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# A Comparison of Aspiration Levels of Students in Ability-Grouped and Randomly-Grouped Schools

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# A COMPARISON OF ASPIRATION LEVELS OF STUDENTS IN ABILITY-GROUPED AND RANDOMLY-GROUPED SCHOOLS

by

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George Aaron Jeffs

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# CHAPTER I

# INTRODUCTION

## Problem

Grouping students within the school setting has long been a concern to all those associated with the educative process. Much investigation has been devoted to the position of level of aspiration as influential motive forces for educational, occupational, and social achievement. Many avenues of grouping have been investigated and some very thoroughly. However, research concerning grouping in relation to level of aspiration in the school setting appears to be extremely limited. This study is designed to further investigate this issue. It might be said that this study consists of essentially two phases: (1) the development of instruments for measuring classroom aspiration, social aspiration, and educational aspiration; and (2) the determination of level of aspiration relationships which exist between junior high school boys grouped on the basis of ability and those randomly assigned to a classroom.

## Significance

This study should be important to the field of education because it attempts to reveal the influences ability grouping might have on a student's level of aspiration, a component of the total personality. The instruments employed in this study may prove valuable to educators both diagnostically and prognostically. Such instruments may expose personality factors which influence school performance. The results

accruing from this study may serve as a guide to school personnel in establishing a classroom atmosphere conducive to good mental health and achievement.

## Hypotheses

The suppositions are so designed as to fit the construct of the null hypothesis. It is assumed that there is no real difference between the means of the populations involved, that any differences are non-significant and might easily arise from sampling fluctuations. The hypotheses that ensue should be considered as applicable to grades seven and nine. That is, each of the 20 hypotheses should be viewed as applicable to grade seven only and these same 20 hypotheses should then be considered as applicable to grade nine only.

1. Classroom aspiration scores for superior students in ability-grouped classes will not differ significantly from those of students of comparable ability not so grouped.

2. Classroom aspiration scores will not differ significantly between average students of the ability- and randomly-grouped districts.

3. Classroom aspiration scores for the developmental students grouped for ability will not be significantly different from those of comparable students in the randomly-grouped district.

4. Social aspiration scores obtained by superior students in ability-grouped classes will not be significantly different from those obtained by students of comparable ability but not so grouped.

5. There will not be a significant difference in the social aspiration scores obtained by the average students of the ability- and randomly-grouped districts.

6. No significant difference will be found between the social aspiration scores obtained by developmental students grouped for ability and comparable students in the randomly-grouped district.

7. Educational aspiration scores for superior students in ability-grouped classes will not differ significantly from those of students of comparable ability but not so grouped.

8. Educational aspiration scores will not differ significantly between average students of the ability- and randomly-grouped districts.

9. Educational aspiration scores obtained by the developmental students grouped for ability will not be significantly different from those of comparable students in the randomly-grouped district.

10. Occupational aspiration scores for superior students in the ability-grouped classes will not differ significantly from those scores obtained by students of equal ability but randomly dispersed throughout classrooms.

11. No significant difference will be found between occupational aspiration scores obtained by average status students in the ability-grouped and randomly-grouped districts.

12. There will be no significant difference in the occupational aspiration scores achieved by the developmental students grouped for ability and comparable students in the randomly-grouped district.

13. Value achievement scores will not be significantly different between superior students in ability-grouped classes and those of similar status randomly-grouped.

14. No significant difference will be found between the value achievement scores of ability-grouped and randomly-grouped students of average status in the two districts.

15. Value achievement scores for the developmental students grouped for ability will not differ significantly from those of comparable students in the randomly-grouped district.

16. There will be no significant difference in the laboratory aspiration level of superior students in the ability-grouped classes and students of comparable ability in the randomly-grouped district.

17. Level of aspiration, as measured by the laboratory test, will not differ significantly between average students of the ability- and randomly-grouped districts.

18. No significant difference in laboratory level of aspiration will be found between developmental students grouped for ability and comparabel students heterogeneously-grouped.

19. There will be no significant difference in aspiration (classroom, social, educational, occupational, laboratory) and value achievement scores obtained by students of the different ability levels in the Ogden School District.

20. There will be no significant difference in aspiration (classroom, social, educational, occupational, laboratory) and value achievement scores obtained by students of the different ability levels in the Weber School District.

## Level of Aspiration

The formulation of the concept "level of aspiration" might be credited to Dembo. It was during the course of an experimental investigation of anger in Germany in 1931 that she proposed this concept. Gardner offers Hoppe's interpretation of what the latter understood as the meaning of "level of aspiration."

> The subject . . . always undertakes the task with certain demands (Anspruchen), which can change in the course of the activity. The totality of these constantly shifting, now indefinite, now precise, expectations, goal-settings or demands in connection with one's own future performance, we shall term the level of aspiration of the subject. (Gardner, 1940, p. 61)

According to Hilgard (1942, p. 424), Hoppe describes "level of aspiration" as a momentary goal which the individual sets for himself. This goal he defines in relation to one's present performance in the task, which may be described correspondingly as the "level of achievement."

Frank's delineation of "level of aspiration" is contained in the following passage.

> The term level of aspiration . . . is defined as the level of future performance in a familiar task which an individual, knowing his level of past performance in that task, explicitly undertakes to reach. (Frank, 1935, p. 119)

Boyd (1952, p. 192) tersely describes "level of aspiration" as an individual's ambition in a dynamic situation.

Bayton (1943, p. 21) has related level of aspiration to needs. This investigator then divides these needs into three categories: (1) the need to do well (or to appear to be wanting to do well), (2) the need to approximate the future performance, and (3) the need to avoid failure.

Frank offers still another definition of the term in question.

> The <u>level of aspiration</u> usually represents a compromise between the subject's evaluation of his ability with respect to the difficulty of the task and his desire to achieve a high level of performance--that is, between a judgment and a goal. (Frank, 1941, p. 224)

A review of the literature pertinent to the present topic indicates that level of aspiration may have many different connotations. An expression of high level of aspiration may indicate merely a desire to attain a goal. This same expression may serve as an incentive to better performance. Again, this same expression might be a means of protecting

the ego. A low level of aspiration, likewise, has no single, specific meaning. It could be a method of avoiding tension. This same low level of aspiration could be an expression of objective judgment. Then again, this stated aim could be a method of avoiding the appearance of failure. Success or failure may not only result in changed behavior, but may also change the subject's meaning of level of aspiration.

Level of aspiration as employed in this paper shall refer to that standard established by the subject which he generally desires and hopes or expects to attain. It is an orientation toward a goal.

# CHAPTER II

# REVIEW OF LITERATURE

## Ability Grouping

A brief discussion offering a limited review of the pros and cons of ability grouping *per se* should perhaps precede a more detailed overview of this practice as it relates to level of aspiration. It might be said that a rather large percentage of ability grouping investigations have centered on achievement. The present study, however, focuses on the social and personality aspects of ability grouping.

Barthelmess and Boyer (1932) divided 1,130 pupils into ability groups on the basis of an individual examination by a clinical psychologist or by group intelligence tests. Either the Otis Classification Test or the Philadelphia Intelligence Test was used for the group testing. The experimental pupils, grouped into three levels, consisted of 565 in number. Standardized achievement and intelligence tests were cumulatively reported. Control schools were selected with groups of pupils of approximately the same average intelligence to enable pairing of experimental and control pupils. The tests administered at the end of the year surveyed academic areas including arithmetic fundamentals and problems, geography, English, and paragraph reading. The experimental group made a gain of 12.8 points, the control group 10.4 points, with the standard error of the difference .31. This proved significant beyond the .01 level. There was an advancement for the homogeneously-grouped pupils in the high group beyond that of the controls of 2.1, in the medium group of 2.6,

and in the low group of 1.8. In the heterogeneously-grouped classes, the high pupils made the greatest improvement, the medium group next greatest, and the low group the least. Numerous studies have shown that grouping for ability results in greater achievement gains than the non-grouped classroom yields (Rankin, Anderson, and Bergman, 1936; Worlton, 1926; Holy and Sutton, 1930; Kraraceis and Wiles, 1938; Howell, 1962; Baughman and Schoonmaker, 1961). Various reports may be found in the literature citing the foibles of ability grouping (Hunt, 1942; Van Wagenen, 1927; Rudd, 1958). Ekstrom evaluated the fallacies of experimental design

> The major deficiency in most of these experiments that compared homogeneous and heterogeneous grouping is failure to provide differentiation of course content and method according to level of ability. The very fact that a control group is introduced can put limitations on the adaptation of the curriculum of ability groups. However, results favoring homogeneous grouping were strongly evident in experiments that specifically provided for differentiation of methods and materials according to the students' ability and made an effort to push bright, homogeneous classes. In summary, it can be concluded that controlled experimental studies comparing the effectiveness of homogeneous and heterogeneous grouping, as evaluated by student achievement, showed a great variety of experimental designs and no consistent pattern of results. Many experiments failed to control the type of teaching and to provide differentiation of teaching according to ability levels. Poor experimental design, such as the use of available data only and the use of matched pairs of subjects on unwarranted assumptions or similarity, made many studies less effective. (Ekstrom, 1961, p. 223)

Some investigators indicate that ability grouping stimulates unhealthy social attitudes. One study that perhaps deserves mention was completed by Luchins and Luchins in 1948. This team of investigators, attempting to determine children's attitudes toward homogeneous grouping, interviewed 190 fourth, fifth, and sixth grade pupils. One general conclusion was that a stigma is attached to the pupils of the lowest class. The subjects involved in this study would rather remain in the higher class and risk the chance of academic failure in order to gain the social

prestige that accompanies this classification. The authors believe that grouping produces a type of caste system in the schools. This study indicates that ability grouping tends to emphasize learning for extrinsic reward. The general tone of this study is echoed by the opinions of others (Cavanaugh, 1960; Tonsor, 1953; Bettelheim, 1958; Hamalainen, 1950; Brueckner and Bond, 1955). Other researchers offer evidence that refutes the inference that ability grouping produces adverse social implication (Goldberg, Passow, and Lorge, 1958; Justman, 1953; Rochfort, 1959; Lawson, 1957; Riley, 1956; Harvey and Holmes, 1956; Howell, 1962).

An argument posed by those in opposition to ability grouping is to the effect that teachers are unsympathetic toward this practice. Drews (1959), Williams (1958), Woody (1924), Marsh (1955), Justman and Wrightstone (1956), and Strickland (1960) offer evidence to the contrary.

Several investigations have been completed in the area of grouping in science and mathematics at the secondary school level. One study, not specifically designed to investigate grouping in science and mathematics solely but including these areas, was done by Justman (1953). Two matched groups of gifted junior high school students served as subjects for this study. The experimental group, homogeneously-grouped and expected to make rapid progress, was matched against the control group of heterogeneously-grouped students expected to make normal progress. Matching criteria included school attended, grade, sex, MA, CA, I.Q., growth in reading, and computational skills. The homogeneous groups for grades seven, eight, and nine showed a significant difference (.01 level) in progress made in mathematics and science as shown by the results of the Cooperative tests. Insignificant differences between members of pairs were found in reading and computational skills as measured by the

Stanford Achievement Reading Test and the New York Arithmetic Computations Test. The experimental group scored significantly higher on the Cooperative Social Studies Test than did the members of the control group. However, the author notes that this difference might result from inadequate matching in reading skills. Creative expression in the language arts was measured by the use of the Scale for Rating Creative Expression. The experimental group was significantly higher (.05 level) on three of the six ratings of original stories and significantly higher (.01 level) on five of six ratings of original poems. Little difference was shown between the groups as concerns social and personal adjustment; they had similar patterns of attitudes and interests. This author concludes that grouping gifted children in special progress classes is accompanied by greater academic achievement than that shown by matched pupils in normal progress classes. Also, homogeneous grouping did not appear to be detrimental to social acceptance, interests, attitudes, and aspects of personality. This study may be criticized on the basis of the experimental design which employs matched pairs.

Opinions generally supporting the conclusions reached by Justman concerning grouping for science and mathematics are many (Peckman, 1952; Price, 1951; Johnson, 1953; Kling, 1954; Buck, 1954; Hetland and Glenn, 1957). It might be said that grouping for science and mathematics is one favorable method employed in meeting educational demands. Elder (1957) advocates an interesting grouping plan by the use of weekly seminars for the mathematically talented high school student. Eckelberry (1956) found no adverse social or psychological effects resulting from an accelerated science and mathematics program at the high school level. Harvey and Holmes (1956) generally support the foregoing finding at the

elementary school level.

It should be obvious that ability grouping has proven to be a controversial issue and one that warrants much research. It is suggested that a great deal of research is needed in relation to socio-psychological variables and ability grouping.

## Methods in Level of Aspiration Studies

The following section of this paper will review a number of methods employed by researchers in the investigation of level of aspiration. Ricciuti (1951) offered an approach to the survey of literature that has here been adopted as a paradigm.

### Task types utilized

One investigator (Ricciuti, 1951) lists Dembo and Hoppe as two of the first researchers attempting to select appropriate tasks from which goal-setting behavior may be elicited. Dembo and Hoppe devised problems resembling games which required ingenuity and patience, such as tossing rings over bottle necks. There appears to be a rather general agreement that the tasks here referred to should possess interest value, intermediate difficulty, and a high degree of ego-involvement.

An important consideration to be recognized when confronted with types of tasks to be utilized is the manner in which performance scores might be reported to the subject. Some investigators prefer to offer fictitious scores while others advocate that only actual scores should be reported to the subject. Should artificial scores be presented to the examinee, the tasks involved are usually those which yield limited variability in performance from trial to trial thus making such reported

scores plausible. If authentic scores are to be reported to the subject, one must consider whether or not the task involved should permit improvement of performance with practice. This is a point of discontention among some investigators. Rotter (1942b) maintained that the learning factor should be minimized, while others (Hanawalt, Hamilton and Morris, 1943) sought appreciable learning during an investigation. Several researchers have conducted investigations on level of aspiration in which practice effects were curbed (Ax, 1946; Frank, 1937; Klugman, 1947, 1948). One worker in the field (Ricciuti, 1951) suggests that in considering if performance scores should improve with practice the best procedure may be one where the examinee is conscious of the possibility of improvement, but in which his performance will show some variability.

Tasks which have served various investigators in experimental studies of level of aspiration follow.

Psychomotor tasks. Cancellation tasks have been the core of some studies (Anderson and Brandt, 1939; Bayton, 1943; Gardner, 1939; Gould and Kaplan, 1940; MacIntosh, 1942; Preston and Bayton, 1941; Davids and White, 1958). Other psychomotor tasks employed in the study of aspiration level include quoit throwing (Margaret, 1942; Smith, 1940), steadiness (Gould and Kaplan, 1940 ; Klein, 1948), kinesthetic judgment (Snedden, 1936), rolling a ball a specific distance along an inclined plane (Ax, 1946; Cohen, 1950; Klugman, 1947, 1948; Rotter, 1942b; Zander and Meadow, 1962), discrimination reaction time (Klein, 1948), manual dexterity and speed (Bayton, 1948; Klein, 1948), and target (Gould, 1939). A number of researchers have utilized dart throwing tasks as a means of establishing level of aspiration (Adams, 1939; Irwin and Mintzer, 1942; Margaret, 1942; McGehee, 1940; Preston, Spiers, and Trasoff, 1947; Smith, 1940; Snedden, 1936).

Cognitive tasks, verbal. Measures described as verbal cognitive have served on occasion in the investigation of level of aspiration. Among such measures are synonyms (Festinger, 1942b; Hertzman and Festinger, 1940; Sears, 1940), literary information (Chapman and Volkmann, 1939), vocabulary (Gould and Kaplan, 1940), opposites (Gardner, 1940b), some parts of the Otis Self-Administering Intelligence Test (Chapman and Volkmann, 1939) and general information (Festinger, 1942b; Gould and Lewis, 1940; Hertzman and Festinger, 1940).

Cognitive tasks, non-verbal. Non-verbal cognitive tasks include a variation of code-substitution tests such as letter-code, digit-symbol, symbol-substitutions and others (Eysenk and Himmelweit, 1946; Gardner, 1939, 1940b; Gould and Kaplan, 1940; Gruen, 1945; Hanawalt, Hamilton, and Morris, 1943; Heathers, 1942; MacIntosh, 1942; Preston and Bayton, 1941; Snedden, 1936).

