationship between socio-economic status and occupation and education aspirations.

Similarly there were no indications that race could be singled out as a significant association to the main variables. Patterns of association

where race was found to be significant in relation to two other variables showed that the patterns were not specifically different for races.

In considering the variable of living with both parents in both the sixth and the twelfth grades, it was found that living with both parents was not significantly related to the main variables. No apparent differences were found to make a difference whether a student lived with both parents or not in relation to patterns of association with other variables. It is possible that because those who lived with both parents in both the sixth and twelfth grades was the larger group that no positive relationship found for it would effect the other. However, it apparently made no observable difference whether a student lived with both parents in relation to educational or occupational aspirations or expectations.

Finally, when reviewing the variable of teacher relationship, it was found that no significant association was found for all of the four main variables with those students who expressed a very friendly relationship to their math or English teachers nor was there a significant association found for those who expressed less than a very friendly relationship with their English teachers. Apparently, as was stated earlier, only the group who expressed less than a very friendly relationship with their math teachers had any relationship with educational expectations when considering the perceived expected achievement in math.

It may be possible that the analysis of the teacher relationship question can lead one toward a position that teachers may, in fact, not be regarded by students as "significant others" and relationship with teachers may not be regarded as a potential indicator of educational plans.

The summary tables of chi squares follow on pages 87-92.

In the final chapter the summary and conclusions of the study are presented.

TABLE 4.1 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR ALL STUDENTS.

	OA	EA	OE	EE
OA				
EA	18.659*			
OE				
EE			45.173*	
SEX	16.430*	0.926	1.770	4.116
SES	2.736	2.230	6.433	3.127
PEA-MATH	4.125	4.116	1.173	11.237*
PEA-ENGLISH	1.766	9.458	4.206	4.725
BP	1.394	0.045	10.259*	0.995
RACE	0.113	1.174	1.737	3.567

TABLE 4.2 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR WHITE STUDENTS.

	OA	EA	OE	EE
OA				
EA	14.488*			
OE				
EE			27.881*	
SEX	8.386*	5.337	0.032	5.331
SES	2.491	3.982	8.887	5.881
PEA-MATH	2.540	4.437	1.695	16.799*
PEA-ENGLISH	1.598	5.522	2.628	3.767
BP	0.609	0.414	5.713	0.818
RACE				

*Significant at P .05 or less.

TABLE 4.3 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR NON-WHITE STUDENTS.

	OA	EA	OE	EE
OA				
EA	7.689			
OE				
EE			20.453*	
SEX	12.845*	2.587	5.307	0.976
SES	3.048	3.916	2.747	2.888
PEA-MATH	4.148	1.150	3.062	6.456
PEA-ENGLISH	5.954	5.501	5.497	6.373
BP	2.677	0.323	3.363	0.646
RACE				

TABLE 4.4 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR MALE STUDENTS

	OA	EA	OE	EE
OA				
EA	10.463*			
OE				
EE			15.188*	
SEX				
SES	3.449	0.940	5.858	3.846
PEA-MATH	8.175	4.298	3.199	9.660*
PEA-ENGLISH	3.891	7.909	1.074	6.483
BP	1.425	0.088	4.343	1.595
RACE	2.626	6.255*	5.090	2.415

*Significant at P .05 or less.

TABLE 4.5 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR FEMALE STUDENTS.

	OA	EA	OE	EE
OA				
EA	10.263*			
OE				
EE			31.328*	
SEX				
SES	0.981	1.996	3.697	5.554
PEA-MATH	1.581	2.311	4.023	3.867
PEA-ENGLISH	1.365	5.549	5.725	0.576
BP	1.262	0.441	6.688*	0.961
RACE	2.737	1.487	0.260	2.651

TABLE 4.6 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR ALL STUDENTS LIVING WITH BOTH PARENTS IN BOTH SIXTH AND TWELFTH GRADES

	OA	EA	OE	EE
OA				
EA	17.990*			
OE				
EE			35.207*	
SEX	8.385*	1.680	1.700	5.618
SES	2.856	3.540	5.297	0.943
PEA-MATH	1.670	4.070	1.332	10.333*
PEA-ENGLISH	2.868	7.537	4.709	2.578
BP				
RACE	0.646	0.662	0.365	3.252

*Significant at P .05 or less.

TABLE 4.7 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR ALL STUDENTS NOT LIVING WITH BOTH PARENTS IN EITHER SIXTH OR TWELFTH GRADES.

	OA	EA	OE	EE
OA				
EA	4.156			
OE				
EE			16.823*	
SEX	9.311*	0.071	0.881	0.071
SES	3.543	4.791	2.709	3.401
PEA-MATH	7.196	3.563	0.326	2.845
PEA-ENGLISH	1.405	6.861	4.327	6.673
BP				
RACE	1.377	1.215	0.147	0.803

TABLE 4.8 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR ALL STUDENTS EXPRESSING VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN BOTH SIXTH AND TWELFTH GRADES.

	OA	EA	OE	EE
OA				
EA	1.810			
OE				
EE			16.676*	
SEX	13.411*	2.168	4.315	7.290*
SES	0.913	7.312	2.756	6.917
PEA-MATH	7.497	4.250	7.933	2.055
PEA-ENGLISH	9.095	8.221	11.772*	4.994
BP	0.432	4.374	4.837	2.802
RACE	0.569	1.544	4.346	0.728

*Significant at P .05 or less.

TABLE 4.9 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN EITHER SIXTH OR TWELFTH GRADES.

	OA	EA	OE	EE
OA				
EA	19.063*			
OE				
EE			34.323*	
SEX	10.032*	0.227	1.949	1.140
SES	3.627	2.217	8.880	3.767
PEA-MATH	6.415	4.154	3.047	10.793*
PEA-ENGLISH	1.051	6.854	1.606	3.574
BP	2.086	0.599	6.693	0.169
RACE	0.021	0.461	0.439	3.278

TABLE 4.10 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR ALL STUDENTS EXPRESSING VERY FRIENDLY RELATIONS WITH READING TEACHERS IN THE SIXTH GRADE AND ENGLISH TEACHERS IN THE TWELFTH GRADE.

	OA	EA	OE	EE
OA				
EA	3.624			
OE				
EE			4.299	
SEX	1.194	0.691	0.513	2.001
SES	1.303	1.406	0.848	0.836
PEA-MATH	2.631	1.105	2.867	1.816
PEA-ENGLISH	2.913	2.349	7.953	1.555
BP	0.554	0.432	2.091	0.183
RACE	4.051	1.072	0.194	2.028

*Significant at P .05 or less.

TABLE 4.11 SUMMARY OF CHI SQUARES OF ALL VARIABLES FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH READING TEACHERS IN THE SIXTH GRADE AND ENGLISH TEACHERS IN THE TWELFTH GRADE.

	OA	EA	OE	EE
OA				
EA	18.727*			
OE				
EE			51.327*	
SEX	14.900*	1.490	0.548	4.016
SES	4.863	1.272	7.019	3.812
PEA-MATH	3.899	6.765	1.832	7.866
PEA-ENGLISH	2.683	11.630*	3.747	5.166
BP	3.743	0.380	7.139*	1.016
RACE	2.255	0.723	1.838	5.763

*Significant at P .05 or less.

CHAPTER V

SUMMARY AND CONCLUSIONS

The Problem

The reason for this study arose out of the concern for the worries and problems by adolescents of vocational choice and related educational plans.

Entering an occupation is generally seen in our culture as a symbol of adulthood, and an indication that a young man or woman has reached a stage of some independence and freedom.

The meaning of occupational choice changes with the age or life period. It is now assumed that vocational development and the eventual decision is a long process placed squarely in the context of total personality development and realistic self assessment.

It has been suggested that the crucial years are the early ones in preparing for a realistic job orientation by the students. Several authorities have expressed a fear that possible irreparable damage is now being done in the elementary and high schools in not preparing students for such choices.

It is commonly felt that the farther young people go in the educational system, the better their chances for higher occupational positions. Educational requirements are increasing for all occupations. Even menial jobs are requiring a high school education as a minimum qualification. The concern for higher education and the increased emphasis

given to it as preparation for occupational choices are of primary interest today. If colleges are to train for the high status jobs, it would be imperative to know more about the students who aspire to higher education. Some evidence has been reviewed which indicates that such aspirations for college are formed many years before the actual college experience. Knowledge of such aspirations continue to assist teachers and counselors in their efforts to encourage more students toward realistic vocational and educational choices.

The study was concerned about the differences and changes in educational and occupational aspirations and expectations over a six-year period between grade six and twelve for a population of 408 students in the Flint Public Schools. Emphasis was placed upon relationships of changes to determine whether certain variables could be identified and related to educational and occupational expectations and aspirations.

The Theory

Various theories indicate a general agreement that vocational choice is a process rather than a single event and that it takes place over a period of years. It takes into account the needs of the individual and his abilities, aptitudes, attitudes, interests and achievements.

This study has accepted as its basis an assumption that students' aspirations can be viewed as the result of a developmental process, based in social interaction.

Design and Procedures

In Chapter III the design of the study was given in detail. In order to examine changes that occurred in the aspirations and expectations of students as sixth and twelfth graders, Smith's 1959 study of 966 sixth graders was partially replicated to elicit the status of the same students in relation to certain variables in 1965-66. Four hundred-eight students responded to questionnaires administered. These were compared with the sixth grade responses by the same pupils using identical scales. The cross-break chi square statistical analysis was used to determine significance of association between the responses for different combinations of variables.

Six hypotheses were applied to each of the four basic variables (occupation aspirations, occupation expectations, education aspirations and education expectations). The six hypotheses were then stated to examine the associations of the four basic variables to certain other variables (each other, sex, socio-economic status, perceived expected achievement in math, perceived expected achievement in English, and race). Each of the hypotheses was restated and examined in Chapter IV.

Findings

Since it was the purpose of this study to consider the associations of changes between sixth and twelfth grade responses to questions regarding educational and occupational aspirations and expectations, all such associations were compared with other variables in the form of

hypotheses predicting positive associations. The data reported earlier in the chapter indicate that only four of the twenty-two separate hypotheses were found to have a significant association and were therefore accepted.

Changes between sixth and twelfth grade educational aspirations are positively associated with changes in occupational aspirations (Hypothesis 1-a). The direction of change was found that when occupational aspirations went up, educational aspirations went up and when occupational aspirations went down, educational aspirations went down.

Changes between sixth and twelfth grade educational expectations are positively associated with changes in occupational expectations (Hypothesis 1-b). The direction of change was found that when occupational expectations went up, educational expectations went up and when occupational expectations went down, educational expectations went down.

Changes in occupational aspirations are positively related to sex (Hypothesis 2-a). Occupational aspirations were found to be significantly associated with sex, regardless of race, regardless of status of living with both parents, regardless of relationship with math teachers, and for those who were in the lowest socio-economic group (Group III). Generally, the direction of change found for all sub-groups was that males lowered their occupational aspirations and females remained unchanged in their occupational aspirations.

Girls tended to be more restrictive in occupation choices and were more able to easily select those occupations which are clearly classified for them. Little or no changes have occurred in the six-year period

regarding this condition so it can be expected that such choices may well remain the same. The world of work for females should be explored. A continuation of the discussion is found on page 103.

The direction of change can be explained by the fact that since boys are expected to be family wage earners, they are more oriented toward occupational goals than are girls. Also, occupational aspiration lacking immediacy for sixth grade boys, may have resulted in careless choices very often being greatly unrealistic in those early years. It is also concluded that the largest group was of the low socio-economic status (Group III). This finding suggests that lower-class boys seemed to be realizing that they cannot muster the resources necessary to attain higher occupational positions. They, therefore, were adjusting their occupational expectations toward the norms of their social group.

Changes in educational expectations are positively associated with differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade (Hypothesis 4-d). A positive association was found to be significant between changes in educational expectations and differences in students' perception of expected achievement in math in sixth grade and perception of attained rank in math in twelfth grade. This same association was found for white males, those living with both parents in both sixth and twelfth grades, and those who expressed less than a very friendly relationship with their math teachers in either sixth or twelfth grade. Generally, the direction of change was found that when perceived expected achievement went up, educational expectations went up and when perceived expected achievement went down, educational expectations went down.

Though not among the stated hypotheses, it was found in reviewing the variable of teacher relationship, a significant association was revealed for the group who expressed less than a very friendly relationship with their math teachers with changes in educational expectations when considering perceived expected achievement in math.

Significant associations existing for change in educational expectation (Hypothesis 4-d) but not existing for change in educational aspiration (Hypothesis 4-c) suggest that students may be more realistic about their expectations than they are about their aspirations.

Perceived expected achievement in math was found to be a predictor of educational expectations of the student. It, therefore, seems reasonable that teachers of math should become more sensitive to their role and should work toward having students see themselves as able, competent and worthy students in math so that their entire educational expectations can be held at a level to promote maximum opportunity for future plans.

The reality of this "expectation" level has led this writer to conclude that the math subject clearly lends itself to the judgment of academic accomplishment or lack of accomplishment with little question or uncertainty on the part of either the teacher or student. The student makes his future educational plans accordingly.

Educational expectations were found to be only partially related to a very friendly relationship with math teachers. It can be assumed that students who expressed less than a very friendly relationship with math teachers are less affected by these teachers' influence. This

finding also suggests that should a teacher have a low expectation of a student, the student is in a more favorable position if he does not have a close relationship with that teacher since only the group who expressed less than a very friendly relationship with their math teachers had any relationship with educational expectations when considering the perceived expected achievement in math.

Further analysis of the teacher relationship question leads toward a position that teachers may, in fact, not be regarded by students as "significant others" and relationship with teachers may not be regarded as an indicator of educational plans.

Even though the other eighteen hypotheses were not accepted, certain value can be gained by looking at them in relation to other variables studied. In considering changes in socio-economic status, it was found that no relationship existed between it and the four major variables.

Similarly there were no indications that race can be singled out as a significant association to the main variables. Where race was found to be significant in relation to two other variables the patterns of direction of change were not specifically different for races than for any other variables.

In considering the variable of living with both parents in both the sixth and twelfth grades, it was found that living with both parents was not significantly related to the main variables. It did not seem to make a difference whether a student lived with both parents or not in relation to patterns of association with other variables.

Recommendations

In this study the one clear conclusion is in support of the association between occupation and education. It has repeatedly been stated that changes in occupational aspirations are positively associated with changes in educational aspirations. Changes in occupational expectations are positively associated with educational expectations.

It has been seen that by the time the child reaches junior high school, he has rather positive or negative attitudes toward a number of occupations. One would hope that these attitudes are based on valid, usable information rather than on incomplete information, misinformation, or no information at all. One way of giving boys and girls a "readiness" for the time when they will be making beginning educational and vocational decisions can be through a program of occupational study in elementary school. This is the fundamental recommendation of this report.

Presenting such occupation information in the elementary school promotes a general understanding of the world of work and develops appropriate attitudes that "there are certain common factors in doing a good job and doing a poor job," and that "among the tens of thousands of occupations, there are probably scores that could be equated with the education, the intelligence, the interests and the motivation of any one individual."[1]

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[1]Dugald S. Arbuckle, Pupil Personnel Services in American Schools (Boston: Allyn and Bacon, 1962), p. 130.

A great deal of occupational information and misinformation is picked up by children during their years in the elementary school. In their normal growth process they become aware of many occupations which were unknown to them before. They acquire impressions of the work people do in these occupations, of the kinds of people who do it, of the compensations it offers, and of the abilities that are required for acceptable performance. On the basis of these impressions they enthusiastically embrace some occupations as possible careers for themselves, and they firmly reject others from either present or future considerations. The potential effect of these early impressions upon later occupational choices can be considerable. To the extent that the information they receive is accurate, the probability of good choices increases.[2]

Hoppock lists eight specific purposes for presenting occupational information to elementary school children. They are to:

1. Increase the child's feeling of security in the strange new world.
2. Encourage the natural curiosity of young people.
3. Extend the occupational horizons of the child.
4. Encourage wholesome attitudes toward all useful work.
5. Develop a desirable approach to the process of occupational choice.
6. Help students who are dropping out of school and going to work.
7. Help students who face a choice between different

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[2]Robert Hoppock, op. cit., p. 344.

high schools or high school programs.