Cognitive tasks, arithmetic. Several studies concerning level of aspiration have been designed for actual classroom situations. The majority of the arithmetic tasks, however, are of the laboratory rather than the classroom type. Such arithmetic tasks may be centered on addition, multiplication, long division, mental multiplication or subtraction (Bayton, 1943; Gould and Kaplan, 1940; Heathers, 1942; Hilgard, Sait, and Margaret, 1940; Preston and Bayton, 1941; Sears, 1940; Lowell, 1952).

## Fashion in which level of aspiration is indicated

Level of aspiration has been expressed in various ways, but the most common method of expressing this concept is by making some sort of estimate concerning future performance. It might be said that there are

in general two principal types of statements elicited from subjects. One of these statements would draw an estimate of future performance in terms of predictions or expectations (Gould, 1939). An example of such a question might be, "What do you expect to do?" The second statement utilized by level of aspiration investigators would be that in terms of goals. An example of the type of question seeking goal responses might be, "What will you try to do?"

Expectations. Rotter (1942b) reported a "bid" type of instruction with emphasis on accuracy since subjects received a penalty for failing to reach a predicted score and were given no credit for scoring beyond their "bid." Several other investigators have used the "bid" type of instruction applying a penalty for inaccuracy (Ax, 1946; Cohen, 1950; Klugman, 1947; McGehee, 1940). Numerous researchers have elicited levels of aspiration from subjects by asking the subject to indicate the level of performance he actually expected to reach (Adams, 1939; Anderson and Brandt, 1939; Gilinsky, 1949; Hanawalt, Hamilton, and Morris, 1943; Hilgard, Sait, and Margaret, 1940; Hilgard and Sait, 1941; Klein, 1948; Pennington, 1940; Smith, 1949; Sumner and Johnson, 1949; Zander and Meadow, 1962). These investigations eliminated the "bidding" feature as well as the penalty for inaccuracy.

Goals. One investigator (Frank, 1937) attempted to elicit responses from subjects that would indicate "how well he intended to do." Such a response might be more correctly labelled a goal rather than a prediction. Gould and Lewis (1940) and Hertzman and Festinger (1940) used a similar approach. Specific requests such as, "What score are you going to try to make-what is your goal for the next trial?" have been used (Heathers, 1942; Sears, 1940).

Contrasts between instruction stressing expectations and those emphasizing goals. Several researchers have discovered that when subjects are asked for expectations concerning future performance, their stated aspirations are lower and closer to previous performance than is the case when they are requested to report hopes or goals (Festinger, 1942b; Holt, 1946; Irwin and Mintzer, 1942). Frank (1937) disclosed that asking for expectations rather than goals led his subjects to be more concerned with the accuracy of their estimates. Irwin (1944) proposed that stated levels of aspiration are more realistic or closely bound to and influenced by performance when expectations or predictions are sought rather than when goals or hopes are asked for. One researcher (Ricciuti, 1951) concludes that eliciting statements of goals or strivings might prove more profitable in level of aspiration studies than securing predictions of expected performance. Holt (1946) reported little difference in the observed ambition or incentive effect of the stated aspirations whether the subjects were asked for goals or expectations before an examination.

Estimates of future performance. The vast majority of research involving level of aspiration has employed the use of raw scores in indicating the level of performance the subject expected to reach. In some instances (Gardner, 1939, 1940b), these expectations were assigned a percentile rank, or some type of converted score (Heathers, 1942). Klein (1948) developed a nine point qualitative scale on which expectations regarding goodness of future performance were made.

Estimates of past performance. Some researchers have employed a plan whereby they ask the examinee to estimate the level of performance attained on a task just completed prior to making estimates on future performance (Bayton, 1943; Eysenck and Himmelweit, 1946; Hilgard and

Sait, 1941; Klein, 1948; Sumner and Johnson, 1949).

Individual and group testing

Many studies concerning level of aspiration have utilized individual testing methods. Several investigations have employed group test measures for determining level of aspiration (Anderson and Brandt, 1939; Chapman and Volkmann, 1939; Gould and Lewis, 1940; Hilgard, Sait and Margaret, 1940; Margaret, 1942; Zander, Curtis and Rosenfeld, 1961; Haller and Miller, 1961).

Types of scores employed

A number of different types of measures have been offered in an attempt to qualify goal-setting behavior exposed by the test situation. A review of some of these scores is offered.

Goal discrepancy. The Goal Discrepancy score, sometimes referred to as the Average Discrepancy, Average Difference, or simply the D-score, first offered by Frank, is a frequently used score employed by researchers of level of aspiration. This score may be said to be the average difference between a performance and the immediately following professed level of aspiration or estimate of future achievement. Such a score may be evaluated as either positive or negative. A positive score infers that, on the average, the expressed goals of the subject were higher than his past performance. Conversely, a negative score would indicate that goals were generally set lower than the level of preceding performance. Numerous investigators have utilized this type of score in their evaluation of level of aspiration (Cohen, 1950; Eysenck and Himmelweit, 1946; Festinger, 1942b; Klugman, 1948; Rotter, 1945; Sears, 1940).

One method of arriving at a D-score is to subtract from the average

of all the aspirations the mean of the immediately preceding performances. Another method closely parallels that just described but the median rather than the mean of the immediately preceding performance is used as a subtrahend (Frank, 1937; Hanawalt, Hamilton and Morris, 1943; McGehee, 1940). Lezak and Raskin (1950) proposed a method of deriving a D-score which is the average of the differences between each estimate and the mean of all previous performance scores up to that point. Anderson and Brandt (1939) used a variation of the D-score technique. This team of researchers compared mean goals for all individuals with mean achievement on each separate trial. One investigator (Preston, 1942) admonished against the use of the Goal Discrepancy score when correlations are desired with certain other variables.

Level of aspiration changes following success and failure. It might be said that the Goal Discrepancy score indicates the general tendency of the subject to set his goals higher or lower than previous performance. The Goal Discrepancy score may not, however, expose how the subject's goals vary from performance to performance with immediately preceding success, as reaching or surpassing the set goal, or failure, as not reaching the stated goal. Festinger (1942) found that levels of aspiration are generally raised after success and lowered following failure. Several investigators have researched this same area and generally substantiate Festinger's findings (Adams, 1939; Cohen, 1950; Eysenck and Himmelweit, 1946; Klugman, 1948; Pennington, 1940; Smith, 1949). Zander and Medow (1962) proclaim this finding to be more pronounced when level of aspiration is established by the group rather than by an individual member of the group. The number of shifts either upward or downward and the times a subject failed to shift following both

success and failure has been experimentally investigated (Cohen, 1950; Rotter, 1945). Research centering on this same theme was completed by Sears (1940) to determine the times that levels of aspiration are set equal to or lower than preceding performance (negative discrepancy). Klugman (1948) investigated the same area but was concerned with positive discrepancy.

Attainment discrepancy. Attainment Discrepancy may be defined as the difference between the level of performance attempted or set by the student and the actual level of attained performance. It is the Attainment Discrepancy that determines feelings of success or failure. McGehee (1940) and Sumner and Johnson (1949) have used an average Attainment Discrepancy. This measure is merely an average of the Attainment Discrepancies of a subject. Eysenck and Himmelweit (1946) found Attainment Discrepancy negatively correlated with Goal Discrepancy. Klugman (1948) discovered a positive correlation between emotional stability and Attainment Discrepancy. Hilgard and Sait (1941) revealed with the use of Attainment Discrepancy that subjects who over-estimated future performance tended to treat past performance with a like attitude.

Judgment discrepancy. Judgment Discrepancy may be defined as the difference between estimated past performance and actual past performance. Some of the more interesting investigations dealing with the relationship between estimation of past performance and goals for future performance reveal that overestimation of past performance is associated positively with setting higher estimates for future performance (Bayton, 1948; Hilgard and Sait, 1941). One study (Festinger, 1942b) showed a negative correlation between Judgment Discrepancy and Goal Discrepancy.

Analysis of response patterns. It has been assumed that goal-setting behavior in the level of aspiration situation carries with it some psychological inferences. Sears (1940), with this assumption in mind, differentiated groups of children who showed high positive D-scores, low positive D-scores, negative D-scores, and a lack of consistent patterns. Rotter (1945) selected three response patterns which he called atypical. The selection of these response patterns was based on the frequency of shifts of the level of aspiration, the height and direction of the Goal Discrepancy score, and the type of shift following success or failure. Cohen (1950) established 12 patterns of response behavior based on the height of the Goal Discrepancy score and the method of adjusting goals to success and failure.

## Relationships Between Level of Aspiration and Other Variables

### Level of aspiration and grouping

Anderson and Brandt (1939) investigated the effects of the standards of one's own group upon his level of aspiration. One hundred fifth-grade children were given a series of six cancellation tests spaced a half-week apart. The relative performance of each child was made available to him so he could see how he stood in relation to the group, but he could not identify the position of any other peer. Prior to each test the subjects were requested to write down privately the score they believed they could reach on the succeeding trial. Graphs showing relative standings were maintained throughout the experiment. Grouping the subjects according to performance quartiles gave lucid trends exposing the effectiveness of the knowledge of group standing. For the upper quartile (those scoring highest in the group) the level of aspiration was an average of 5.8 points

below the performance level. For the second quartile, the level of aspiration on the average was 1.9 points above the performance level. For the third quartile, the level of aspiration was 2.1 points above the performance. For the fourth quartile, the level of aspiration was 13.6 points above the performance level. Thus, the trend was for those subjects finding themselves above the average of the group to have negative discrepancy scores, those finding themselves close to the average of the group tend to have a slightly positive discrepancy score, while those subjects who found themselves below the mean of the group tend to have a very large positive discrepancy score. This study showed that the correlation between discrepancy score and position of performance with respect to the group mean, taking positive and negative discrepancies into account, was -.46. That is, the lower the performance relative to that of the group, the larger the discrepancy. Hilgard, Sait, and Margaret (1940) found essentially the same results among college students.

Hertzman and Festinger (1940) explored level of aspiration among male college students. These subjects were given two experimental sessions. At the time of the second experimental session, the subjects were told the average score and the average level of aspiration of a group of other people of their own scholastic standing. The scores assigned to this group were arranged so that the individual's performance was approximately equal to the performance of the group. The positive or negative sign of the group goal discrepancy was reported as opposite to that of the subject. The results showed that the level of aspiration changed significantly from the first to the second session in the direction of conforming to the group level of aspiration. Rotter (1942a) concludes that an individual's expressed goal or aspiration level tends to regress

toward the mean performance of the group to which he maintains association. This same investigator explains that a subject's knowledge of the performance of others tends to influence his difference score. A. B. Wilson (1959), studying high school boys, points to school milieu and peer-group norms as having influence upon educational and occupational aspirations. Haller and Butterworth (1960) report that the data gathered in their study on high school boys support the hypotheses that peers tend to influence each others' levels of educational aspiration. One investigation among high school boys (Miller, 1959) disclosed a positive correlation of .33 between an individual's level of occupational aspiration and the aspiration levels of his peer group members. Edwards and Wilson offer an interesting finding concerning peer group influence on level of aspiration.

> Peer groups of children from lower-class families are more tightly knit than are those from middle-class families. Hence, the peer group becomes the significant reference with respect to attitudinal development among children from the lower socio-economic sections of the population. (Edwards and Wilson, 1961, p. 112)

Showing the influence of school atmosphere on educational aspiration, these same investigators found that 93 percent of the sons of professional people at high status schools desired education further than that offered by the high school and fewer than two-thirds of the sons of professional people at predominantly working-class school wished to go to college.

One study (Zander and Medow, 1962), involving eleventh and twelfth grade boys, investigated group (teams of three or five members) level of aspiration versus individual (solo) level of aspiration. These researchers offer the following important finding:

> Teams and solo persons alike raised their aspirations following a performance in which they exceeded a previously set level of aspiration. But teams more often lowered their aspiration following an

> unexpectedly poor performance than did solo persons. Thus, teams appeared to be less optimistic following a poor performance than were individuals. Teams appeared to be more concerned with the perceived probability of attaining a given level, when setting a level of aspiration, than were solo persons. (Zander and Medow, 1962, p. 22)

Chapman and Volkmann (1939), investigating college students, demonstrated that knowledge of what others did on a test (where the subject had not yet actually performed) will markedly influence the subjects' stated aspiration depending upon how they evaluate the other people whose score they know. This study revealed that there is a tendency for subjects to aspire toward the middle of the distribution when they do not actually know what they themselves can do.. One investigation (Kaiser and Blake, 1955) revealed that an individual's level of aspiration may be changed by informing the subject that the group to which he claims membership has altered its goal desires. Rosenthal and Cofer (1948) showed that the reverse is also true. That is, an individual group member may alter the behavior of his fellow members as well as their goals.

Other investigations, using subjects of different age levels, offer results which tend to confirm the finding that the group to which an individual claims affiliation influences his level of aspiration (Dreyer, 1954; Festinger, 1942a, 1942b; Stotland, et al, 1957; Margaret, 1942; Zander, Natsoulas, and Thomas, 1960; Raven and Rietsema, 1957; Gilchrist, 1952; Gilinsky, 1949; Klugman, 1948; Kostick, 1957; Veness, 1960; Zander, Curtis and Rosenfeld, 1961; Davids and White, 1958; Cassel and Vanvorst, 1954; Hanawalt, Hamilton and Morris, 1943).

Level of aspiration and achievement

Achievement, as used in this paper, shall refer to academic success taking form in grades, scores, honors and the like.

Sears (1940) conducted a much referred-to study involving children from ages 9 to 12 years. She divided these children into three groups. A "success" group was composed of children who had shown evidence of success in all of the academic school subjects including reading and arithmetic. A "failure" group was composed of children who had witnessed academic experiences opposite that of the success group. A mixed group, called the "differential" group, was made up of children who had experienced success with reading but met failure with arithmetic. The tasks administered to these subjects were multiple-choice word-meaning items for reading and problems in addition for arithmetic. Half of the subjects received arithmetic tasks during the first session and the other half received reading tasks. The reverse was true for the following session so that all the children were exposed to all of the tasks. Two sample trials were followed by 20 regular trials. After each trial the child was told his performance time, and then either spontaneously gave his next level of aspiration or was asked for it by the experimenter, who used the words: "Now what are you going to try for?" A success and failure condition was established for further tasks. The examiner for the success condition was especially supportive and encouraging. The environment for the failure condition was just the opposite. It was shown that self-confident, successful children react to the level of aspiration situation in pretty much the same way, whereas unsuccessful children, lacking in confidence, may adopt behavior techniques that are inconsistent. Sears found that experimentally induced success brings the reactions of all subjects in regard to level of aspiration into a more homogeneous distribution than do the neutral conditions of stimulation. It was found that the children of the past failure group showed a

higher goal discrepancy on the average than those of the past success group. More pronounced, however, was the wide variability among subjects of the failure group. The range of discrepancies among these subjects was from very high positive to negative scores. The variability among subjects of the success group was much less, with discrepancies almost entirely within a small positive range.

Pauline Sneddon Sears (1940) relates that Juchnat grouped 500 subjects into categories of high, medium, or low, on the basis of their initial levels of aspiration. Juchnat then examined the grades of these subjects. This investigator found that better students showed a high initial level of aspiration, the average students a medium initial level, while the poor students set an initial level which was either at the top or bottom of the scale. Pierce and Bowman (1960), studying tenth and twelfth grade boys, found the high-achievers to possess significantly higher educational goals than low-achievers. A study involving 17-year-old boys (Haller and Miller, 1961) disclosed a relationship between achievement (grade point average) and occupational aspiration of .50, while the correlation between achievement and educational aspiration reached .53. Anderson and Brandt (1939) found that fifth grade pupils in their study rated in the lowest levels of achievement consistently set goals considerably above their past achievement and pupils rated in the upper levels of achievement were consistent in setting goals somewhat below their preceding achievement. Kurtz and Swenson (1951), employing the term "plus achiever" to indicate a student whose achievement is well above expectation on the basis of ability rating and "minus achiever" to indicate a student whose achievement is definitely below expectation on the basis of ability rating, exposed several significant points. These

researchers disclosed that plus achievers set high educational and vocational aims, and that they are likely to achieve such goals. Plus achievers appear to relate their school work to future goals; they tend to regard an education for more than its job value. Minus achievers have limited educational and vocational aims and do not look to the future. Plus achievers were shown to possess a stronger desire for an extended education and more concrete plans for attaining it. Plus achievers also appear more concerned about the possibility of not securing the amount of education they desire. Plus achievers have fairly clear vocational aims.

One investigation (Wilson, 1959) revealed that high school boys achieving highest grades possess higher educational aspirations than do students achieving lesser grades. Wilson also believes that socio-economic status is an important factor in determining level of aspiration regardless of grade point average. Hilgard (1946), studying children, learned that subjects with a past history of success in reading and arithmetic usually established their goals realistically when examined in either of these areas. Hilgard found that children who consistently failed exhibited goal-setting behavior that was unpredictable. Several researchers (Hilgard, Sait and Margaret, 1940) revealed that among college students those succeeding in an experimental situation interpreted their success cautiously and made estimates that the next score would be less successful. Those college students who met failure in the experimental situation estimated that their scores would improve. A study by Mitchell (1959, pp. 102-103) involving college females exposed the following findings: (1) the self-rejectant overachievers consistently have the least discrepancy between level of aspiration and grade actually obtained, (2) the self-rejectant overachievers are most likely to receive

an examination grade that satisfies or surpasses their aspiration, (3) the self-rejectant overachievers always show the smallest discrepancy between prior grade and present level of aspiration, (4) the self-acceptant underachievers show with consistency the greatest discrepancy between previous grade and present level of aspiration, and (5) the self-acceptant underachievers always possess the largest discrepancy between expected grade and actual grade obtained. Barnett, Handelsman, Stewart and Super (1952) found among junior and senior high school students a high relationship between level of occupational aspiration and academic achievement. The relationship between these variables found support from Bradley (1943) and Stubbins (1950). One study interpreted the relationship between level of aspiration and achievement:

> The dull child has to work up to his maximum all the time, whereas the bright child is not forced to exert himself to keep up to the class level. When special incentives are added, only the bright child can show improvement. Aspiration and achievement are mutually dependent. The level of aspiration is modified by success and failure, and experiences of success and failure are relative to the level of aspiration. The unpracticed golfer who hopes to shoot a round in 90 will experience the elation of success if he shoots 88, while the expert who usually shoots his round in the seventies will have had a terrible day if he requires 80 strokes. Hence, the effect of success or failure on an individual is dependent upon the aspirational level the individual sets for himself. The level of aspiration must be adjusted from time to time to provide a goal suitable to the development that takes place within the individual; otherwise no improvement would occur. If the goal is adjusted at a level beyond the reach of the individual's ability, the results are likely to be disastrous. (Dorcus and Dunlap, 1940, p. 289)

Worrell (1959) found that college students who held aspirations close to previous performance, who viewed their level of performance satisfaction as below previous performance, and who believed they would not achieve greatly beyond their present achievement by applying greatest effort, tended to be successful in grade achievement. Pennington (1940) showed that failure among college students is frequently

accompanied by a lowering of level of aspiration.

Level of aspiration and socio-economic status

Hieronymus (1951) developed a measure which he called Socio-Economic Expectations. This instrument used the concept of level of aspiration in measuring motivation. Items were constructed to find out what sort of home each student expected to have as an adult, the anticipated nature and extent of community and social participation in future years, expected income and conveniences, and anticipated schooling and occupation. The inventory was administered to all ninth grade students in a mid-western community and the relationship with present socio-economic status and I.Q. was established. Correlational analysis revealed that level of aspiration was more closely related to present socio-economic status than it was to I.Q. However, no evidence testing the significance of the difference between these variables was presented. This study showed a relationship of .50 between socio-economic expectation and socio-economic status. A correlation coefficient of .30 was found between socio-economic status and attitude toward education. A study by A. B. Wilson (1959), utilizing high school boys, showed that high achievers are less likely to wish to go to college if they attend a working-class school and, conversely, that low achievers are more apt to want to go to college if they attend a middle-class school. This investigator found that college aspiration is positively related to socio-economic strata. Wilson found that high school boys from homes where the father occupied a "higher" occupational level had greater educational aspirations than did boys from homes where fathers occupied "lower" occupational levels. Also, high school boys in this study aspired educationally in positive relation to

their parent's education. Dole (1961) reports that Berdie concluded that desire of a large number of high school graduates in Minnesota to attend college was closely related to class structure, as well as to economic and cultural status. Haller and Miller (1961), studying 17-year-old boys, found the correlations between socio-economic status of the family and occupational and educational aspiration to be .37 and .41 respectively. One thorough investigation (Seidman, 1953) reported a significant relationship between adolescents' occupational aspiration and expectations and their socio-economic backgrounds. Another study involving a large sample of high school seniors from the entire state of Wisconsin, tended to show that values specific to different social status positions are influential in the establishment of educational and occupational aspirations.

> . . . because the effects of measured intelligence and sex were controlled, the present tests lend support to the sociological claim that values specific to different status positions are most important influences on levels of educational and occupational aspiration. (Sewell, Haller and Straus, 1957, p. 73)

Stivers (1959) reported significant socio-economic influences on level of aspiration among high school girls. Gould (1941) found that level of aspiration average discrepancy scores among college males tend to be higher in subjects with an inferior socio-economic background than in those with a better background. Urell (1960) discovered that adolescents residing in different socio-economic settings have significantly different occupational aspirations. This ssme result was found by Stubbins (1950) in studying male adults. Bradley (1943), using high school and college students as subjects, generally confirms the findings offered by Urell, Stubbins and Bradley, and adds that students frequently select a vocation somewhat higher in the socio-economic scale than that occupied by the parent. Other investigations generally lend support to the

conclusions herein cited concerning the relationship between level of aspiration and socio-economic status (Peters, 1941; Singer and Stefflre, 1954; Youmans, 1956; Reissman, 1953; Edwards and Wilson, 1961; Hill and Hole, 1958). One researcher (Frank, 1941) believes that the level of aspiration may not be fully understood without consideration of the influence of the social and cultural background.

Level of aspiration and personality

Sears (1941) made clinical studies of selected small groups of children of grades 4, 5 and 6 who were highly motivated for school work and who had been either highly successful or unsuccessful academically. When these subjects were divided according to size of discrepancy scores for experimental school type tasks, certain related factors emerged as differentiating these groups. Children employing a predominantly "high" discrepancy pattern were poorer in school achievement than the other groups and were rated as showing an attitude of low self-confidence accompanied by rather free admission of their incompetence. Children showing characteristically "low positive" discrepancy (realistic) reactions were, on the other hand, rated as highly confident, successful and comfortable in their achievement. Behavior problems and unfavorable personality traits (rated by the teacher) appeared less frequently in the realistic group. A third group was labelled "negative discrepancy." These children ranged in between the other two groups in confidence and academic success, but were differentiated from both in terms of high ratings for self-consciousness, social- rather than self-oriented motivation, defensiveness, and self-protection in their attitudes toward failure. Sears concludes that "academic security" and "personality structure" have intense personal significance for the individual and both

are related to level of aspiration. Anderson and Brandt (1939), in a study of American school children, showed that those children who placed in the lower quartile of the class on the basis of the experimental tasks had a high positive average difference score. A negative average difference score was shown by those children in the upper quartile. Gardner (1940b) found suggestive, though statistically unreliable, relationships between low average difference scores and fear of failure among adolescents. Frank (1941) indicated that it has been suggested that high levels of aspiration might be characterized by self-confidence, ambition, subjectivity, and wishfulness. A low level of aspiration may be accompanied by realism, cautiousness, self-protectiveness, and fear of failure. Gruen (1945), investigating children of grades 7 and 8, believes that level of aspiration behavior reflects underlying personality needs and wants and thus may be employed as a measure of personality adjustment. One leader in the field (Rotter, 1942a, 1942b) believes that every level of aspiration response is a result of "personality" factor interaction. A team of investigators (Klein and Shoenfeld, 1941) found that level of aspiration operated only in "ego-involved situations" among college undergraduates. Hanawalt, Hamilton and Morris (1943) reported that individual personality factors have great influence on group differences in level of aspiration. Several investigators (Lenz and Nickel, 1941) proposed that vocational preference may expose personality manifestations.

A trio of investigators (Ausbel, Schiff and Zeleny, 1953) showed that academic aspiration measures were negatively correlated with measures of general adjustment among high school juniors. This study revealed that high academic aspirations are directly related to anxiety in adolescent boys. Cohen (1954), working with adults, discovered that

self-rejectants set either very high or very low levels of aspiration. Klugman, investigating adult subjects, has summarized his findings pertinent to level of aspiration and personality:

1. Correlations, better than Fisher's 5 percent level of significance, were found between emotional stability and the variable labelled Evaluation, Goal Discrepancy, Attainment Discrepancy, Performance, Weighted, Range of Weighted, and Variety of Levels scores.
2. 'Low but present' correlations, to use Garrett's explanatory term, were found between emotional stability and the variables labelled Learning, Range of Aspirations, Range of Performance, Number of Shifts, Unusual Shifts, Responsiveness, Total Time, Time for First Trial, Attainment Discrepancy adjustment, miscues, and Positive Goal Discrepancy scores.
3. Little or no relationship was found between emotional stability and evaluation Time, Aspiration Estimates, Sum of Shifts, Rigidity, Goal Discrepancy Adjustment, and Success Scores.
4. Weak support for Rotter's statement that frequency of shifts is related 'to basic personality trends of the subject' was obtained.
5. Little support was found for his (Rotter's) statement that emotional instability is related to frequency of unusual shifts.
6. 'High' discrepancy groups did not differ significantly from 'low' discrepancy groups in emotional stability - a finding similar to Gardner's. However, the difference was not so small as to preclude some relationship tendency.
7. The data on these adults do not agree with Gruen's results on adolescents in which the 'maladjusted subject tended to keep his estimates below his performance level or to make gross compensatory over-estimates.' (Klugman, 1948, pp. 115-116)

An earlier study by this same investigator (Klugman, 1947) indicated a low relationship between performance on the Rotter Aspiration Board and emotional stability. Steiner (1957) found that persons unsure of their self-perception set goals which were related to their past performance, expected considerable variance in their future performance, and probably overestimated their future performance. Those subjects pessimistic in their self-appraisals made low and pessimistic estimates of future performance. Lepine and Choderkoff (1955) somewhat confirm Steiner's findings. One researcher (Martire, 1956) failed to find a relationship between self-concept and level of aspiration.

Dynes, Clarke and Dinitz (1956), working with college students, discovered that personality conflicts in the home are related to high aspiration levels and satisfactory home relationships showed association with low aspiration levels. Gould and Kaplan (1940) have shown that level of aspiration has a consistent but low positive correlation with dominance and extroversion, two personality traits which have been used to distinguish between college leaders and non-leaders. The leaders have more self-confidence and are more willing to take on responsibilities. It seems reasonable that these same characteristics of personality might be responsible for the higher level of aspiration exhibited by leaders. Davids and White (1958) discovered that the initial level of aspiration possessed by 25 emotionally disturbed boys was higher than that of 30 normal boys.

Level of aspiration and occupational interests

Peters (1941) discovered that the four most influential factors which contribute to vocational aspirations among high school seniors are the parent, a friend, a professional acquaintance, and a relative other than a parent. This author lists a second group of factors influencing vocational selection as the parent, opportunity for advancement, relative other than parent, and opportunity for quick employment. A similar survey by Fleege and Malone (1946) involving junior high school students reported that interest in work, opportunity to help mankind, opportunity for personal advancement, and aptitude for work are directing forces in occupational interests. One investigator (Bradley, 1943) found that choice of vocation may be influenced by many factors like parents, teachers, friends, ambition, aptitude, interest, social prestige,

renumeration, race, environment, opportunities, sex, and difference in motivation. Bradley states that Endicott, studying the factors involved in influencing students in their choice of vocation, found that parental influence is much more important for students in the junior high than for those in the senior high school. Weigand (1953), using college students as subjects, points to the goal and the student's personal interest in the goal situation as two significant motivational devices at play in selecting occupational choice. Weigand combines goal orientation and goal involvement to produce what he calls goal aspiration. An investigation involving college men (Anderson, 1932) showed that the selection of a given occupation as a life work was based on interest and opportunity in the work in general. Economic return was not significantly emphasized, though students may have intended this to be included in the term opportunity. No student in this study reported that he intended to follow an occupation because of the suggestion of a parent.

Auten (1951) offers information to the effect that most senior students in high school chose vocations commensurate with expected educational plans. It has been hypothesized that the OL score (that score on the Occupational Level section of the Strong Vocational Interest Blank) may be used as a measure of level of aspiration. However, one investigation (Barnett, et al, 1952) showed that the use of this scale for such a purpose is not warranted. Gould (1941) discovered that male college students who showed high discrepancy scores between performance and estimate of future performance tended to set low vocational expectations. Stephenson offered the following summary after a survey of the occupational aspirations and plans of 443 ninth grade students by means of an occupational questionnaire:

1. Occupational aspirations and plans of the students reflect neither the occupational position of the father nor the occupational needs of the community.
2. However, there is a marked difference between the aspirations and the plans, the latter more nearly approximating the father's occupational position and the national distribution of occupations.
3. All students tend to concentrate their aspirations in Group I (highest group) and lower their occupational sights most in this group when considering occupational plans.
4. Occupational aspirations and plans selected are confined to a relatively narrow range of occupations with considerable concentration of choices within this narrow range.
5. When students are grouped according to father's occupation, a relatively close relationship between the student's occupational plans and his father's occupational group is indicated.
6. However, when the student's aspirations are compared with the father's occupation group, little relationship is revealed, all students having relatively high occupational aspirations.
7. It is the students in the lower occupational groups who lower their occupational aspirations most when considering occupational plans. (Stephenson, 1955, p. 34)

Haller and Miller (1961) found a correlation of .64 between male adolescents' occupational and educational aspirations.

Level of aspiration and value achievement

v-Achievement may be said to be the degree to which a subject considers himself to be achievement-oriented. This measure should not be confused with n-Achievement.

Gardner (1940b) found that of the 51 adolescents investigated the 10 with the highest average (positive) discrepancy scores, indicating high achievement, also rated highest on importance attached to intellectual achievement. One investigator (Miller, 1959) discovered a positive but low relationship between occupational aspiration and achievement values among senior high school boys. This same report indicated a low and non-significant correlation between an individual's achievement values and the achievement values of the members of his peer group. Haller and Miller (1961) discovered among high school boys a significant relationship

between their Occupational Aspiration Scale and deCharms' v-Achievement measure. Pierce and Bowman (1960) found a significant difference in achievement values (using Strodtbeck's instrument) between tenth-grade high- and low-achieving boys. A difference between these groups failed to reach the 0.05 level when deCharms' instrument was used to detect achievement values. No significant differences in achievement value were noted between high- and low-achieving twelfth-grade boys when either instrument was employed. In an investigation of family interaction, values, and achievement, McClelland, et al (1958) found that overachieving boys scored significantly higher than underachieving boys on needs for achievement and on achievement values.

Level of aspiration and intelligence

Haller and Miller (1961), studying high school boys, discovered a correlation between I.Q. and occupational aspiration of .45 and a relationship between I.Q. and educational aspiration of .41. An interesting study involving male high school seniors (Crowley, 1959) disclosed that students who rated high in intelligence wished to go to college and graduate school. Those male high school seniors who rated lower in intelligence wished for their education to terminate soon. Sears (1941) indicated that among children ages nine to twelve, general intelligence appears to be higher in the low-positive-discrepancy group (level of aspiration slightly above the performance level) and somewhat lower, although not significantly so, in the high-positive-discrepancy group (level of aspiration high above the performance level). A. B. Wilson (1959) points to the influence of intelligence regarding educational and occupational aspirations among high school boys. Sewell, Haller and Straus (1957) discovered that high school seniors possessing high

intelligence also generally possessed a high level of educational aspiration. Barnett, et al (1952) found intelligence and occupational aspiration among high school boys to be highly related. These general relationships between intelligence and level of aspiration hold at the college level (Gilinsky, 1949). Bradley (1943) infers from his study of high school and college students that the higher the intellectual capacity the greater is the likelihood that the student will choose a professional career. One investigation (Eysenck and Himmelweit, 1946), employing neurotics as subjects, revealed a strong positive relationship between intelligence test scores and level of aspiration.