8. Show children who really need money how they can earn it.[3]

Teachers can play an important role in guiding young people toward or away from a particular occupation or related educational planning. It is imperative that teachers become more aware of the rewards and punishments that they give. Their simple failure to respond to a particular child may make a great deal of difference as to whether he looks upon himself as competent or incompetent. The elementary school report card often helps a youngster to see himself as one who succeeds or fails in an academic setting and whether he will or will not succeed in high school and college. In this way, even at an early age, the range of occupations open to the child becomes clearly marked.

Lifton found that textbooks and teachers showed a similar bias. In the primary grades, they stressed service occupations. In the upper grades, they emphasized professional fields. Both gave very little attention to skilled trades.[4]

Teachers must learn about and acknowledge the need for many different kinds of workers and develop a realistic attitude and respect for low-status jobs. Children should be helped to understand that skills needed for jobs in today's world may not be needed for many jobs in the world of tomorrow. An examination of programs to retrain workers who

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[3]Ibid.

[4]Walter M. Lifton, "Vocational Guidance in the Elementary Schools," Vocational Guidance Quarterly, 8 (Winter, 1959-60), 79-81.

possess obsolete job skills may also be included in the elementary program.

The role of women in the world of work should be explored. At the elementary school level, young girls should be helped to see the important part that work outside the home is likely to play in a girl's life in the future. Increasing opportunities for women should be studied along with important or unusual jobs held by women today. Female elementary teachers in the school and working mothers in the community can serve as a proof to girls that women can successfully combine marriage with paid employment.

In order for any study of occupational life to be meaningful at the elementary level, it should be related to the community. Field trips can focus the attention of the pupil on the occupational and educational life of the community. Recently, the writer has learned of two meaningful field trips taken by the fourth graders in two elementary schools in Flint. An inner city school group in the lower socio-ecomomic area visited the Buick Assembly Plant where many of the parents are employed. The other school in a middle-class community sent its fourth graders to the Ann Arbor campus of The University of Michigan representing the educational attainment of many of the residents of that neighborhood.

Another community related activity would be to survey the occupations of the children's parents, other relatives, and friends. The children could interview their parents and report to the class. Visitors could come to the classroom to describe their occupations and to answer questions.

A formal occupational information program to be set up within the framework of the regular elementary curriculum is offered by Norris.[5] She suggests that the part of the curriculum best suited to a program of occupational information is social studies. These include geography, history, and civics--subject areas that somewhat parallel those involved in a study of the world of work.

Other subjects can be used too.

1. Language Arts. Occupational information can be easily related to listening, writing, reading, and speaking. Children can read and report on books and poems about an occupational or industrial area. They can hold discussions, prepare outlines, give reports, and hold mock interviews. They can tape record discussions or interviews with workers during field trips. Older elementary pupils can write letters for permission to make a field trip, or gather facts about local industries. Committees can be selected to dramatize what workers do on the job.

2. Arithmetic. During arithmetic classes, pupils can study the differences in weekly, hourly, or monthly wages of various kinds of workers, and compute withholding taxes. Buying and selling of products and services can be explored, according to the competence of the children. They can make up arithmetic problems involving the different kinds of workers or industries they are studying.

3. Health and Safety. Pupils can study the physical, mental, and other requirements of a job, and discuss the safety precautions needed on various jobs.

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[5]Willa Norris, Occupational Information in the Elementary School (Chicago: S. R. A. Inc., 1963), p. 40.

4. Arts and Crafts. A teacher has many opportunities for relating artwork to the study of the occupational world. She can display posters showing the relation between school subjects and occupations, and have pupils prepare posters depicting workers on the job. Pictures of workers can be cut from magazines or drawn by pupils. Clay figures can be made of the equipment or products used or produced on the job.

5. Music. Many school songbooks have songs about different kinds of workers. Children may even make up their own songs. Some recordings of workers on the job are available. Small children may portray to music the movements of workers as they perform their daily duties.

She lists more than one hundred pages of resource material for use in an occupational information program in the elementary school. Among the resources listed are: early elementary occupational books and pamphlets, later elementary occupational books and pamphlets, occupational films, filmstrips, recordings and songs.

A minimum program of occupational information that could be followed by every elementary teacher is suggested by Hoppock.[6]

Listen. When a child wants to talk about his occupational choice, let him. And listen attentively. Let your attention indicate to him that this is important, that you think the discussion is worth your time and his, and that you are glad that he feels like telling you about it.

If the child wants information, help him to get it. Use your own professional skills to find the best information available. Help him to

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[6]Hoppock, op. cit., p. 352.

learn where and how to look for facts about jobs.

Critically examine your own comments on occupations. Do they reflect the snob values of your social class? Are you saying things that will make it harder for your students to feel satisfied with honest work in occupations which you consider menial? Are you tossing out bits of misinformation about occupations because you have not bothered to verify your casual impressions or to bring up to date the information you acquired some time ago?

Check your facts. Be sure that whatever occupational information you introduce into your teaching is accurate.

When the child completes grade six, he has begun to understand man's need for food, clothing and shelter and the need to work to provide the necessities of life. The sixth grader begins to know himself. With the help of forward looking educational programs and responsive teachers, he can also have a fund of occupational information to draw on in helping to make important decisions for his future so that when he is called upon to choose his curriculum for junior and senior high school, he can do so in the best possible position of preparedness.

Implications for Further Study

An assessment of student relationships with teachers of math should be explored to determine the degree to which such a relationship can be contributory toward helping students make future educational plans. Such a study may well include an assessment by teachers of their importance and responsibilities in such a relationship.

An investigation should be undertaken to identify additional factors other than those found in this study, to determine other potential influences upon the direction of change of pupil educational and occupational aspirations and expectations.

The role of parents should be explored to compare specific choices of students with information collected about the parents. An expansion of such information toward recommendations in helping parents understand their role in occupational guidance of their children can be a significant contribution.

Content of textbooks found in specific subject fields should be reviewed to determine the amount of occupational information found and its adequacy of meeting established educational needs. Such a study should have considerable interest in our teacher education programs and the expanding fields of guidance and counseling.

Curriculum changes similar to those recommended within this study should be surveyed. The study can be useful to school districts in assisting them in establishing their own programs of occupational information in elementary education.

Finally, it is recommended that a follow-up survey of the population of this study be made to compare students' vocational pursuits at different intervals in their post high school years. Such information can contribute substantially to the verification of data reported in this study.

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APPENDIX A

NAME_____ H. R. TEACHER_____

SCHOOL_____ _____

DATE_____ _____

FLINT STUDENT STUDY

We are interested in what young people like you THINK ABOUT THEMSELVES and WHAT KINDS OF PLANS they have for the future. After each question is read, then write in the answer. The information that you give will be treated confidentially, our interest being in how students in general answer these questions, rather than in how particular students answer them. We hope, therefore, that you will answer the following questions in as frank a manner as possible.