Level of aspiration and social status

A study by Sewell, Haller and Straus (1957) involving high school seniors where the effects of measured intelligence and sex were controlled exposed the importance of status position on levels of occupational and educational aspirations. These researchers found that among females there was a positive relationship of parental social status and occupational aspirations when intelligence is controlled. However, this relationship among males could not be accounted for by controlling measured intelligence. A trio of researchers (Ausbel, Schiff and Zeleny, 1953) divulged that academic aspiration among adolescent girls is related inversely to sociometric status. Cassell and Saugstad (1952) found that students of grades six and eight who received optimum sociometric choices possessed moderate levels of aspiration. One investigator (Gould, 1939), engaging as subjects male college students, found a relationship, though statistically unreliable, between high average difference scores and dissatisfaction with status. Holt (1945) indicated that college persons

lacking in the ability and need to make friends or lacking in esteem from others tend to show extreme levels of aspiration. Such extremes in level of aspiration may be a compensatory attempt to bolster and protect their own self-esteem.

Level of aspiration and sex

Marks (1951), investigating levels of aspiration of children in grades five and six, found that the stated expectations of boys were not significantly different than those of girls. A similar conclusion was reached by Ausbel, Schiff, and Zeleny (1953) after investigating this area among adolescents. However, the girls in this study made significantly higher errors of estimate in judging past academic performance and showed greater variability than boys on most "real-life" measures. Dole (1961) reported a median correlation of .54 for males and .50 for females between occupational and educational goals among students from grade six to college in Hawaii. However, this report indicates that more girls than boys at the sixth, ninth, and twelfth grade levels had college aspirations. A number of investigations, involving both school children and adults, have indicated that males show a higher average D-score than females (Frank, 1937; Walter and Marzoff, 1951; Gould and Lewis, 1940; Sumner and Johnson, 1949; Holt, 1946; Anderson and Brandt, 1939).

Level of aspiration and age

Cassell and Saugstad (1952) found that sixth grade pupils possess higher levels of aspiration than do eighth graders. Marks (1951) found no significant difference between stated expectations of fifth and sixth grade groups of children. Dole (1961) reported that of the students involved in his study from grades six to college, the younger students'

occupational goals were formulated to a considerable extent on unrealistic perceptions of self and society.

# CHAPTER III

# METHODS AND PROCEDURE

## Pilot Study

The pilot study was conducted at Logan and Smithfield Junior High Schools, Logan and Smithfield, Utah. A battery of six sub-tests was offered: educational aspiration, social aspiration, occupational aspiration, value achievement, laboratory aspiration and socio-economic status. Although only the educational and social aspiration tests were item analyzed, the entire battery was administered during the pilot study to determine what problems might arise in relation to test administration and scoring and to develop a time estimate for future use of the instruments involved. The battery of tests was administered to 100 seventh grade boys and 148 ninth grade boys at Logan Junior High School on October 20, 1961. An item analysis of the educational aspiration test resulted in a revision of this measure. The revised educational aspiration test was administered to 40 seventh and 40 ninth grade boys at Smithfield Junior High School on November 10, 1961. The battery of tests administered during the Ogden-Weber study eliminated the socio-economic measure employed in the pilot study and divided the educational aspiration test as used in the pilot study into two measures, classroom and educational aspiration.

## Sample Selection

### Population

The two school districts chosen for this study, Ogden and Weber, enroll somewhat over 30,000 students. The two juxtaposed districts are similar in cultural environment and socio-economic conditions, thus leading to somewhat ideal research opportunities. These districts possess both urban and rural environments that run the gamut of American social class levels. The communities involved offer a limited number of wealthy families, a large number of professionals, and many clerical, skilled, semi-skilled, and unskilled workers. There is a small college serving some 3500 day-time students in Ogden, two larger universities within daily communing distance, and several local vocational schools. Such facilities afford the school children of the communities an opportunity to learn about advanced education.

### Sample

Four Weber County elementary schools began ability grouping at three levels--accelerated, average, and developmental--in the school year 1958-1959. The pupils from these schools constitute the experimental group. Pupils from seven Ogden City School District elementary schools where ability-grouping was not a practice were employed as the control group. Schools in the Ogden and Weber School Districts were equated on the basis of socio-economic status and geographic position. A later investigation of socio-economic status indicated that the schools were closely comparable. It was necessary to select a greater number of subjects from the Ogden School District since it was not known exactly how many would be classified into ability groups comparable to those

established in the Weber School District.

The 554 subjects selected for the level of aspiration study were taken from those male pupils who were enrolled in grades four and six in the four Weber School District elementary schools during the school year 1958-1959 and the boys enrolled in the seven equated Ogden School District elementary schools during the same year. These students were enrolled in grades seven and nine during the 1961-1962 school year. Subjects were available in three Weber School District Junior High Schools--Wahlquist, South, and Roy--and in four Ogden School District Junior High Schools--Central, Washington, Highland, and Mt. Ogden. Once again, the schools in each district were selected from the standpoint of similarity in socio-economic status and geographic position.

One reason why the grade levels involved in the level of aspiration study were so selected was because little research concerning aspiration at these grade levels has been consummated. Also, these grade levels in the Weber School District employed partial grouping or grouping on the basis of ability for mathematics and science. The age level at which we find the subjects of this study is one at which educational, social, and occupational aspiration may or may not be well formulated. We can be somewhat assured that the subjects have a limited amount of educational, social, and occupational achievement thus permitting more flexibility in aspiration in these areas. It has been suggested (Miller, 1961) that for this type of research age, sex, and educational status should be homogeneous for the groups involved. Heterogeneity in these areas might influence the range of known occupational, educational, or social alternatives, the values placed on achievement, and the opportunities for peer group formation.

Selection of groups

Weber. Subjects for each of three Weber County School District ability groups--accelerated, average, developmental--were selected on the basis of the results of the Sequential Test of Educational Progress (STEP) given in the Spring of 1961. Students were assigned to the various mathematics and science sections, designated as 1, 2, 3, 4, for the 1961-1962 academic year as a result of the score received on the STEP. Table 1 gives an account of the number of subjects found at each level in the Weber School District. The first number of the level combination indicates the mathematics level at which the subject is enrolled. The second number of the level combination points to the science level at which the subject is functioning. For example,a 1-1 combination indicates that the subject was enrolled in the accelerated sections for both mathematics and science. A 1-2 indicates that the student was enrolled in the accelerated section for mathematics and average section for science. A 2-1 combination indicates that the student was enrolled in the average section for mathematics and the accelerated section for science. A 2-2 combination means that the subject was enrolled in the average section for both mathematics and science. A 3 is indicative of the developmental section while a 4 points to a special education section. Students enrolled in special education classes were eliminated from the study because they were considered atypical.

It may be noted from Table 1 that a limited number of subjects was found in the 2-3, 3-2, and 3-3 combinations for grade seven. These three levels were grouped to form a 3-3 section for the present study when t-tests between them revealed that there were no significant differences between the three groups. This process increased the number in this group to 34

when without this process the N would have been but 14. It may be seen in Table 1 that the 1-1 group at the seventh grade level includes 31 subjects, the 2-2 level is composed of 69 subjects, and the adjusted 3-3 level is composed of 34 students.

Table 1. Level and number of subjects in level, Weber County School District, grades 7 and 9

| Level | Grade | |
|---|---|---|
| | Seven | Nine |
| 1-1 | 31 | 32 |
| 1-2 | 3 | 0 |
| 2-1 | 4 | 12 |
| 2-2 | 69 | 72 |
| 2-3 | 9 | 4 |
| 3-2 | 11 | 21 |
| 3-3 | 14 | 26 |
| 3-4 | 0 | 2 |
| 4-3 | 0 | 0 |
| 4-4 | 7 | 7 |
| Totals | 148 | 176 |

Table 1 shows that the 3-3 section for grade nine includes but 26 subjects. A t-test between sections 3-2 and 3-3 revealed no significant differences and thus these two levels were combined to result in a total number of 47. It may be noted from Table 1 that the 1-1 group includes 32 subjects, the 2-2 group includes 72 subjects, and the 3-3 group

consists of 47 subjects at the ninth grade level. All other subjects tested in the Weber School District were eliminated from the present study either because the N was too small at the various levels or because they were in special education classes.

Ogden. After the three groups had been established for the Weber School District, a combination mathematics-science achievement test (STEP) mean score was obtained for each of the groups. Cut-off scores for establishing comparable Ogden School District groups were determined by use of the split-mean method employing the combination mean scores for the three Weber School District groups.

$$\frac{\text{Mean Accelerated} + \text{Mean Average}}{2} = \text{Cut-off score between average and accelerated}$$

$$\frac{\text{Mean Developmental} + \text{Mean Average}}{2} = \text{Cut-off score between average and developmental}$$

The established cut-off scores are presented in Table 2. Table 3 shows the total number of Ogden School District students in each level at grades seven and nine. Ogden group 1 is the ability equivalent of the Weber group 1-1. Ogden group 2 is the ability equivalent of the Weber group 2-2. Ogden group 3 is the ability equivalent of the Weber group 3-3.

## Test Administration

All six sub-tests of the aspiration level battery with the exception of six individually given make-up tests were administered by the writer between February 7 and February 27, 1962. Make-up tests were administered soon after February 27, 1962, for the purpose of testing those students

Table 2. Cut-off scores for establishing Ogden School District groups

| Group | Grade | Cut-off Score |
|---|---|---|
| Accelerated | 7 | 542 and above |
| Average | 7 | 514 to 541 |
| Developmental | 7 | 513 and below |
| Accelerated | 9 | 564 and above |
| Average | 9 | 545 to 563 |
| Developmental | 9 | 544 and below |

Table 3. Level and number of subjects in level, Ogden City School District, grades 7 and 9

| Level | Grade | |
|---|---|---|
| | Seven | Nine |
| 1 | 31 | 83 |
| 2 | 50 | 41 |
| 3 | 25 | 39 |

not in attendance when the original battery of tests was administered. The number of subjects administered the battery at any one time ranged between 47 (Central Junior High School) and 136 (Roy Junior High School). The number of proctors serving during any testing period ranged between four and seven. Much of the testing was conducted in an auditorium or multipurpose room where comfortable seats were found. A lap board and pencil were issued to each student as he entered the auditorium. Physical conditions generally were such that each student found a vacant seat both to his left and right and the row of seats both in front and behind each student was unoccupied. School cafeterias served as testing cities in two instances. In such an instance, students were seated on

only one side of a table so that no student sat face-to-face with another student. Such an arrangement prevented possible distraction by opposing students. Also, several feet of seating space separated each student laterally. These physical arrangements allowed for the circulation of proctors. A public address system was furnished in all testing situations with the exception of one and the acoustics in this auditorium were such that a public address system was not required. A stop watch was employed to time the last of the sub-tests, the coding test, which required accurate timing. It may generally be said that testing conditions were excellent. A copy of the instructions for each sub-test as read aloud by the examiner may be found in Appendix B of this paper.

## Test Scoring

All sub-tests of the aspiration battery were scored individually by clerks following the scoring directions found under the section of this paper concerning the instruments employed. Each score was then transferred to hand data cards and from there punched on to IBM cards.

## Classroom Aspiration

The classroom aspiration instrument is a self-appraisal rating that provides a measure of the subject's interpretation of his own skill at various performances together with the level of skill which he expects to reach. The classroom aspiration test was originally used in the pilot study as a segment of the educational aspiration test. However, after a relationship of -.11 was established between the first (ultimately the classroom aspiration test) and the second (ultimately the educational aspiration test) sections of the original educational aspiration test,

it was divided to yield two sub-tests. The first section of the original educational aspiration test, now referred to as the classroom aspiration test, was revised following the pilot study to improve clarity. The original instrument included a key for ranking oneself. The revised edition includes descriptions for each level of rating and these are repeated for each question. The pilot study design of the classroom aspiration test placed the questions in two columns, "I am" and "I wish," while the revised design pairs the questions such as 1a and 1b thus facilitating interpretation for the examinees as well as insuring ease of scoring. Lewin, et al (Hunt, 1944, p. 325) indicates that the "how good I wish I were at" rating is analogous to the level of aspiration score. The "how good I expect to become" rating might elicit a more realistic level of aspiration. The latter explanation is the foundation upon which the writer altered the design of the pilot study classroom aspiration instrument. Also, this design lends itself to yielding a D-score. The approximate administration time for this test is three minutes exclusive of time alloted for instructions. The reader is referred to Appendix B of this paper where a sample of this instrument is available.

Scoring

The classroom aspiration test is scored on the basis of the difference between the subject's estimate of his current status and his expectations in the same area. For example, should a subject consider himself "pretty good" at sports right now and expects to become "nearly best in my grade," his D-score would be plus 1. The difference score between all six pairs of questions is calculated and then the difference scores

are summed for the final classroom aspiration score. A constant of 10 was added to all raw scores for the purpose of eliminating negative numbers. Table 4 indicates the range of classroom aspiration scores for each of the schools involved in this study.

Table 4. School, grade, and range of classroom aspiration scores

| School | Grade | Classroom aspiration | |
|---|---|---|---|
| | | high | low |
| Central | 7 | 11 | -1 |
| Wahlquist | 7 | 10 | 1 |
| South | 7 | 11 | -5 |
| Washington | 7 | 9 | -3 |
| Highland | 9 | 8 | 0 |
| Roy | 9 | 12 | -4 |
| Wahlquist | 9 | 11 | 0 |
| Mt. Ogden | 9 | 10 | -3 |

## Social Aspiration

The general structure of the social aspiration test used in this study was adapted from Hills (1955). Because satisfactory biserial correlations were obtained in the item analysis of the social aspiration instrument during the time of the pilot study, this test was maintained almost intact for the Ogden-Weber study. The only alteration of the social aspiration test that occurred following the pilot study and prior to the Ogden-Weber study was the omission of item 3c. It was discovered following the pilot study that a strong relationship existed between

items 3b and 3c. Table 5 will show that the product-moment correlations between these two items were .80 and .63 for grades seven and nine respectively. The Phi coefficients between these two items proved to be .78 and .60 for grades seven and nine. It was plausible, then that one should be eliminated. The item selected for discard was 3c. The basis for discarding 3c rather than 3b was the fact that the validity indices for item 3b were .65 and .49 for grades seven and nine respectively,

Table 5. Product-moment and Phi correlation coefficients between items 3b and 3c, social aspiration, grades 7 and 9, Logan Junior High School

| Type of correlation | Grade | Correlation |
|---|---|---|
| Product-moment | 7 | .80 |
| Phi | 7 | .78 |
| Product-moment | 9 | .63 |
| Phi | 9 | .60 |

while the validity indices for item 3c were .64 and .26 for grades seven and nine respectively. Thus, the item showing the greatest validity index was retained. It will be noted from Tables 6 and 7 that the biserial correlations for item 3a when compared with the entire test are -.30 and -.03 for grades seven and nine respectively. Despite the exposition of these negative relationships, this item was retained in the social aspiration test because it served as a reference item for 3b and actually was not assigned a score itself, so did not influence the total score of this test. The reader is referred to Tables 6 and 7 for a summary of the item validities obtained from an item analysis of the social aspiration test. A copy of the social aspiration test may be found in

Appendix B of this paper. The reader is also referred to Table 5 for a review of the correlation coefficients obtained between items 3b and 3c. It will be noted that both Pearson product-moment and Phi correlations were computed.. The total time involved in administering the social aspiration test, exclusive of that time consumed for instruction, is approximately seven minutes.