1. ARE YOU A GIRL OR A BOY?
   (Circle one below)

   Girl Boy

2. HOW OLD ARE YOU? _____YEARS AND _____MONTHS.

3. ARE YOUR PARENTS LIVING?
   (Circle one below)

   Both Mother Only Father Only Neither

4. IF BOTH PARENTS ARE LIVING, ARE THEY.....
   (Circle one below)

   Living Together Separated Divorced

5. IF SEPARATED OR DIVORCED, HOW LONG? _____

6. WHO IS THE MAIN WAGE EARNER IN YOUR HOUSE?
   (Circle one below)

   Father Mother

7. WRITE A FEW LINES DESCRIBING THE KIND OF WORK YOUR FATHER (OR MOTHER) DOES AT HIS JOB. _____

   _____

   _____

   _____

8. IS HE SELF-EMPLOYED?
   (Circle one below)

   Yes No

(If answer to question 8 above is yes, then answer 9 and 10, below)

9. DOES HE HAVE ANY EMPLOYEES WORKING FOR HIM?
(Circle one below)

Yes No

10. IF YES, HOW MANY?
(Circle one below)

(a) 1 - 10 (c) 25 - 50 (e) 100 - 500

(b) 10 - 25 (d) 50 - 100 (f) 500 - 1000

(If answer to question 8 above is no, then answer 11, 12, and 13, below)

11. WHAT IS THE NAME OF THE ORGANIZATION FOR WHICH HE WORKS? _____

_____

_____

12. DO ANY PEOPLE WORK UNDER HIS SUPERVISION?
(Circle one below)

Yes No

13. IF YES, HOW MANY:
(Circle one below)

(a) 1 - 10 (c) 25 - 50 (e) 100 - 500

(b) 10 - 25 (d) 50 - 100 (f) 500 - 1000

14. HOW LONG HAS YOUR FATHER BEEN IN THIS LINE OF WORK? _____

_____

15. IF LESS THAN TWO YEARS, WHAT WAS HIS OCCUPATION BEFORE THAT TIME?

_____

_____

16. WHAT WAS THE LAST YEAR OF SCHOOL YOUR FATHER COMPLETED?
(Circle one below)

Grammar School: 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8

High School: 9 - 10 - 11 - 12

College: 1 - 2 - 3 - 4

Graduate Work: _____

17. WHAT WAS THE LAST YEAR OF SCHOOL YOUR MOTHER COMPLETED?
(Circle one below)

Grammar School: 1 - 2 - 3 - 4 - 5 - 6 - 7 - 8

High School: 9 - 10 - 11 - 12

College: 1 - 2 - 3 - 4

Graduate Work: _____

WHAT YOU WANT TO DO

18. IF YOU WERE FREE TO CHOOSE ANY JOB, WHAT WOULD YOU MOST LIKE TO DO WHEN YOU GROW UP? _____

_____

19. SOMETIMES WHAT WE WOULD LIKE TO DO IS NOT THE SAME AS WHAT WE EXPECT TO DO. WHAT JOB WOULD YOU LIKE THAT YOU ARE PRETTY SURE YOU WILL GET? _____

_____

20. HOW CERTAIN ARE YOU ABOUT YOUR JOB PLANS?
(Circle one below)

Very Certain Fairly Certain Not Certain

21. IF YOU WERE FREE TO GO AS FAR AS YOU WANT TO IN SCHOOL, HOW FAR IN SCHOOL WOULD YOU LIKE TO GO?
(Circle one below)

Junior High: 7 - 8 - 9

Senior High: 10 - 11 - 12

College: 1 - 2 - 3 - 4

Graduate Work: _____

22. SOMETIMES WHAT WE WOULD LIKE TO DO ISN'T THE SAME AS WHAT WE EXPECT TO DO. HOW FAR IN SCHOOL ARE YOU PRETTY SURE YOU WILL GO?
(Circle one below)

Junior High: 7 - 8 - 9

Senior High: 10 - 11 - 12

College: 1 - 2 - 3 - 4

Graduate Work: _____

23. HOW CERTAIN ARE YOU ABOUT YOUR SCHOOL PLANS?
(Circle one below)

Very Certain Fairly Certain Not Certain

24. AS YOU THINK OF YOUR SCHOOL WORK IN THE NEXT FEW YEARS, WHAT KIND OF GRADES DO YOU EXPECT THAT YOU WILL GET?
(Circle one below)

In Social Studies?	A,	B,	C,	D,	E
In Arithmetic?	A,	B,	C,	D,	E
In Science?	A,	B,	C,	D,	E
In Reading?	A,	B,	C,	D,	E

YOU AND YOUR TEACHER

Now we are interested in what young people think of their teachers. Circle the statements that tell how you feel about your teachers.

25. CIRCLE THE ONE BELOW THAT TELLS HOW YOU FEEL TOWARD YOUR MUSIC TEACHER.

    a. Very friendly
    b. Friendly
    c. Neither friendly nor unfriendly
    d. Unfriendly
    e. Very unfriendly

26. CIRCLE THE ONE BELOW THAT TELLS HOW YOU FEEL TOWARD YOUR READING TEACHER.

    a. Very friendly
    b. Friendly
    c. Neither friendly nor unfriendly
    d. Unfriendly
    e. Very unfriendly

27. NOW, CIRCLE THE ONE BELOW THAT TELLS HOW YOU FEEL TOWARD YOUR ARITHMETIC TEACHER.

    a. Very friendly
    b. Friendly
    c. Neither friendly nor unfriendly
    d. Unfriendly
    e. Very unfriendly

MICHIGAN STATE UNIVERSITY

High School Study

INTRODUCTION:

Michigan State University has been doing a study to find out what high school students think about themselves, their school work and their future plans. We are asking you to help in this study also by answering the following questions as honestly as you can.

Please read carefully the directions on each part of the questionnaire before you answer.

The answers you give will not be shown to your teachers or anyone else, and will in no way affect your grades. No one will see the answers you give except the research staff of the university.

Your help in this study is greatly appreciated.

PLEASE SUPPLY THE FOLLOWING INFORMATION

Name:(Print) _____
(Last Name) (First Name) (Middle Name)

Birthdate: _____ Sex: Male _____ Female _____
(Month) (Day) (Year)

Name of Present School: _____

Date: _____ Homeroom Number: _____

Did you attend school in Flint while in the Sixth Grade? Yes ____ No _____

What Elementary School did you attend while in Sixth Grade? _____

_____

In What Elementary School district do you now live? _____

_____

(Please be sure the information above is complete before continuing)

ıt Your Parents

With whom were you living when you were in the ninth grade? (Check one)

_____ a. Mother and Father
_____ b. Mother only
_____ c. Father only
_____ d. Mother and Stepfather
_____ e. Stepmother and Father
_____ f. Other. Please explain
_____

With whom are you living now? (Check one)

_____ a. Mother and Father
_____ b. Mother only
_____ c. Father only
_____ d. Mother and Stepfather
_____ e. Stepmother and Father
_____ f. Other. Please explain
_____

Parents' Occupation. In the table below, please circle YES or NO to indicate whether your parents or stepparents are employed. If either or both are employed, please supply the remaining information requested in the table. Before you go on to the next page be sure to read item "g" in the table and write in a response for one or both parents, if a response is appropriate.

	Father or Stepfather		Mother or Stepmother	
a. Is each parent now employed (other than housewife for mother) (Circle Yes or No)	Yes	No	Yes	No
If Yes, please answer: b. Describe his and/or her occupation.				
c. Who is his and/or her employer? (Company, business, etc.)				
d. About how long employed in this occupation?				
e. Do any people work under his and/or her supervision? (Circle Yes or No)	Yes	No	Yes	No
f. If Yes, about how many people does he and/or she supervise (Check one)	___1-10 ___11-25 ___26-50	___51-100 ___101-500 ___More than 500	___1-10 ___11-25 ___26-50	___51-100 ___101-500 ___More than 500
g. If employed at this occupation less than 2 years, or if unemployed, what was his and/or her previous occupation?				

How far did your parents (or stepparents) go in school?

	Place a check in the appropriate row(s) and column(s)			
	(a) Father	(b) Stepfather	(c) Mother	(d) Stepmother
(1) Completed 6 grades or less				
(2) Completed grades 7, 8, or 9				
(3) Completed grades 10 or 11				
(4) Graduated from high school				
(5) Attended college but did not graduate				
(6) College graduate				

ɔut Yourself

If you were free to choose any job, as your ultimate goal, what would you most like to do?

_____

What would you need in order to get this job? _____

_____

Sometimes what we would like to do is not the same as what we expect to do. What job do you expect you really will get?

_____

Why do you think you can get this job? _____

If you were free to go as far as you wanted to go in school, how far would you like to go? (Check one)

_____ a. I'd like to quit right now.
_____ b. I'd like to graduate from high school.
_____ c. I'd like to go to business or trade school.
_____ d. I'd like to go to college for awhile.
_____ e. I'd like to graduate from college.
_____ f. I'd like to do graduate work beyond college.

Sometimes what we would like to do isn't the same as what we expect to do. How far in school do you expect you really will go? (Check one)

_____ a. I think I really will quit school soon.
_____ b. I think I really will graduate from high school.
_____ c. I think I really will go to business or trade school.
_____ d. I think I really will go to college for awhile.
_____ e. I think I really will graduate from college.
_____ f. I think I really will do graduate work beyond college.

How certain are you about your school plans? (Check one)

_____ a. Very certain
_____ b. Fairly certain
_____ c. Not certain

How well do you think you have done in school? (Check one for each series of grades).

	a. Among the Poorest	b. Below Average	c. Average	d. Above Average	e. Among the Best
(1) While I was in the elementary grades					
(2) While I was in Junior High					
(3) Now in Senior High					

How do you rate your ability in the following school subjects compared with your closest friends? (Check one for each subject)

	a. Among the Poorest	b. Below Average	c. Average	d. Above Average	e. Among the Best
(1) Mathematics					
(2) English					
(3) Social Studies					
(4) Science					

Where do you think you rank in your entire high school class in the following subjects? (Check one for each subject)

	a. Among the Poorest	b. Below Average	c. Average	d. Above Average	e. Among the Best
(1) Mathematics					
(2) English					
(3) Social Studies					
(4) Science					

out How You Feel

. Check the one below that tells how you feel toward your present Science teacher. If you are not now taking this subject, consider the most recent teacher you have had in this subject.

_____ a. Very friendly
_____ b. Friendly
_____ c. Neither friendly nor unfriendly
_____ d. Unfriendly
_____ e. Very unfriendly

. Check the one below that tells how you feel toward your present English teacher. If you are not now taking this subject, consider the most recent teacher you have had in this subject.

_____ a. Very friendly
_____ b. Friendly
_____ c. Neither friendly nor unfriendly
_____ d. Unfriendly
_____ e. Very unfriendly

. Check the one below that tells how you feel toward your present Math teacher. If you are not now taking this subject, consider the most recent teacher you have had in this subject.

_____ a. Very friendly
_____ b. Friendly
_____ c. Neither friendly nor unfriendly
_____ d. Unfriendly
_____ e. Very unfriendly

5. Check the one below that tells how you feel toward your present Social Studies teacher. If you are not now taking this subject, consider the most recent teacher you have had in this subject.

_____ a. Very friendly
_____ b. Friendly
_____ c. Neither friendly nor unfriendly
_____ d. Unfriendly
_____ e. Very unfriendly

ɔut the Viewpoint of a Close Friend

ink about one of your closest friends at school. Now answer the following questions as you ink this FRIEND would answer them.

. How do you think your FRIEND would rate your school ability compared with other students in your high school class? (check one)

_____ a. Among the best
_____ b. Above average
_____ c. Average
_____ d. Below average
_____ e. Among the poorest

'. For your FRIEND to be most pleased with you, what kind of grades should you get in school in general? (check one)

_____ a. Mostly A's
_____ b. Mostly B's
_____ c. Mostly C's
_____ d. Mostly D's
_____ e. Mostly E's
_____ f. My grades do not make a difference to my friend

). How important is it to your FRIEND that you get mostly B's or better? (check one)

_____ a. Very important
_____ b. Important
_____ c. Not particularly important
_____ d. My grades do not matter to my friend at all

). What would be the lowest grades you could get and still have your FRIEND satisfied with you? (check one)

_____ a. Mostly A's
_____ b. Mostly B's
_____ c. Mostly C's
_____ d. Mostly D's
_____ e. Mostly E's
_____ f. My grades do not make a difference to my friend

ɔout the Viewpoint of your Parents

1. How do you think your PARENTS would rate your school ability compared with other students in your high school class? (check one)

_____ a. Among the best
_____ b. Above average
_____ c. Average
_____ d. Below average
_____ e. Among the poorest

2. For your PARENTS to be most pleased with you, what kind of grades should you get in school in general? (check one)

_____ a. Mostly A's
_____ b. Mostly B's
_____ c. Mostly C's
_____ d. Mostly D's
_____ e. Mostly E's
_____ f. My grades do not make a difference to my parents

23. How important is it to your PARENTS that you get mostly B's or better? (check one)

_____ a. Very important
_____ b. Important
_____ c. Not particularly important
_____ d. My grades do not matter to my parents at all

24. What would be the lowest grades you could get and still have your PARENTS satisfied with you? (check one)

_____ a. Mostly A's
_____ b. Mostly B's
_____ c. Mostly C's
_____ d. Mostly D's
_____ e. Mostly E's
_____ f. My grades do not make a

bout the Viewpoint of a Teacher of Your Choice

ink about the teacher you like or have liked best---the one you feel is most concerned bout your schoolwork.

5. Who is this teacher? (check one)

_____ a. A former elementary teacher.
_____ b. A former junior high teacher.
_____ c. A former senior high teacher.
_____ d. A present high school teacher.
_____ e. Other. Please explain_____
_____

ow answer the following questions as you think THIS TEACHER would answer them.

6. How do you think this TEACHER would rate your school ability compared with other students in your high school class? (check one)

_____ a. Among the best
_____ b. Above average
_____ c. Average
_____ d. Below average
_____ e. Among the poorest

7. For this TEACHER to be most pleased with you, what kind of grades should you get in school in general? (check one)

_____ a. Mostly A's
_____ b. Mostly B's
_____ c. Mostly C's
_____ d. Mostly D's
_____ e. Mostly E's
_____ f. My grades do not make a difference to my teacher

8. How important is it to this TEACHER that you get mostly B's or better? (check one)

_____ a. Very important
_____ b. Important
_____ c. Not particularly important
_____ d. My grades do not matter to my teacher at all

9. What would be the lowest grades you could get and still have this TEACHER satisfied with you? (check one)

_____ a. Mostly A's
_____ b. Mostly B's
_____ c. Mostly C's
_____ d. Mostly D's
_____ e. Mostly E's
_____ f. My grades do not make a difference to my teacher

. There are many people who are important in our lives, such as aunt, mother, next door neighbor, business teacher, older friend, closest boy friend, minister of my church, and many others. In the space below identify at least one person who you feel is important in YOUR life. Please indicate who each person is without giving his or her name.

1. _____

2. _____

3. _____

4. _____

5. _____

. There are many people who are concerned about how well students do in school. They may or may not be the same as the people who you consider important in your life. In the space below, identify at least one person who you feel is concerned about how well YOU do in school. Please indicate who each person is without giving his or her name.

1. _____

2. _____

3. _____

4. _____

5. _____

APPENDIX B

TABLE 5.1 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL ASPIRATIONS AND CHANGES IN OCCUPATIONAL ASPIRATIONS IN THE SIXTH AND TWELFTH GRADE FOR ALL STUDENTS.

EDUCATIONAL ASPIRATIONS	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	55	32	28
Theoretical Frequency	37.53	36.63	40.84
Chi Square	8.13	0.59	4.03
SAME			
Observed Frequency	38	45	53
Theoretical Frequency	44.39	43.32	48.29
Chi Square	0.92	0.07	0.46
DOWN			
Observed Frequency	32	45	55
Theoretical Frequency	43.08	42.05	46.87
Chi Square	2.85	0.21	1.41

$X^2 = 18.659$ P .001

TABLE 5.2 ASSOCIATION BETWEEN SEX AND CHANGES IN OCCUPATIONAL ASPIRATIONS IN THE SIXTH AND TWELFTH GRADES FOR ALL STUDENTS.

SEX	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
MALE			
Observed Frequency	61	51	89
Theoretical Frequency	64.76	65.27	70.97
Chi Square	0.22	3.12	4.58
FEMALE			
Observed Frequency	64	75	48
Theoretical Frequency	60.24	60.73	66.03
Chi Square	0.23	3.35	4.92

$X^2 = 16.430$ P .001+

TABLE 5.3 ASSOCIATION BETWEEN CHANGES IN SUBJECT'S STATUS OF LIVING WITH BOTH PARENTS IN THE SIXTH AND TWELFTH GRADE AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS.