Table 6. Biserial correlations for item analysis of the social aspiration instrument, grade 7, Logan Junior High School, N=100

| Item number | Correlation |
|---|---|
| 1A | .63 |
| 1B | .49 |
| 1C | .30 |
| 2A | .67 |
| 2B | .35 |
| 2C | .42 |
| 3a | -.30 |
| 3b | .65 |
| 3c | .64 |

Table 7. Biserial correlations for item analysis of the social aspiration instrument, grade 9, Logan Junior High School, N=148

| Item number | Correlation |
|---|---|
| 1A | .70 |
| 1B | .50 |
| 1C | .73 |
| 2A | .71 |
| 2B | .55 |
| 2C | .56 |
| 3a | -.03 |
| 3b | .49 |
| 3c | .26 |

Scoring

The social aspiration test is scored by assigning a different weight to each of the five alternatives offered as possible answers to each question. The weights are in descending order. That is, the first alternative is awarded five points, the second four points, the third three points, the fourth two points, and the fifth one point. Thus, it is possible to receive from one to five points for each question. Question 3b, however, is scored somewhat differently. The answers to questions 3a and 3b result from a selection of one of the five family socio-economic categories offered. The score awarded to 3b is the difference noted between levels of 3a and 3b and multiplied by 2. For example, let us assume that the subject checks C on 3a and B on 3b. Thus, his level from

3a to 3b has advanced one step. This one (1) step is then multiplied by 2 for a score of 2. Let us now assume that another subject selects E on 3a and B on 3b. This subject has advanced his level from E to B or 3 levels. The number of level advancements (3) is then multiplied by 2 for a final score of 6 for 3b. It should be noted that negative scores are possible to obtain. The total score for the social aspiration test is a summation of the scores obtained on 1A, 1B, 1C, 2A, 2B, 2C and 3b.

## Educational Aspiration

The educational aspiration test appeared in the pilot study as including the previously discussed classroom aspiration test. Ultimately, however, the educational aspiration test was divorced from the classroom aspiration test and redesigned until the former consisted of eight questions concerning educational goals each with five alternatives as possible answers. It will be recalled from the discussion of the classroom aspiration test that the reason for making two tests of the original single test with two sections was that these two sections showed little relationship of a positive nature ($r = -.11$). Of the original educational aspiration test administered to grades seven and nine, Logan Junior High School, items 1 and 5 were eliminated because they failed to discriminate. In addition, items 10, 11, 12, 13 and 14 were eliminated because not all subjects in the pilot study chose to answer them. The redesigned edition of the test was of a forced-choice nature to insure complete scores for all examinees. Garrett (1959) indicates that test items should show a validity index of .20 or more to warrant retention in a test. The biserial correlations following an item analysis of the original educational aspiration test proved insufficient. To compensate for this finding, the

ceiling for items 2, 3, 4, 6, 7, 8 and 9 was elevated. Item 15 of the original educational aspiration test was maintained as first composed. The adjusted educational aspiration test with raised ceilings was administered to a group of 80 male subjects in grades seven and nine at Smithfield Junior High School, six miles north of Logan, Utah. Satisfactory biserial correlations were found following an analysis of the revised items. Tables 8 and 9 offer the reader a comparison of the biserial correlations before, at Logan Junior High School, and after, at Smithfield Junior High School, the ceilings were raised. The final form of the educational aspiration test appears in Appendix B of this paper. Testing time for the administration of this instrument exclusive of time consumed in issuing instructions is approximately five minutes.

Table 8. Biserial correlations resulting from item analysis of the educational aspiration test, grade 7

| Logan Junior High School N: 100 | | Smithfield Junior High School N: 40 | |
|---|---|---|---|
| Item number | r | Item number | r |
| 2 | .36 | 1 | .62 |
| 3 | .03 | 2 | .44 |
| 4 | .41 | 3 | .75 |
| 6 | .23 | 4 | .71 |
| 7 | .00 | 5 | .00[a] |
| 8 | .40 | 6 | .60 |
| 9 | .20 | 7 | .66 |
| 15 | .60 | 8 | .60 |

[a]Although the $r_{bis}$ for this item was extremely low, it was maintained because it proved to be .51 when administered to grade nine.

Table 9. Biserial correlations resulting from item analysis of the educational aspiration test, grade 9

| Logan Junior High School N: 148 | | Smithfield Junior High School N: 40 | |
|---|---|---|---|
| Item number | r | Item number | r |
| 2 | .24 | 1 | .78 |
| 3 | .14 | 2 | .29 |
| 4 | .48 | 3 | .54 |
| 6 | .47 | 4 | .38 |
| 7 | .35 | 5 | .51 |
| 8 | .48 | 6 | .38 |
| 9 | .35 | 7 | .48 |
| 15 | .35 | 8 | .38 |

Scoring

The educational aspiration test is scored on the basis of which alternative answer the student selects for each question. If the student chooses the first of the five alternatives, he received five points. He received four points for selecting the second alternative, three for electing to mark the third alternative, two for the fourth, and one for the fifth. The higher the student's educational aims, the greater is the number of points he received. The total educational aspiration score is the sum of the scores obtained on each of the eight questions of the test. Total scores may range from eight to forty.

## Occupational Aspiration

The instrument employed in this study for the purpose of investigating occupational aspiration was the Occupational Aspiration Scale (OAS),

revision 1, 1961, authored by Archibald O. Haller. The writer is greatly in debt to Dr. Haller for the use of this aspiration instrument. The OAS consists of eight forced-choice questions regarding job preference. This instrument is designed to estimate the occupational prestige level sought by the subject while minimizing the non-prestige effects of his particular occupational choice. The examinee is required to select from 10 ranked occupational alternatives one for each question. The scores for rating the alternatives in each of the eight questions were drawn systematically from the entire range of the North-Hatt occupational prestige continuum (Haller, 1958).

The following information concerning an analysis of responses to the OAS is offered by Haller and Miller:

1. The rate of non-responses and unusable responses is less than one per cent.
2. The mean score is approximately 37 points.
3. The standard deviation of the scores is approximately 11.5 - 13.0 points.
4. The split-half reliability is about r = .80, when corrected for attenuation.
5. The test-retest reliability coefficient, measured on equivalent forms administered 10 weeks apart, is r = .62. (Haller and Miller, 1961, p. 134)

The approximate time consumed in administering this test exclusive of instructions is 15 minutes. A copy of the OAS appears in Appendix B of this paper.

Scoring

Scoring is accomplished by assigning a weight to the alternative selected by the subject. Such weights are obtained from a scoring key offered by the author of the OAS. The order of the response to each question was randomized to reduce the possibility of spurious inter-correlation due to "response sets." This randomization also reduced the

chances that the examinee would perceive the hierarchical ordering of the response alternatives. The alternatives for each question are scored within the range of zero to nine. The total score is the summation of the scores received on each of the eight questions. Total scores may conceivably range from zero to seventy-two.

## Value Achievement

The value achievement test is the only measuring device employed in this study that does not directly relate to level of aspiration. The purpose for using this instrument in the Ogden-Weber study was to determine the effects of grouping on one's evaluation of achievement. The writer is indebted to Richard deCharms and Irwin W. Miller for the use of the v Achievement questionnaire. The v Achievement tool consists of nine questions designed to assess the degree to which an individual values achievement or believes himself to be achievement-oriented. This instrument is so constructed that it indicates the student's opinion regarding his achievement motivation. Eight of the nine questionnaire items come from Murray's original study. Dr. deCharms (1955) found that the nine items that compromise the v Achievement test correlated at least +.30 with the remainder of test items. The writer rephrased the last item to better insure intelligibility among seventh and ninth grade students, since this instrument has heretofore generally been used with students at a more advanced grade level. The last item as presented by deCharms read, "Only ambition will bring a man's mind into full activity." This item as reworded by the writer reads, "I think that people should be ambitious because only ambition makes one's mind active." The nine items are dispersed among eleven other items in an attempt to somewhat conceal

the fact that this was a measure to determine the degree to which achievement is valued. The time involved in the administration of this questionnaire exclusive of instructions is approximately six minutes. A replica of this instrument may be found in Appendix B of this paper.

Scoring

A score for the v Achievement instrument is obtained by summing the weighted responses for each of the nine items fundamental to the questionnaire. The range of response categories is from strongly disagree (SD) to strongly agree (SA) and the weights correspondingly assigned are from zero to four. The category disagree (D) is awarded a weight of 1. The category designated by a question mark (?) is assigned a weight of 2. The category designated as agreement (A) is given a weight of 3. Thus, high scores are indicative of greater achievement orientation. The total v Achievement score may range from zero to 36.

## Laboratory Aspiration

The writer is indebted to Dr. Raymond B. Cattell for the use of the coding test. The coding test is much like many other so-called laboratory aspiration tests. This type of test may be classified as cognitive, nonverbal. The aims of this test are to get (a) a measure of the general excess of aspiration over achievement, (b) a measure of the immediate responsiveness of aspiration to changes in achievement and, (c) a measure of aspiration for improvement, or the constant deficit between immediate past performance and immediately succeeding goal. Scoring instructions vary with the aim of the test. The first two aims are directed at adults and the last aim is designed for children only between ages 10 and 17.

The present study was interested in measuring the last-defined aim. Cattell admonishes that aspiration for improvement is not independent of the first-mentioned aims. The task involved in completing a coding test is one of substituting a symbol for a number. Approximately six minutes should be consumed in administering this test after directions have been issued. A duplicate of the coding test may be found in Appendix B of this paper.

Scoring

A score for the coding test is obtained by taking the sum of the aspiration "estimates" on the first two pages and subtracting this from the sum of the "estimates" on the last two pages. The estimate on page 3 is not directly used. It should be noted that a constant of 50 was added to each raw score as a means of eliminating negative scores. Table 10 indicates the range of laboratory aspiration or coding test difference scores for each of the schools involved.

Table 10. School, grade, and range of coding test or laboratory aspiration scores

| School | Grade | Laboratory aspiration | |
|---|---|---|---|
| | | high | low |
| Central | 7 | 26 | -13 |
| Wahlquist | 7 | 36 | - 3 |
| South | 7 | 36 | -15 |
| Washington | 7 | 45 | -22 |
| Highland | 9 | 40 | -15 |
| Roy | 9 | 42 | -24 |
| Wahlquist | 9 | 45 | -10 |
| Mt. Ogden | 9 | 36 | -15 |

## Socio-Economic Scale

The socio-economic scale designed for the pilot study of this investigation was not used as part of the aspiration level battery in the Ogden-Weber study but instead was administered to all junior high school students as part of the Utah State University Biographical Information Form. Thus, a stated socio-economic position was obtained for each student involved in the level of aspiration study. The socio-economic scale, a duplication of which may be found in Appendix B of this paper, was adapted from Hollingshead (1949), Centers (1949), and Warner and Abegglen (1955). The answer sheets for 21 of the 100 seventh grade Logan Junior High School boys who were administered the socio-economic scale as part of the pilot study were randomly selected to serve as a basis for establishing relationships between raters. The same number of answer sheets (21) was randomly selected from among 148 subjects of grade nine who completed the socio-economic scale. Three raters from the staff of the Logan Junior High School rated each of the selected socio-economic scale answer sheets independently. These raters were serving as counselors at Logan Junior High School and were somewhat acquainted with the socio-economic conditions of the community. Table 11 shows the relationships obtained between raters. The correlation coefficients offered are intended to show that the raters evaluated each student's socio-economic position at approximately the same level.

Table 11. Correlation coefficients obtained between raters of socio-economic status for grades 7 and 9, Logan Junior High School

| Rater | r grade 7 | r grade 9 |
|---|---|---|
| Subject[a] vs 3 raters[b] | .47 | .94 |
| Subject vs author[c] | .55 | .85 |
| 3 raters vs author | .95 | .70 |
| Author vs composite of raters[d] | .74 | .95 |

[a]Randomly selected Logan Junior High School males, N=21 for each grade.
[b]One male and two female counselors.
[c]George A. Jeffs
[d]Three raters plus the subject.

# CHAPTER IV

# FINDINGS AND DISCUSSION

## Introduction

Most of the laboratory studies of aspiration set up situations which are too far removed from significant problems of life to provide a basis for generalizing about personality. In the laboratory it is difficult to set up an experiment involving performance which will have significance for all subjects. However, the writer will try to integrate the findings of the present study with findings of other studies in an attempt to show the relationships and make interpretations more meaningful.

The reader is referred to Tables 12, 13, 14, and 15, found in Appendix A of this paper, for a concentrated overview of the findings of this study. Since the significant differences of aspiration levels obtained between districts in the present study is little more than may be expected by chance, it might be more enlightening to consider the general trends rather than focusing the discussion on significant differences only. Hypotheses shall be discussed in relation to specific areas of aspiration so that results pertaining to three hypotheses will be discussed simultaneously rather than separately. The last two hypotheses, 19 and 20, will not receive separate treatment in this paper but will be discussed in conjunction with the other 18 hypotheses.

## Analysis Technique

The form in which the hypotheses of this study is stated, the null form, and the nature of the data collected indicated that an appropriate statistical technique to employ in threating these data would be analysis of variance. This statistic is in harmony with the design of this study and affords an F-ratio. The F-tests were calculated by treating the obtained raw scores associated with each variable as a one-way analysis of variance with unequal cell sizes. Significant F-tests were followed by t-tests to compare differences between pairs of mean scores.

## Classroom Aspiration

Hypotheses 1, 2, and 3 indicate that no significant classroom aspiration differences were expected between ability-grouped students assigned to accelerated, average, and developmental academic school settings and comparable students not so assigned. The findings of this study indicate that these hypotheses must be accepted with the exception of the developmental section, grade nine. Also, it was hypothesized that no significant classroom aspiration differences were expected among students at different ability levels in the Weber School District or the Ogden School District. The former hypothesis must be rejected while the latter is accepted.

### Between districts

The mean score referred to herein shall indicate the D-score or the difference between the subject's evaluation of his current status and his expectation of future status. A significant difference in classroom aspiration was found between ninth grade developmental students. This

finding, however, is reduced in importance when one notes that a reverse difference is found at the seventh grade developmental level. This finding might lead one to believe that the significant finding, which is just significant at the 5 percent level of confidence, may well be a chance occurance. The fact that the findings at the developmental level of grades seven and nine are in opposition to each other tends to invalidate the significant difference discovered. Also, the sign test result (1.63) indicated no significant trend for either the ability- or randomly-grouped students to show consistently higher classroom aspiration. However, the sign test approaches significance. The insignificance of the sign test result may be attributed to chance. It is possible that ability-grouped subjects show a more favorable attitude toward classroom aspiration. This point should be further investigated. Table 16, found in Appendix A of this paper, will inform the reader of a significantly different socio-economic rating between developmental students at the seventh grade level favoring the ability-grouped students. The reader might also note that the developmental seventh and ninth grade students expressing the highest classroom aspiration are from higher socio-economic environments. This relationship, however, does not appear at the accelerated or average levels. Such a finding may mean that socio-economic status is more influential in producing various degrees of classroom aspiration among developmental students than among accelerated or average students. A significant trend was discovered for higher classroom aspiration to be associated with higher socio-economic status at the seventh grade level. It might be concluded that socio-economic position is more influential in the determination of classroom aspiration among the younger of the two age groups studied--seventh grade boys.

Within districts

Tables 12 and 13 show that significant classroom aspiration differences between ability levels in the ability-grouped district were found on three different occasions--one at the seventh grade and two at the ninth grade level--all favoring the higher of the ability groups. No significant differences in classroom aspiration were found between levels in the randomly-grouped district. Tables 14 and 15 indicate a significant trend for randomly-grouped students of higher academic standing to show a higher classroom aspiration than that stated by randomly-grouped students of lesser academic standing. Tables 14 and 15 show such a trend to be insignificant within the ability-grouped district. This finding may be interrelated with that reported by Worrell (1959) who found that high D-scores were associated with unrealistic aspirations. We might conclude from this finding that students with higher classroom aspirations possess a more realistic approach to goal-setting than do students with lesser classroom aspirations. A trend for ability-grouped students to show more realism than randomly-grouped students approaches significance. Sears (1941) discovered that subjects showing a lower mean aspiration D-score were high in academic security, confidence and personal adjustment. The findings of the present study as indicated by Table 13 suggest that we may expect a descending order of magnitude in academic security, personal adjustment, and self-confidence as classroom aspiration decreases. It may be noted from Tables 12, 13 and 16 that a significant trend exists within the randomly-grouped district at both grades seven and nine for students of higher socio-economic status to show higher classroom aspiration scores than students of lesser academic status. This trend is not significant within the ability-grouped district but approaches significance in grade seven.