LIVING WITH BOTH PARENTS IN BOTH SIXTH AND TWELFTH GRADE	OCCUPATIONAL EXPECTATIONS UP	SAME	DOWN
NO			
Observed Frequency	55	22	28
Theoretical Frequency	42.35	22.91	39.74
Chi Square	3.78	0.04	3.47
YES			
Observed Frequency	91	57	109
Theoretical Frequency	103.65	56.09	97.26
Chi Square	1.54	0.01	1.42

$X^2 = 10.259$ P .001

TABLE 5.4 ASSOCIATION BETWEEN DIFFERENCES IN STUDENTS' PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH IN SIXTH GRADE AND PERCEPTION OF ATTAINED RANK IN MATH IN TWELFTH GRADE AND CHANGES IN EDUCATIONAL EXPECTATIONS FOR ALL STUDENTS.

PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH	EDUCATIONAL EXPECTATIONS UP	SAME	DOWN
UP			
Observed Frequency	102	93	80
Theoretical Frequency	88.93	101.93	84.14
Chi Square	1.92	0.78	0.20
SAME			
Observed Frequency	23	40	28
Theoretical Frequency	29.43	33.73	27.84
Chi Square	1.40	1.17	0.00
DOWN			
Observed Frequency	5	16	15
Theoretical Frequency	11.64	13.34	11.01
Chi Square	3.79	0.53	1.44

$X^2 = 11.237$ P .02

TABLE 5.5 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS IN THE SIXTH AND TWELFTH GRADE FOR ALL STUDENTS.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	70	14	27
Theoretical Frequency	44.89	23.98	42.12
Chi Square	14.04	4.16	5.43
SAME			
Observed Frequency	55	32	52
Theoretical Frequency	56.22	30.03	52.75
Chi Square	0.03	0.13	0.01
DOWN			
Observed Frequency	21	32	58
Theoretical Frequency	44.89	23.98	42.14
Chi Square	12.72	2.68	5.98

$X^2 = 45.173$ P .001+

TABLE 5.6 ASSOCIATION BETWEEN DIFFERENCES IN STUDENT'S PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH IN THE SIXTH GRADE AND PERCEPTION OF ATTAINED RANK IN MATH IN THE TWELFTH GRADE AND CHANGES IN EDUCATIONAL EXPECTATIONS FOR WHITE STUDENTS.

PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH	EDUCATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	73	60	53
Theoretical Frequency	62.45	71.96	51.59
Chi Square	1.78	1.99	0.04
SAME			
Observed Frequency	16	34	12
Theoretical Frequency	20.82	23.99	17.20
Chi Square	1.11	4.18	1.57
DOWN			
Observed Frequency	3	12	11
Theoretical Frequency	8.73	10.06	7.21
Chi Square	3.76	0.37	1.99

$X^2 = 16.799$ P .01

TABLE 5.7 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL ASPIRATIONS AND CHANGES IN OCCUPATIONAL ASPIRATIONS IN THE SIXTH AND TWELFTH GRADE FOR WHITE STUDENTS.

EDUCATIONAL ASPIRATIONS	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	38	20	19
Theoretical Frequency	25.18	24.30	27.52
Chi Square	6.53	0.76	2.64
SAME			
Observed Frequency	25	31	41
Theoretical Frequency	31.72	30.61	34.67
Chi Square	1.42	0.00	1.16
DOWN			
Observed Frequency	23	32	34
Theoretical Frequency	29.10	28.09	31.81
Chi Square	1.28	0.55	0.15

$X^2 = 14.488$ P .01

TABLE 5.8 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS IN THE SIXTH AND TWELFTH GRADE FOR WHITE STUDENTS.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	47	10	21
Theoretical Frequency	29.88	16.98	31.14
Chi Square	9.81	2.87	3.30
SAME			
Observed Frequency	35	25	41
Theoretical Frequency	38.69	21.99	40.32
Chi Square	0.35	0.41	0.01
DOWN			
Observed Frequency	13	19	37
Theoretical Frequency	26.43	15.02	27.54
Chi Square	6.83	1.05	3.25

$X^2 = 27.881$ P .001

TABLE 5.9 ASSOCIATION BETWEEN SEX AND OCCUPATIONAL ASPIRATIONS IN THE SIXTH AND TWELFTH GRADE FOR WHITE STUDENTS.

SEX	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
MALE			
Observed Frequency	40	40	62
Theoretical Frequency	45.91	45.38	50.71
Chi Square	0.76	0.64	2.51
FEMALE			
Observed Frequency	46	45	33
Theoretical Frequency	40.09	39.62	44.29
Chi Square	0.87	0.73	2.88

$X^2 = 8.386$ P .02

TABLE 5.10 ASSOCIATION BETWEEN SEX AND CHANGES IN OCCUPATIONAL ASPIRATIONS IN THE SIXTH AND TWELFTH GRADE FOR NON-WHITE STUDENTS.

SEX	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
MALE			
Observed Frequency	22	11	27
Theoretical Frequency	19.18	20.16	20.66
Chi Square	0.41	4.16	1.95
FEMALE			
Observed Frequency	17	30	15
Theoretical Frequency	19.82	20.84	21.34
Chi Square	0.40	4.03	1.89

$X^2 = 12.845$ P .01

TABLE 5.11 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS IN THE SIXTH AND TWELFTH GRADE FOR NON-WHITE STUDENTS.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	23	4	6
Theoretical Frequency	14.89	7.01	11.10
Chi Square	4.41	1.29	2.34
SAME			
Observed Frequency	20	7	11
Theoretical Frequency	17.15	8.07	12.78
Chi Square	0.47	0.14	0.25
DOWN			
Observed Frequency	8	13	21
Theoretical Frequency	18.96	8.92	14.12
Chi Square	6.33	1.87	3.35

$X^2 = 20.453$ P .001

TABLE 5.12 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL ASPIRATIONS AND CHANGES IN OCCUPATIONAL ASPIRATIONS IN SIXTH AND TWELFTH GRADE FOR MALE STUDENTS.

EDUCATIONAL ASPIRATIONS	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	26	14	16
Theoretical Frequency	17.45	13.51	25.05
Chi Square	4.19	0.02	3.27
SAME			
Observed Frequency	18	18	38
Theoretical Frequency	23.06	17.85	33.10
Chi Square	1.11	0.00	0.73
DOWN			
Observed Frequency	18	16	35
Theoretical Frequency	21.50	16.64	30.86
Chi Square	0.57	0.02	0.56

$X^2 = 10.463$ P .05

TABLE 5.13 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS IN THE SIXTH AND TWELFTH GRADE FOR MALE STUDENTS.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	34	7	12
Theoretical Frequency	23.17	11.01	18.83
Chi Square	5.06	1.46	2.47
SAME			
Observed Frequency	33	18	30
Theoretical Frequency	34.41	16.82	28.77
Chi Square	0.16	0.08	0.05
DOWN			
Observed Frequency	13	12	23
Theoretical Frequency	21.42	10.17	17.40
Chi Square	3.31	0.78	1.80

$X^2 = 15.188$ P .01

TABLE 5.14 ASSOCIATION BETWEEN DIFFERENCES IN STUDENTS' PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH IN THE SIXTH GRADE AND PERCEPTION OF ATTAINED RANK IN MATH IN THE TWELFTH GRADE AND CHANGES IN EDUCATIONAL EXPECTATIONS FOR MALE STUDENTS.

PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH	EDUCATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	51	50	35
Theoretical Frequency	42.14	56.83	37.03
Chi Square	1.80	0.82	0.11
SAME			
Observed Frequency	11	28	13
Theoretical Frequency	16.11	21.73	14.16
Chi Square	1.62	1.81	0.09
DOWN			
Observed Frequency	4	11	10
Theoretical Frequency	7.75	10.45	6.81
Chi Square	1.81	0.03	1.50

$X^2 = 9.660$ P .05

TABLE 5.15 ASSOCIATION BETWEEN RACE AND CHANGES IN EDUCATIONAL ASPIRATIONS FOR MALE STUDENTS.

RACE	EDUCATIONAL ASPIRATIONS		
	UP	SAME	DOWN
WHITE			
Observed Frequency	36	64	51
Theoretical Frequency	41.63	56.45	52.92
Chi Square	0.76	1.01	0.07
NON-WHITE			
Observed Frequency	23	16	24
Theoretical Frequency	17.37	23.55	22.08
Chi Square	1.83	2.42	0.17

$X^2 = 6.255$ P .05

TABLE 5.16 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL ASPIRATIONS AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL FEMALE STUDENTS IN THE SIXTH AND TWELFTH GRADE.

EDUCATIONAL ASPIRATIONS	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	29	18	12
Theoretical Frequency	20.20	23.73	15.07
Chi Square	3.83	1.38	0.63
SAME			
Observed Frequency	20	27	15
Theoretical Frequency	21.23	24.93	15.84
Chi Square	0.07	0.17	0.04
DOWN			
Observed Frequency	14	29	20
Theoretical Frequency	21.57	25.34	16.09
Chi Square	2.66	0.53	0.95

$X^2 = 10.263$ P .05

TABLE 5.17 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL FEMALE STUDENTS IN THE SIXTH AND TWELFTH GRADE.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	36	7	15
Theoretical Frequency	21.51	13.03	23.46
Chi Square	9.77	2.79	3.05
SAME			
Observed Frequency	22	14	22
Theoretical Frequency	21.51	13.03	23.46
Chi Square	0.01	0.07	0.09
DOWN			
Observed Frequency	8	19	35
Theoretical Frequency	22.99	13.93	25.08
Chi Square	9.77	1.84	3.92

$X^2 = 31.328$ P .001+

TABLE 5.18 ASSOCIATION BETWEEN CHANGES IN SUBJECT'S STATUS OF LIVING WITH BOTH PARENTS IN SIXTH AND TWELFTH GRADE AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL FEMALE STUDENTS.

LIVING WITH BOTH PARENTS IN SIXTH AND TWELFTH GRADE	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
NO			
Observed Frequency	26	13	14
Theoretical Frequency	19.54	12.14	21.32
Chi Square	2.13	0.06	2.51
YES			
Observed Frequency	40	28	58
Theoretical Frequency	46.46	28.86	50.68
Chi Square	0.90	0.03	1.06

$X^2 = 6.688$ P .05

TABLE 5.19 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL ASPIRATIONS AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL STUDENTS LIVING WITH BOTH PARENTS IN SIXTH AND TWELFTH GRADES.

EDUCATIONAL ASPIRATIONS	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	40	24	19
Theoretical Frequency	25.75	26.96	30.29
Chi Square	7.89	0.32	4.21
SAME			
Observed Frequency	22	34	40
Theoretical Frequency	29.78	31.18	35.04
Chi Square	2.03	0.25	0.70
DOWN			
Observed Frequency	23	31	41
Theoretical Frequency	29.47	30.86	34.67
Chi Square	1.42	0.00	1.16

$X^2 = 17.990$ P .01

TABLE 5.20 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS LIVING WITH BOTH PARENTS IN SIXTH AND TWELFTH GRADES.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	45	10	20
Theoretical Frequency	26.66	16.41	31.93
Chi Square	12.62	2.50	4.46
SAME			
Observed Frequency	33	27	41
Theoretical Frequency	35.90	22.09	43.00
Chi Square	0.23	1.09	0.09
DOWN			
Observed Frequency	13	19	48
Theoretical Frequency	28.44	17.50	34.06
Chi Square	8.39	0.13	5.70

$X^2 = 35.207$ P .001

TABLE 5.21 ASSOCIATION BETWEEN SEX AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL STUDENTS LIVING WITH BOTH PARENTS IN SIXTH AND TWELFTH GRADES.

SEX	OCCUPATIONAL ASPIRATION		
	UP	SAME	DOWN
MALE			
Observed Frequency	43	41	65
Theoretical Frequency	45.39	49.67	53.94
Chi Square	0.13	1.51	2.27
FEMALE			
Observed Frequency	42	52	36
Theoretical Frequency	39.61	43.33	47.06
Chi Square	0.14	1.73	2.60

$X^2 = 8.385$ P .02

TABLE 5.22 ASSOCIATION BETWEEN DIFFERENCES IN PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH IN THE SIXTH GRADE AND PERCEPTION OF ATTAINED RANK IN MATH IN THE TWELFTH GRADE AND CHANGES IN EDUCATIONAL EXPECTATIONS FOR ALL STUDENTS LIVING WITH BOTH PARENTS IN THE SIXTH AND TWELFTH GRADES.

PERCEIVED EXPECTED ACHIEVEMENT IN MATH	EDUCATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	69	64	59
Theoretical Frequency	59.13	73.08	59.79
Chi Square	1.65	1.13	0.01
SAME			
Observed Frequency	17	33	20
Theoretical Frequency	21.56	26.64	21.80
Chi Square	0.96	1.52	0.15
DOWN			
Observed Frequency	3	13	11
Theoretical Frequency	8.31	10.28	8.41
Chi Square	3.40	0.72	0.80

$X^2 = 10.333$ P .05

TABLE 5.23 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS WHO DID NOT LIVE WITH BOTH PARENTS IN BOTH SIXTH AND TWELFTH GRADES.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	25	4	7
Theoretical Frequency	18.86	7.54	9.60
Chi Square	2.00	1.66	0.70
SAME			
Observed Frequency	22	5	11
Theoretical Frequency	19.90	7.96	10.13
Chi Square	0.22	1.10	0.07
DOWN			
Observed Frequency	8	13	10
Theoretical Frequency	16.24	6.50	8.27
Chi Square	4.18	6.51	0.36

$X^2 = 16.823$ P .01

TABLE 5.24 ASSOCIATION BETWEEN SEX AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL STUDENTS WHO DID NOT LIVE WITH BOTH PARENTS IN BOTH SIXTH AND TWELFTH GRADES.

SEX	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
MALE			
Observed Frequency	18	10	24
Theoretical Frequency	19.08	15.74	17.17
Chi Square	0.06	2.10	2.71
FEMALE			
Observed Frequency	22	23	12
Theoretical Frequency	20.92	17.26	18.83
Chi Square	0.06	1.91	2.47

$X^2 = 9.311$ P .01

TABLE 5.25 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS EXPRESSING VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN BOTH SIXTH AND TWELFTH GRADES.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	13	1	5
Theoretical Frequency	6.65	4.12	8.23
Chi Square	6.06	2.36	1.27
SAME			
Observed Frequency	7	8	11
Theoretical Frequency	9.10	5.63	11.27
Chi Square	0.48	0.99	0.01
DOWN			
Observed Frequency	1	4	10
Theoretical Frequency	5.25	3.25	6.50
Chi Square	3.44	0.17	1.88

$X^2 = 16.676$ P .001

TABLE 5.26 ASSOCIATION BETWEEN SEX AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL STUDENTS EXPRESSING VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN BOTH SIXTH AND TWELFTH GRADES.

SEX	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
MALE			
Observed Frequency	10	4	18
Theoretical Frequency	7.47	10.67	13.87
Chi Square	0.86	4.17	1.23
FEMALE			
Observed Frequency	4	16	8
Theoretical Frequency	6.53	9.33	12.13
Chi Square	0.98	4.76	1.41

$X^2 = 13.411$ P .01

TABLE 5.27 ASSOCIATION BETWEEN SEX AND CHANGES IN EDUCATIONAL EXPECTATIONS FOR ALL STUDENTS EXPRESSING VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN BOTH SIXTH AND TWELFTH GRADES.

SEX	EDUCATIONAL EXPECTATIONS		
	UP	SAME	DOWN
MALE			
Observed Frequency	11	19	3
Theoretical Frequency	12.03	14.22	8.75
Chi Square	0.09	1.61	1.61
FEMALE			
Observed Frequency	11	7	11
Theoretical Frequency	9.97	11.78	7.25
Chi Square	0.11	1.94	1.94

$X^2 = 7.290$ P .05

TABLE 5.28 ASSOCIATION BETWEEN DIFFERENCES IN STUDENTS' PERCEPTION OF EXPECTED ACHIEVEMENT IN ENGLISH IN THE SIXTH GRADE AND PERCEPTION OF ATTAINED RANK IN ENGLISH IN THE TWELFTH GRADE AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS EXPRESSING VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN BOTH SIXTH AND TWELFTH GRADES.