## Social Aspiration

Hypotheses 4, 5, and 6 indicate that no significant social aspiration differences were expected between ability-grouped students functioning in accelerated, average, and developmental academic school settings and comparable students heterogeneously-grouped. The general findings of this study indicate that these hypotheses must be accepted with the exception of the average section of grade seven. Also, it was hypothesized that no significant social aspiration differences were expected among the ability levels of the Weber School District or among the academic levels of the Ogden School District. Both of the latter hypotheses were rejected.

### Between districts

The only significant difference in social aspiration between districts was recorded by the average students of the seventh grade. The randomly-grouped students in this instance exhibited a significantly higher aspiration for social accomplishment than did comparable students in the ability-grouped district. A reverse trend among ninth grade students of average academic ability somewhat nullifies the difference found at the seventh grade level and may mean that his difference actually has no real significance. A possible explanation for the finding at the seventh grade level is that the heterogeneously-grouped average seventh grade student has had more social experience than the ability-grouped seventh grade student and thus knows the upper range of social possibilities while the ability-grouped subject has witnessed limited social experience restricted to the social activities of his own ability group. Sears (1940) relates that a subject may set a high goal and receive gratification in social approval for his recognition of the social norm and his evident

effort to reach it, while he actually has little or no expectation of reaching it, or he may set his goal low in overt denial of the social norm and derive gratification from over-reaching it. Sears' explanation may explain the obtained differences between seventh grade average groups in the current study. That is, the obtained high social aspirations of the randomly-grouped students at the average level may be a means of securing social approval. Ability-grouped students of the accelerated and developmental groups show higher social aspirations than do comparable students not grouped for ability. A sign test to check the existence of a trend for randomly- or ability-grouped students to show higher social aspirations proved insignificant. However, this test proved to approach significance and indicates that ability-grouping might influence the social aspirations of group members. Ability grouping possibly tends to mold social unity because it may force groups to become somewhat socially active within the group. Perhaps this forced social interaction tends to elevate social aspiration. The socio-economic influence on social aspiration between districts shows no consistent trend.

Within districts

Significant differences were recorded within both the ability-grouped district and the randomly-grouped district at the seventh grade level, but none was noted at the ninth grade level. The significant differences (4) favored the higher of the two academic groups in each comparison. It may be noted on Tables 12 and 16 that in three of the four significant differences being reported among seventh grade students of both districts, significant differences in socio-economic status were also present. These differences were in the same direction. That is, the socio-economic

differences also favored the higher of the academic groups being compared. No such discovery was made at the ninth grade level. Thus, we might reason that at the seventh grade level, socio-economic conditions have influenced to some degree the subject's social aspirations. This reasoning receives some support from a study by Hieronymus (1951) who showed a relationship of .50 between socio-economic expectation and socio-economic status. However, when socio-economic influences are considered at both grade levels seven and nine, there seems little evidence to support the idea that social aspiration is related per se to ability level. Sign tests were applied to both districts in an attempt to establish a significant trend. The tests failed to meet significance in the randomly-grouped district, but nearly met the standard for significance in the ability-grouped district. This may suggest that ability grouping influences social aspiration. The reader may note that when both districts are considered simultaneously, the average level student appears to express higher social aspiration than the accelerated or developmental student. This result may be an influence of our "middle-class culture." There is a significant trend within the ability-grouped district at the seventh grade level for socio-economic status to show some relationship to social aspiration. That is, the higher the socio-economic status, the higher is the social aspiration.

## Educational Aspiration

Hypotheses 7, 8, and 9 indicate that no significant educational aspiration differences were expected between ability-grouped students placed in accelerated, average, or developmental academic environments and students of similar academic ability but heterogeneously placed in

school settings. The general findings lead us to accept these hypotheses with the exception of the developmental group, grade nine, which showed a significantly lower educational aspiration in the ability-grouped sample. Also, it was hypothesized that no educational aspiration differences of a significant nature were expected among the ability levels of the Weber School District or among the academic levels of the Ogden School District. Both of these hypotheses were rejected within both district levels.

Between districts

A significant difference in educational aspiration was recorded between the developmental students of grade nine favoring the randomly-grouped subjects. However, this significant difference is but at the 5 percent level of confidence. Since the difference in educational aspiration among the seventh grade developmental students is nearly as large as the significant difference at the ninth grade level but in the opposite direction, one wonders about the significance of the difference found at the ninth grade level. The sign test was applied to determine if the ability-grouped students showed a consistently higher or lower educational aspiration than the randomly-grouped students. The results of this test proved nonsignificant. It should be noted on Tables 12, 13, and 16 that larger educational aspiration scores are associated with higher socio-economic status estimates at both grades seven and nine at the developmental level. Once again socio-economic status appears to have been influential at the developmental level in producing differences in level of aspiration. The reader may recall that this same relationship was noted when the results of classroom aspirations were considered. Figures 1 and 2 are offered to help the reader interpret the reported findings. The reader should note the negative skewness of these

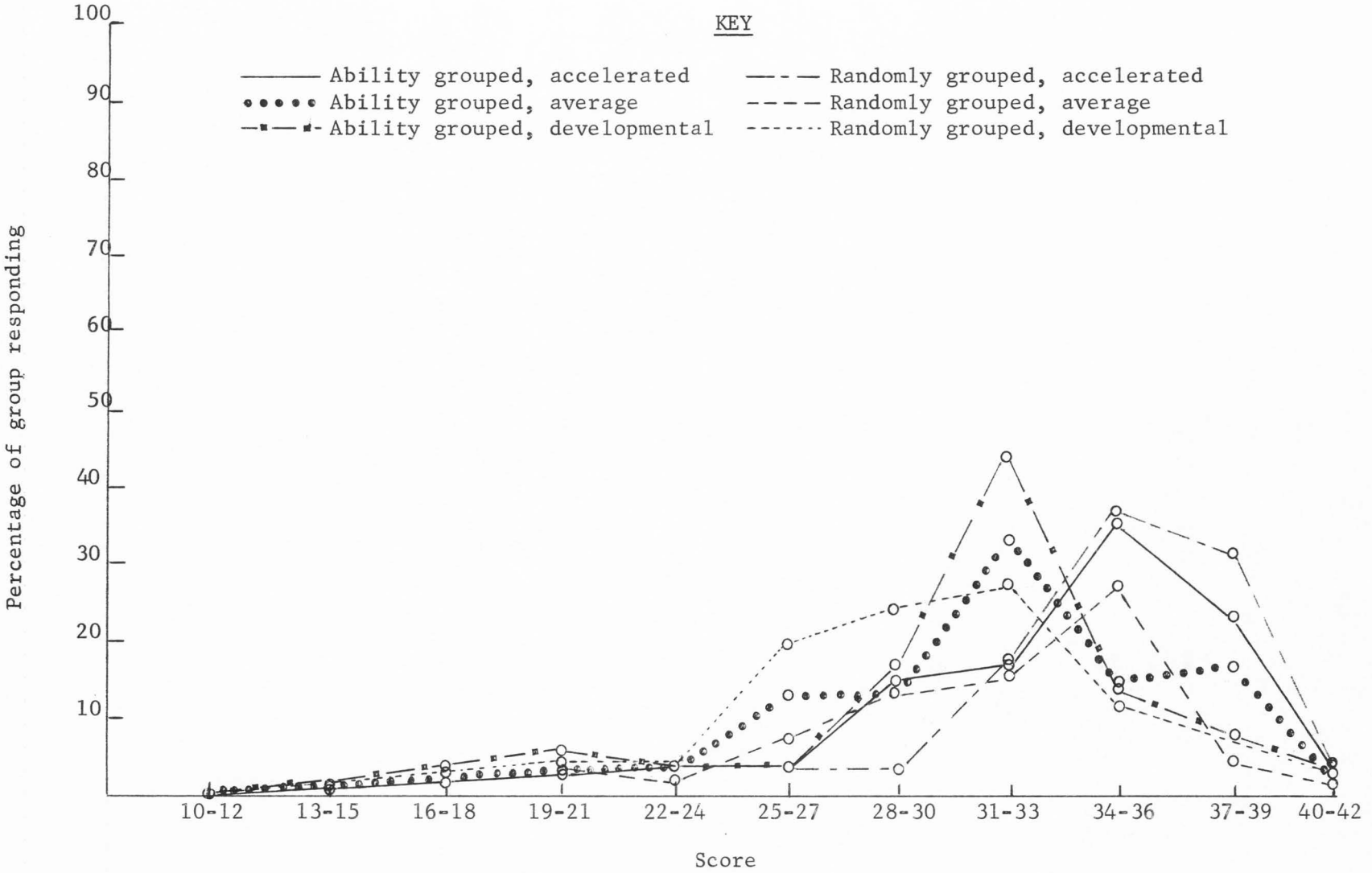


Figure 1. Educational aspiration frequency distribution, grade 7

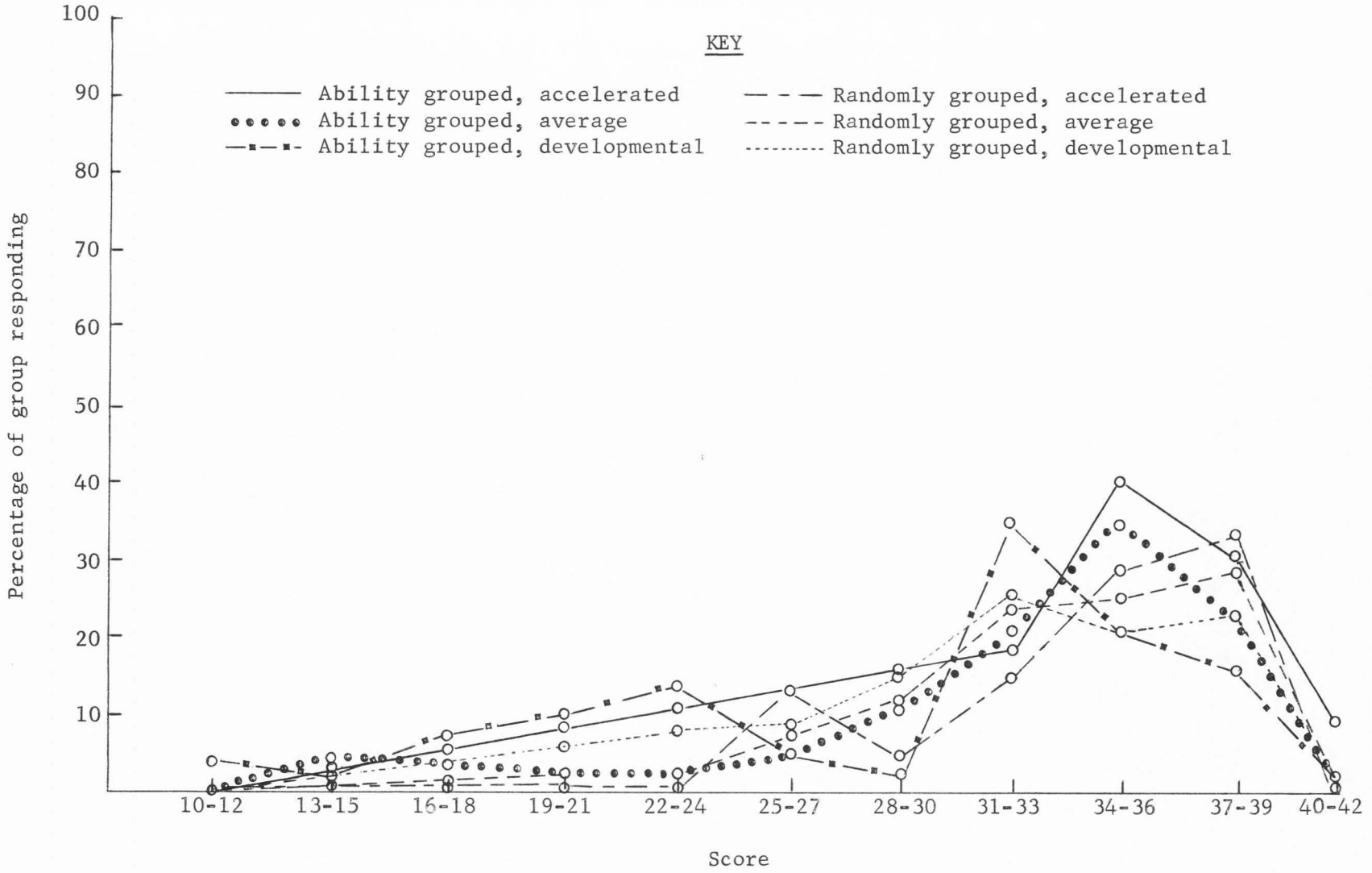


Figure 2. Educational aspiration frequency distribution, grade 9

distributions. Such skewness may indicate a lack of realism of stated educational goals which may in turn account for the absence of significant differences between stated educational goals.

Within districts

Significant educational aspiration differences were found within the ability-grouped district at all levels in grade nine. No significant differences were found within the ability-grouped district in grade seven. Significant differences were discovered within the randomly-grouped district at both grades seven and nine. Significant educational aspiration differences might well be influenced by the significant socio-economic status differences that accompany them in the randomly-grouped district in the seventh grade and in the ability-grouped district at the ninth grade level. Support for this theory is found in the research of Hieronymus (1951) who reported a correlation of .30 between socio-economic status and attitude toward education, and A. B. Wilson (1959) who found that a definite relationship exists between socio-economic position of the home and educational aspirations. Haller and Miller (1961) report a correlation of .41 between socio-economic status of adolescent boys' homes and educational aspiration.

The present study discovered a significant trend for high educational aspiration to be associated with the degree of academic productivity at both grades seven and nine. The higher the academic group to which the student belongs the higher are his educational goals. This statement applies to both ability-grouped and randomly-grouped districts. The reader is referred to Tables 14 and 15 for sign test results. The present finding supports a report by Crowley (1959) in which it was shown that

the higher the intellectual capacity of the child the greater are the chances that he will have college and graduate school goals.

With the increasing emphasis our culture is placing on educational attainment, the general trend disclosed by the present study is not surprising. Industrial demands, greater incomes, and more extensive education of parents help to increase the desire for education and this desire is reflected in lofty educational aspirations. Since higher income and extended education show some relationship to socio-economic status (Edwards and Wilson, 1961), the possibility exists that the educational aspiration instrument designed for this study may serve in determining socio-economic status. This instrument may also be used to establish academic status. Ford (1957) has shown that a college education appears to have become a normal expectation of junior high school youth. Perhaps this normal expectation may account for the lack of significant differences found in the present study concerning educational aspiration.

## Occupational Aspiration

Hypotheses 10, 11, and 12 indicate that no significant occupational aspiration differences were anticipated between students grouped on the basis of ability into accelerated, average, and developmental sections and students of equal ability but not so grouped. The findings of this investigation force the acceptance of these hypotheses with the exception of the average group, grade seven in which the randomly-grouped students express significantly higher occupational aspirations than do comparable students grouped for ability. Also, it was hypothesized that no significant occupational aspiration differences were expected within the ability

levels of the Weber School District or within the academic levels of the Ogden School District. The results of this investigation forced the rejection of these latter two hypotheses as significant level differences were discovered in both districts.

Between districts

Only one significant occupational aspiration difference was noted between districts and that between the seventh grade average groups and favoring the randomly-grouped subjects. Several other differences between districts approach significance, which may be considered as support for the conclusion that ability grouping tends to be associated with lower occupational aspiration. Such an association appears particularly true at the ninth grade level. That is, consistently higher occupational aspiration scores were found among the randomly-grouped subjects or consistently lower occupational aspiration scores were reported by ability-grouped subjects. It may be noted that the only reverse finding of this near-significant trend for randomly-grouped students to show higher occupational aspiration occured between the developmental students of grade seven. This was the only grade and level at which a significant difference in socio-economic status occured between districts. Perhaps, then, socio-economic status has a particularly strong influence on occupational aspiration at this age and level. Tables 14 and 15 will help the reader to follow the findings offered. These tables offer sign test results and show a trend approaching significance for the randomly-grouped students to express higher occupational aspirations than ability-grouped students. This difference might be explained on the basis of cultural pressures for obtaining lofty occupational positions. Occupational status is one of the most frequently employed

measures of success in our society. It has been shown (Edwards and Wilson, 1961) that middle-class homes are prone to stimulate their children to aspire occupationally as a means to social advancement. Perhaps this is the reason that the significant difference occurred between the average rather than the accelerated or developmental levels. The finding that the ability-grouped students generally show a lower mean occupational aspiration score than the randomly-grouped students may indicate that the former need meet a more restricted peer group demand than the randomly-grouped students and therefore need not aspire as high occupationally to receive peer group acceptance. Rotter (1942b) found that an individual's level of aspiration tends to regress toward the mean of the group to which he belongs. Table 16 will show that students classed as average in this study generally fit the socio-economic category of middle-class. Little support for assuming that socio-economic status influences occupational aspiration between districts was found since seventh grade students of the randomly-grouped district expressed a mean socio-economic status score that is lower than that of similar students of the ability-grouped district. The reverse is true at the ninth grade level. That is, the stated socio-economic status means of the randomly-grouped subjects of grade nine tend to be higher than similar students of the ability-grouped district.

The reader should take note of the high occupational aspiration mean scores for students involved in the current investigation. The grand mean occupational aspiration scores for seventh grade students is 44.75 and for the ninth grade students this grand mean is 47.04. Both of these means are higher than the mean of 37.00 reported by the author of the occupational aspiration instrument. Thus, it may be that the subjects of this study were irrealistic in selecting occupational goals.

Within districts

A number of significant occupational aspiration differences may be noted on Tables 12 and 13 within both districts and in both grades seven and nine. Significant differences in occupational aspiration were found in all three level comparisons of the ability-grouped district, grade nine. Two of the three comparisons in the ability-grouped district at the seventh grade level were found to be significant. The sign test within the ability-grouped district proved significant. Five of the six differences considered in this trend were significant. The higher the academic status of the group the higher is their expressed occupational aspiration within the ability-grouped district. This finding lends support to one investigation by Haller and Miller (1961) involving 17-year-old boys. These researchers found a relationship of .50 between achievement and occupational aspiration. Three significant occupational aspiration differences were noted when the randomly-grouped seventh grade students' results were observed. One such significant difference was found when the randomly-grouped ninth grade students' occupational aspiration results were observed. A significant sign test was discovered within the randomly-grouped district favoring the students of higher academic status. This finding is supported by reports from Barnett, Handelsman, Stewart and Super (1952) who found a high relationship between level of occupational aspiration and academic achievement. The results expose a parallel increase in occupational aspiration and academic level in both the ability-grouped and heterogeneously-grouped districts. That is, the higher the academic group to which the subject is assigned, the higher is his level of occupational aspiration. Intelligence and occupational aspiration have been shown to be positively related

(Bradley, 1943). This relationship may account for the foregoing association between academic position and occupational aspiration. It may be noted that within the ability-grouped district at both grade levels seven and nine there appears to be a significant trend for the group with the higher occupational aspiration score, that group highest in academic standing, to be from a higher socio-economic environment. This significant trend is also found within the randomly-grouped district. Such a finding may be interpreted to mean that high socio-economic standing may tend to produce higher occupational aspiration scores than does an evnironment of lower socio-economic conditions. This finding offers support for Peters' (1941) conclusion that the home is the greatest single agency for the determination of a vocation among high school students. Sewell, Haller, and Straus (1957) have reported similar findings.

## Value Achievement

Hypotheses 13, 14, and 15 indicate that no significant differences were expected in value achievement scores between ability-grouped students functioning in accelerated, average, and developmental academic settings and comparable students not assigned to such groups. The findings of this study require the acceptance of all three hypotheses as no significant differences were discovered between groups. It was also hypothesized that no significant value achievement differences were expected within the ability levels of the Weber School District or within the academic levels of the Ogden School District. These two hypotheses were also accepted as no significant level differences were discovered.

Between districts

The value of achievement differences found between districts in this study were extremely small and none showed significance. Four of the six differences showed that the randomly-grouped students expressed a more positive regard for the value of achievement. This finding does not represent a significant trend. The absence of significant differences may be somewhat of a mild surprise to some individuals since some arguments run along the line that ability grouping might produce greater respect for achievement. However, Haller and Miller (1961) have shown that an insignificant relationship was found between an individual's achievement values and the achievement values of the members of his peer groups. This discovery leads one to believe that ability-grouping may have little effect on the value placed on achievement. Perhaps the instrument used in this study is inadequate to measure real value of achievement. Also, the students involved in the present study might be conforming to parental and teacher influence for high respect for achievement. Reporting a desire for achievement is one way of compensating for not actually achieving.

Within districts

No significant differences concerning the value of achievement were found within the Weber or Ogden School Districts. However, it might be noted within the ability-grouped district that there is a significant trend for the student associated with the highest academic groups to show a higher regard for achievement. This finding somewhat substantiates data offered by Pierce and Bowman (1960) who found significant differences in achievement values between tenth grade high- and low-achieving boys.

Also, Strodtbeck (McClelland, et al, 1958, pp. 135-194) found that over-achieving boys scored significantly higher regarding the value of achievement than did underachieving boys. There is a significant trend within the ability-grouped district at both grade levels seven and nine for a higher value of achievement to be associated with a higher socio-economic standing. Thus, either or both socio-economic standing and academic standing may have a tendency to influence the value placed on achievement among ability-grouped students. This same point may be made of the seventh grade randomly-grouped students but not of the ninth grade randomly-grouped students.

## Laboratory Aspiration

Hypotheses 16, 17, and 18 indicate that no significant differences in laboratory aspiration were expected between ability-grouped students in accelerated, average, and developmental academic settings and comparable students randomly assigned to classrooms. The general findings require the acceptance of these hypotheses with the exception of the average group, grade seven, where a significant difference in laboratory aspiration favoring the ability-grouped students was found. It was also hypothesized that no significant laboratory aspiration differences were expected within the ability levels of the Weber School District or within the academic levels of the Ogden School District. These two hypotheses were accepted because no significant difference in laboratory aspiration was noted within the ability-grouped or randomly-grouped districts.

### Between districts

A significant laboratory aspiration difference was observed between districts concerning students assigned to the average group, grade seven

favoring the ability-grouped students. This same difference in the same direction is shown between average students of the two districts at the ninth grade level. This difference does not reach but approaches significance. It might be said about these findings that ability-grouping may well have an effect on the average student in promoting a greater laboratory aspiration score. The size of the laboratory aspiration score (D-score) has personality significance that may be reviewed in the literature cited in this paper. It may be said at this point that larger D-scores or higher laboratory aspirations tend to be associated with "favorable" personality traits. A sign test revealed that a trend that approached significance was found that indicated that ability-grouped students exhibit higher aspirations of a laboratory nature than do randomly-grouped students. Thus, ability grouping may be found to influence not just the average members of the ability-grouped sections, but all levels of ability-grouped programs. A significant trend was discovered between groups at the seventh grade level which tended to show that students expressing higher laboratory aspirations were from higher socio-economic environments. The trend was the opposite at the ninth grade level. Thus, one significant trend tends to cancel the other.

Within districts

Within the ability-grouped district no significant laboratory aspiration differences were observed. Although no significant trend was noted within the ability-grouped district, it will be noted on Tables 12 and 13 that such a significant trend was prevented because of the higher laboratory aspirations offered by the average students. This may be explained on the basis of the desire for middle-class students to excell

academically. The setting for the laboratory aspiration test was such that it might be considered by the students as an academically-associated task. There appears to be no significant trend within the ability-grouped district for socio-economic status to consistently influence laboratory aspirations. No significant differences were noted within the randomly-grouped district. No significant trend concerning socio-economic status and laboratory aspiration within the randomly-grouped district was observed.

## Additional Findings

### Between districts

Table 15 shows a sign test that approaches significance indicating that ability-grouped accelerated students of grade nine are prone to show higher aspirations in general than students of equal academic status but randomly-grouped. Table 15 also shows the reverse to be true at the developmental level of grade nine though not a degree of statistical significance. That is, randomly-grouped developmental students generally express higher aspirations than do ability-grouped developmental students of grade nine. This may indicate that ability-grouping helps to advance aspiration level among accelerated students and lower aspiration level among developmental students at the ninth grade level. It may be seen in Table 14 among seventh grade students at the developmental level a trend approaching significance favoring the general aspirations of the ability-grouped students. This discovery is in direct opposition to that found at the ninth grade level and thus these results tend to cancel each other.

Within districts

It should be noted on Tables 14 and 15 that the vertical axis of the Weber School District level section shows some significant trends in both grades seven and nine. These significant trends favor the accelerated over the developmental and the average over the developmental in level of aspiration taken as a general theme without regard to specific type of aspiration. Thus, there is a significant trend for students in the higher academic levels of the ability-grouped district at both grades seven and nine to express higher levels of aspiration. This is also true in the randomly-grouped district at the seventh grade level. It should be noted on Table 16 that significant socio-economic status differences between levels run the same direction as do the aspiration levels. That is, the higher the socio-economic status the more lofty is the level of aspiration in general. The significant trend for the average group to show higher levels of aspiration than the developmental group in the Weber School District is also supported by the same direction of socio-economic status. This same discussion may be applied to the randomly-grouped students at the seventh grade level. Figures 3 and 4 are offered to show the comparability of socio-economic status when groups are considered simultaneously. Table 16 indicates that the overall mean socio-economic status of the two districts involved in this study differ but slightly.