PERCEPTION OF EXPECTED ACHIEVEMENT IN ENGLISH	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	19	10	12
Theoretical Frequency	14.35	8.88	17.77
Chi Square	1.51	0.14	1.87
SAME			
Observed Frequency	2	2	12
Theoretical Frequency	5.60	3.47	6.93
Chi Square	2.31	0.62	3.70
DOWN			
Observed Frequency	0	1	2
Theoretical Frequency	1.05	0.65	1.30
Chi Square	1.05	0.19	0.38

$X^2 = 11.772$ P .02

TABLE 5.29 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL ASPIRATIONS AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN EITHER SIXTH OR TWELFTH GRADES.

EDUCATIONAL ASPIRATIONS	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	50	26	22
Theoretical Frequency	33.57	30.85	33.57
Chi Square	8.04	0.76	3.99
SAME			
Observed Frequency	33	36	42
Theoretical Frequency	38.03	34.94	38.03
Chi Square	0.66	0.33	0.41
DOWN			
Observed Frequency	28	40	47
Theoretical Frequency	39.40	36.20	39.40
Chi Square	3.30	0.40	1.47

$X^2 = 19.063$ P .001

TABLE 5.30 ASSOCIATION BETWEEN SEX AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN EITHER SIXTH OR TWELFTH GRADES.

SEX	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
MALE			
Observed Frequency	52	47	71
Theoretical Frequency	57.53	54.94	57.53
Chi Square	0.53	1.15	3.15
FEMALE			
Observed Frequency	59	59	40
Theoretical Frequency	53.47	51.06	53.47
Chi Square	0.57	1.23	3.39

$X^2 = 10.032$ P .01

TABLE 5.31 ASSOCIATION BETWEEN DIFFERENCES IN STUDENTS' PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH IN THE SIXTH GRADE AND PERCEPTION OF ATTAINED RANK IN MATH IN THE TWELFTH GRADE AND CHANGES IN EDUCATIONAL EXPECTATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN EITHER SIXTH OR TWELFTH GRADES.

PERCEPTION OF EXPECTED ACHIEVEMENT IN MATH	EDUCATIONAL EXPECTATIONS UP	SAME	DOWN
UP			
Observed Frequency	86	74	70
Theoretical Frequency	74.85	82.34	72.81
Chi Square	1.66	0.84	0.11
SAME			
Observed Frequency	20	33	23
Theoretical Frequency	24.73	27.21	24.06
Chi Square	0.91	1.23	0.05
DOWN			
Observed Frequency	4	14	14
Theoretical Frequency	10.41	11.46	10.13
Chi Square	3.95	0.57	1.48

$X^2 = 10.793$ P .05

TABLE 5.32 ASSOCIATION BETWEEN CHANGES IN SUBJECT'S STATUS OF LIVING WITH BOTH PARENTS AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN EITHER SIXTH OR TWELFTH GRADES.

LIVING WITH BOTH PARENTS IN SIXTH AND TWELFTH GRADES	OCCUPATIONAL EXPECTATIONS UP	SAME	DOWN
NO			
Observed Frequency	46	19	23
Theoretical Frequency	37.01	18.94	32.05
Chi Square	2.19	0.00	2.56
YES			
Observed Frequency	81	46	87
Theoretical Frequency	89.99	46.06	77.95
Chi Square	0.90	0.00	1.05

$X^2 = 6.693$ P .05

TABLE 5.33 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH MATH TEACHERS IN EITHER SIXTH OR TWELFTH GRADES.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	59	13	22
Theoretical Frequency	39.66	19.99	34.35
Chi Square	9.43	2.44	4.44
SAME			
Observed Frequency	48	23	40
Theoretical Frequency	46.83	23.60	40.56
Chi Square	0.03	0.02	0.01
DOWN			
Observed Frequency	20	28	48
Theoretical Frequency	40.50	20.41	35.08
Chi Square	10.38	2.82	4.76

$X^2 = 34.323$ P .001

TABLE 5.34 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL ASPIRATIONS AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH READING TEACHER IN THE SIXTH GRADE OR ENGLISH TEACHER IN THE TWELFTH GRADE.

EDUCATIONAL ASPIRATIONS	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	48	27	26
Theoretical Frequency	32.06	31.74	37.19
Chi Square	7.92	0.71	3.37
SAME			
Observed Frequency	30	35	44
Theoretical Frequency	34.60	34.26	40.14
Chi Square	0.61	0.02	0.37
DOWN			
Observed Frequency	22	37	46
Theoretical Frequency	33.33	33.00	38.67
Chi Square	3.85	0.48	1.39

$X^2 = 18.727$ P .001

TABLE 5.35 ASSOCIATION BETWEEN SEX AND CHANGES IN OCCUPATIONAL ASPIRATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH READING TEACHER IN THE SIXTH GRADE OR ENGLISH TEACHER IN THE TWELFTH GRADE.

SEX	OCCUPATIONAL ASPIRATIONS		
	UP	SAME	DOWN
MALE			
Observed Frequency	53	41	77
Theoretical Frequency	53.44	55.04	62.52
Chi Square	0.00	3.58	3.35
FEMALE			
Observed Frequency	47	62	40
Theoretical Frequency	46.56	47.06	54.58
Chi Square	0.00	4.11	3.85

$X^2 = 14.900$ P .001

TABLE 5.36 ASSOCIATION BETWEEN CHANGES IN EDUCATIONAL EXPECTATIONS AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH READING TEACHER IN THE SIXTH GRADE OR ENGLISH TEACHER IN THE TWELFTH GRADE.

EDUCATIONAL EXPECTATIONS	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	64	11	21
Theoretical Frequency	39.30	20.94	35.76
Chi Square	15.52	4.72	6.09
SAME			
Observed Frequency	44	28	40
Theoretical Frequency	45.85	24.43	41.72
Chi Square	0.07	0.52	0.07
DOWN			
Observed Frequency	14	26	50
Theoretical Frequency	36.85	19.63	33.52
Chi Square	14.17	2.07	8.10

$X^2 = 51.327$ P .001

TABLE 5.37 ASSOCIATION BETWEEN CHANGES IN SUBJECT'S STATUS OF LIVING WITH BOTH PARENTS AND CHANGES IN OCCUPATIONAL EXPECTATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH READING TEACHER IN THE SIXTH GRADE OR ENGLISH TEACHER IN THE TWELFTH GRADE.

LIVING WITH BOTH PARENTS IN SIXTH AND TWELFTH GRADE	OCCUPATIONAL EXPECTATIONS		
	UP	SAME	DOWN
NO			
Observed Frequency	53	21	30
Theoretical Frequency	42.58	22.68	38.74
Chi Square	2.55	0.13	1.97
YES			
Observed Frequency	69	44	81
Theoretical Frequency	79.42	42.32	72.26
Chi Square	1.37	0.07	1.06

$X^2 = 7.139$ P .05

TABLE 5.38 ASSOCIATION BETWEEN DIFFERENCES IN STUDENTS' PERCEPTION OF EXPECTED ACHIEVEMENT IN READING IN THE SIXTH GRADE AND PERCEPTION OF ATTAINED RANK IN ENGLISH IN THE TWELFTH GRADE AND CHANGES IN EDUCATIONAL ASPIRATIONS FOR ALL STUDENTS EXPRESSING LESS THAN VERY FRIENDLY RELATIONS WITH READING TEACHER IN THE SIXTH GRADE OR ENGLISH TEACHER IN THE TWELFTH GRADE.

PERCEPTION OF EXPECTED ACHIEVEMENT IN ENGLISH	EDUCATIONAL ASPIRATIONS		
	UP	SAME	DOWN
UP			
Observed Frequency	81	71	62
Theoretical Frequency	68.53	73.70	71.76
Chi Square	2.27	0.10	1.33
SAME			
Observed Frequency	21	32	35
Theoretical Frequency	28.18	30.31	29.51
Chi Square	1.83	0.09	1.02
DOWN			
Observed Frequency	4	11	14
Theoretical Frequency	9.29	9.99	9.73
Chi Square	3.01	0.10	1.88

$X^2 = 11.630$ P .05