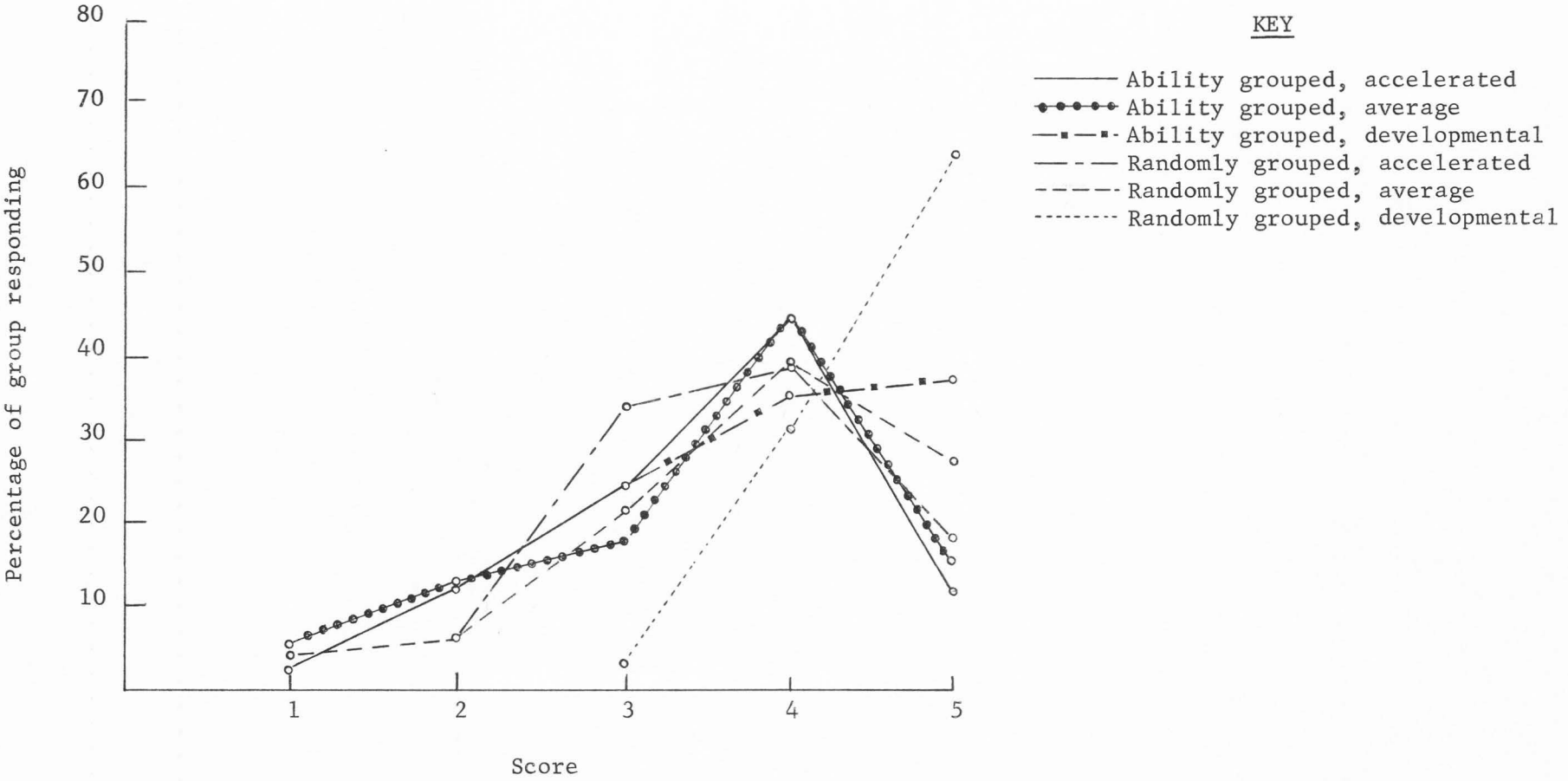


Figure 3. Socio-economic frequency distributions, grade 7

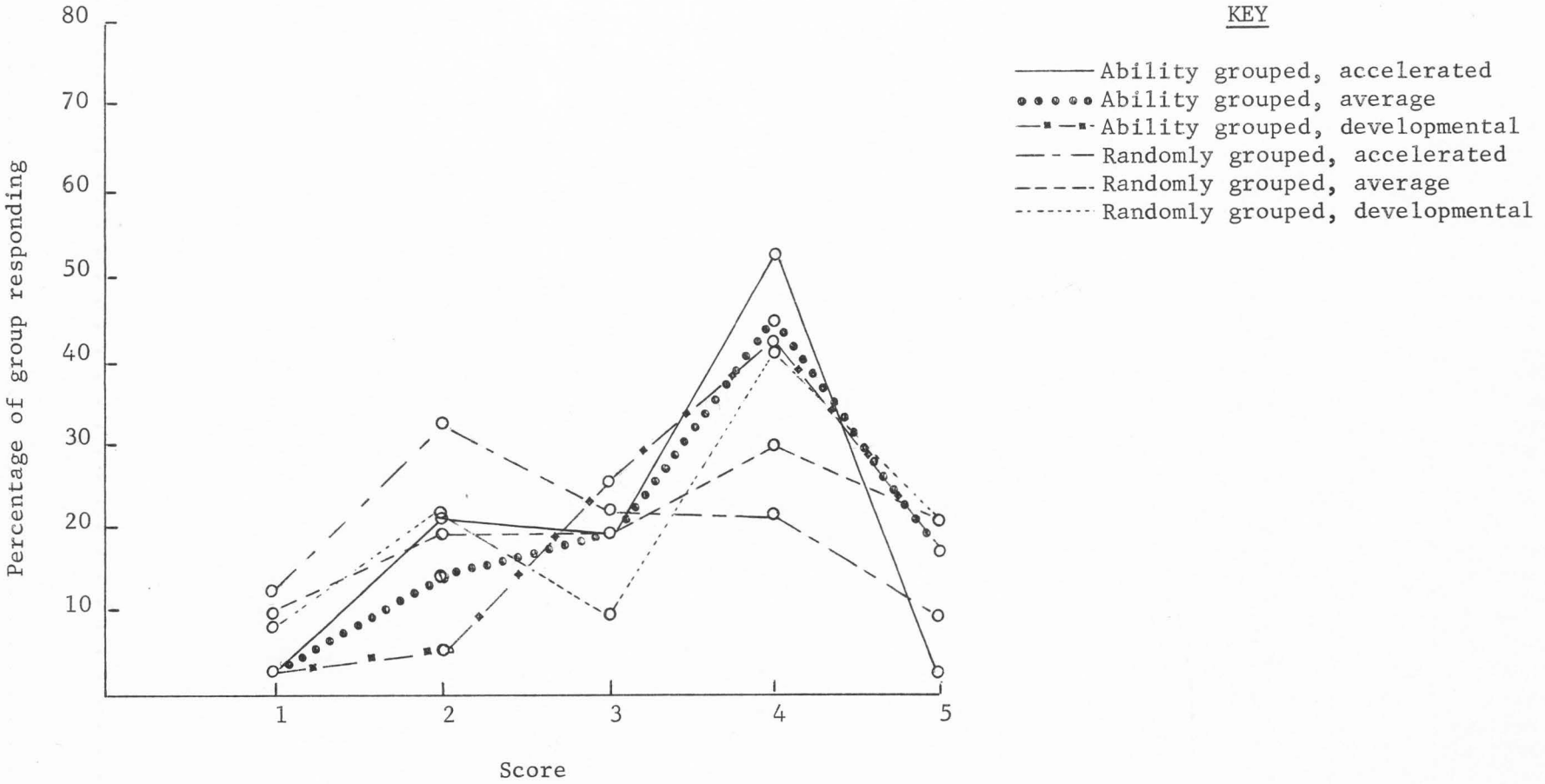


Figure 4. Socio-economic frequency distributions, grade 9

# CHAPTER V

# SUMMARY AND CONCLUSIONS

## Summary

The primary purposes of this study were: (1) to develop instruments for measuring classroom aspiration, social aspiration, and educational aspiration, and (2) to determine the effects of ability grouping on levels of aspiration. The sample, comprising 554 seventh and ninth grade boys, was drawn from two juxtaposed school districts each of which employed a different method for classroom grouping, ability and random. Subjects obtained from the school district practicing ability grouping were seventh and ninth grade boys who had been functioning within the ability-grouped school district for a period of four years assigned on the basis of achievement test results (STEP) to homogeneous mathematics and science classes. Subjects for the control group were those male students of grades seven and nine who were equal in achievement to the experimental group and who also had been enrolled in the randomly-grouped school district for a minimum of four years. Three academic groups were established in each district--accelerated, average, and developmental. The variables under study were classroom aspiration, social aspiration, educational aspiration, occupational aspiration, value of achievement, and laboratory aspiration. The experimental design employed analysis of variance to test the significant differences among and between groups. The design attempted to establish differences between the accelerated groups of each district on each of the six variables. This same approach

was applied to the average and developmental groups of the two districts. Within district differences were also tested. Few of the conclusions offered are supported by statistical significance, but they afford a general direction of the findings.

## Classroom Aspiration

Hypotheses 1, 2, and 3 anticipated that no significant differences would occur between or within districts regarding classroom aspiration.

### Findings

1. Junior high school boys grouped for ability generally exposed higher classroom aspirations than did similar junior high school boys not so grouped.

2. Junior high school boys within the randomly-grouped district and demonstrating greater academic achievement had higher classroom aspirations than did junior high school boys of lesser academic ability.

3. A significant trend showed that socio-economic influence is more pronounced in establishing classroom aspiration at the seventh grade level than at the ninth grade level.

## Social Aspiration

Hypotheses 4, 5, and 6 anticipated that no significant differences would occur between or within districts regarding social aspiration.

### Findings

1. Junior high school boys grouped for ability exhibited greater social aspiration than did those junior high school boys of equal ability but randomly-grouped.

2. Social aspiration may be influenced more by socio-economic status at grade seven than at grade nine.

3. A near significant trend was disclosed within both districts for higher social aspiration to be associated with higher socio-economic status.

## Educational Aspiration

Hypotheses 7, 8, and 9 anticipated that no significant differences would occur between or within districts regarding educational aspiration.

### Findings

1. No significant trend was discovered that indicated that either those students grouped for ability or those students randomly-grouped expressed higher or lower educational aspiration.

2. Junior high school boys with high academic ability generally exposed a higher desire for further education than did those junior high school boys with average academic ability. The latter boys showed a desire for further education that was greater than that expressed by junior high school boys with least academic talent.

3. Educational aspiration may well be influenced by socio-economic status.

## Occupational Aspiration

Hypotheses 10, 11, and 12 anticipated that no significant differences would occur between or within districts regarding occupational aspiration.

### Findings

1. Junior high school boys grouped on the basis of ability tended

to show less desire to aspire occupationally than did similar boys not grouped for ability.

2. Academic standing among junior high school boys appears directly related to the magnitude of occupational aspirations.

3. Grand mean scores indicate that the students of this study may be irrealistic concerning occupational aspiration.

4. Socio-economic status appears to have some influence on occupational aspiration within both districts.

## Value Achievement

Hypotheses 13, 14, and 15 anticipated that no significant differences would occur between or within districts regarding the value of achievement.

### Findings

1. Ability grouping was found to have neither a definitely positive or negative effect on a students value of achievement.

2. Junior high school boys within the ability-grouped district high in academic ability revealed a greater value for achievement than those boys in the same district with moderate academic ability. The latter boys showed a greater value for achievement than did boys of lesser academic ability.

3. Socio-economic status may influence the value of achievement within the ability-grouped district.

## Laboratory Aspiration

Hypotheses 16, 17, and 18 anticipated that no significant differences would occur between or within districts regarding laboratory aspiration.

Findings

1. Junior high school boys grouped for ability exhibited a higher desire for immediate success than did junior high school boys of equal academic capacity but randomly grouped.

2. Junior high school boys of average academic ability demonstrated a higher aspiration for immediate success than did junior high school boys possessing greater and lesser degrees of academic talent.

## Additional Findings

The following findings do not pertain specifically to any stated hypotheses.

1. Significant district differences involved but five by number and this is just slightly more than would be expected by chance.

2. No significant district differences reached the 1 percent level of confidence.

3. No significant district differences were noted between groups of accelerated students.

4. Three significant district differences were found between average groups--social aspiration, occupational aspiration, and laboratory aspiration.

5. Two significant district differences were found between developmental groups--classroom aspiration and educational aspiration.

6. Level differences indicated that positive aspiration scores were often related to the magnitude of academic standing.

7. Socio-economic position was shown to be related to academic standing. The higher of the academic groups frequently reported higher socio-economic positions.

## General Conclusions

It may generally be concluded that grouping for ability has little effect on level of aspiration. The fact that more significant level differences occured in the ability-grouped district may lead one to believe that aspiration levels are set in accordance with the frame of reference of the group. That is, there may be more distinct levels of aspiration among the ability-grouped subjects which reflect the group goals. The randomly-grouped subjects actually have but one large group (their entire class) with which to associate their personal goals. The finding of few significant differences might indicate that the partial grouping procedure utilized by the junior high schools of this study is too limited and that had more complete grouping practices been employed, more significant results may have been obtained.

The aspiration instruments utilized in this study are by no means infallible. However, neither need they be discarded. Further revision may prove these instruments valuable for research purposes. The reader is admonished not to place great faith in the use of any one of these instruments in establishing levels of aspiration, but perhaps the use of these instruments together may prove fruitful to research. The future establishment of the predictive validity of these instruments should prove interesting. Perhaps the laboratory aspiration and value of achievement instruments used in the present study possess a smaller degree of ego-involvement than is elicited by the other instruments since they do not involve future or long-range goals.

Figures 1 and 2 offer for illustrative purposes a frequency distribution for the responses to the educational aspiration test. The reader will note that the distribution is negatively skewed indicating that the

instrument needs revising.

The more recent studies give evidence of the experimenters' awareness of the need to adequately motivate the subject during a testing situation. Aspiration measures should motivate the subject to respond realistically.

In the final analysis, a person's goal depends on his inner motives and the degree to which he perceives the goal as contributing to his maintenance or prestige. Both individual goals and the demands of others influence the decisions that are made and the levels of aspiration that are attained. An individual's level of aspiration is influenced by his attitudes toward himself and by his estimate of his status in a group.

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# APPENDIX A

Table 12. Aspiration level means, grade 7

| Measure | District | | | Level | | | | | | Grand Mean |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Ability grouped | | | Randomly grouped | | | |
| | Accelerated 1 vs 4 | Average 2 vs 5 | Developmental 3 vs 6 | 1 vs 2 | 1 vs 3 | 2 vs 3 | 4 vs 5 | 4 vs 6 | 5 vs 6 | |
| Classroom aspiration[a] | 13.741<br>14.387 | 15.275<br>15.300 | 14.764<br>15.600 | 13.741**<br>15.275 | 13.741<br>14.764 | 15.275<br>14.764 | 14.387<br>15.300 | 14.387<br>15.600 | 15.300<br>15.600 | 14.92 |
| Social aspiration | 17.000<br>16.451 | 14.826<br>16.720* | 14.264<br>13.480 | 17.000**<br>14.826 | 17.000**<br>14.264 | 14.826<br>14.264 | 16.451<br>16.720 | 16.451**<br>13.480 | 16.720*<br>13.480 | 15.49 |
| Educational aspiration | 33.645<br>34.774 | 31.898<br>32.760 | 31.705<br>29.720 | 33.645<br>31.898 | 33.645<br>31.705 | 31.898<br>31.705 | 34.774<br>32.760 | 34.774**<br>29.720 | 32.760**<br>29.720 | 32.42 |
| Occupational aspiration | 49.161<br>53.032 | 42.028<br>46.380* | 41.558<br>37.600 | 49.161**<br>42.028 | 49.161**<br>41.558 | 42.082<br>41.558 | 53.032*<br>46.380 | 53.032**<br>37.600 | 46.380**<br>37.600 | 44.75 |
| Value achievement | 22.451<br>23.483 | 21.159<br>21.740 | 20.000<br>20.720 | 22.451<br>21.159 | 22.451<br>20.000 | 21.159<br>20.000 | 23.483<br>21.740 | 23.483<br>20.720 | 21.740<br>20.720 | 21.53 |
| Laboratory aspiration | 62.580<br>60.258 | 63.202*<br>58.740 | 60.382<br>55.880 | 62.580<br>63.202 | 62.580<br>60.382 | 63.202<br>60.382 | 60.258<br>58.740 | 60.258<br>55.880 | 58.740<br>55.880 | 60.65 |

1=ability grouped, accelerated
2=ability grouped, average
3=ability grouped, developmental
4=randomly grouped, accelerated
5=randomly grouped, average
6=randomly grouped, developmental
**1 percent level of confidence
*5 percent level of confidence
[a]On this measure only a low score indicates higher aspiration.

Table 13. Aspiration level means, grade 9

| Measure | District | | | Level | | | | | | Grand Mean |
|---|---|---|---|---|---|---|---|---|---|---|
| | Accelerated | Average | Developmental | Ability grouped | | | Randomly grouped | | | |
| | 1 vs 4 | 2 vs 5 | 3 vs 6 | 1 vs 2 | 1 vs 3 | 2 vs 3 | 4 vs 5 | 4 vs 6 | 5 vs 6 | |
| Classroom | 13.343 | 14.166 | 15.510 | 13.343 | 13.343** | 14.166** | 13.530 | 13.530 | 14.170 | 14.14 |
| aspiration[a] | 13.530 | 14.170 | 14.384* | 14.166 | 15.510 | 15.510 | 14.170 | 14.384 | 14.384 | |
| Social | 15.687 | 15.791 | 15.170 | 15.687 | 15.687 | 15.791 | 15.036 | 15.036 | 15.390 | 15.31 |
| aspiration | 15.036 | 15.390 | 14.820 | 15.791 | 15.170 | 15.170 | 15.390 | 14.820 | 14.820 | |
| Educational | 36.000 | 33.097 | 30.255 | 36.000** | 36.000** | 33.097** | 35.385 | 35.385** | 33.878 | 33.58 |
| aspiration | 35.385 | 33.878 | 32.358* | 33.097 | 30.255 | 30.255 | 33.878 | 32.358 | 32.358 | |
| Occupational | 50.812 | 45.152 | 41.000 | 50.812* | 50.812** | 45.152** | 51.277 | 51.277** | 47.731 | 47.04 |
| aspiration | 51.277 | 47.731 | 45.025 | 45.152 | 41.000 | 41.000 | 47.731 | 45.025 | 45.025 | |
| Value | 23.375 | 23.083 | 22.404 | 23.375 | 23.375 | 23.083 | 22.120 | 22.120 | 21.804 | 22.25 |
| achievement | 22.120 | 21.804 | 22.589 | 23.083 | 22.404 | 22.404 | 21.804 | 22.589 | 22.589 | |
| Laboratory | 61.250 | 64.069 | 58.957 | 61.250 | 61.250 | 64.069 | 60.686 | 60.686 | 60.853 | 61.29 |
| aspiration | 60.686 | 60.853 | 60.794 | 64.069 | 58.957 | 58.957 | 60.853 | 60.794 | 60.794 | |

1=ability grouped, accelerated
2=ability grouped, average
3=ability grouped, developmental
4=randomly grouped, accelerated
5=randomly grouped, average
6=randomly grouped, developmental
**1 percent level of confidence
*5 percent level of confidence
[a]On this measure only a low score indicates higher aspiration.

Table 14. Sign test results, grade 7

| Measure | District | | | Level | | | | | | Sign Test |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weber | | | Ogden | | | |
| | Accelerated | Average | Developmental | 1 vs 2 | 1 vs 3 | 2 vs 3 | 4 vs5 | 4 vs 6 | 5 vs 6 | |
| Classroom aspiration | x | x | x | + | + | | + | + | + | 1.63 |
| Social aspiration | x | o | x | + | + | + | | + | + | 1.63 |
| Educational aspiration | o | o | x | + | + | + | + | + | + | 2.45* |
| Occupational aspiration | o | o | x | + | + | + | + | + | + | 2.45* |
| Value achievement | o | o | o | + | + | + | + | + | + | 2.45* |
| Laboratory aspiration | x | x | x | | + | + | + | + | + | 1.63 |
| Sign test | .000 | .816 | 1.63 | 1.63 | 2.45* | 1.63 | 1.63 | 2.45* | 2.45* | |

**1 percent level of confidence
*5 percent level of confidence
x=score favors ability grouped students
o=score favors randomly grouped students
+=indicates that higher academic level score is greater than comparison score.

Table 15. Sign test results, grade 9

| Measure | District | | | Level | | | | | | Sign Test |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weber | | | Ogden | | | |
| | Accelerated | Average | Developmental | 1 vs 2 | 1 vs 3 | 2 vs 3 | 4 vs 5 | 4 vs 6 | 5 vs 6 | |
| Classroom aspiration | x | x | o | + | + | + | + | + | + | 2.45* |
| Social aspiration | x | x | x | | + | + | | + | + | .816 |
| Educational aspiration | x | o | o | + | + | + | + | + | + | 2.45* |
| Occupational aspiration | o | o | o | + | + | + | + | + | + | 2.45* |
| Value achievement | x | x | o | + | + | + | + | | | .816 |
| Laboratory aspiration | x | x | o | | + | + | | | + | |
| Sign test | 1.63 | .816 | 1.63 | .816 | 2.45* | 2.45* | .816 | .816 | 1.63 | |

**1 percent level of confidence
*5 percent level of confidence
x=score favors ability grouped students
o=score favors randomly grouped students
+=indicates that higher academic level score is greater than comparison score.

Table 16. Socio-economic means tested for significance of difference[a], sign test results[b], and overall socio-economic means[c] for Weber and Ogden, grades 7 and 9

| Grade | District differences | | | Level differences | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 vs 4 | 2 vs 5 | 3 vs 6 | 1 vs 2 | 1 vs 3 | 2 vs 3 | 4 vs 5 | 4 vs 6 | 5 vs 6 |
| 7 | 3.516 | 3.594 | 4.117** | 3.516 | 3.516** | 3.594 | 3.709 | 3.709** | 3.820** |
| | 3.709 | 3.820 | 4.600 | 3.594 | 4.117 | 4.117 | 3.820 | 4.600 | 4.600 |
| 9 | 3.093 | 3.625 | 3.723 | 3.093 | 3.093* | 3.625 | 2.855 | 2.855 | 3.341 |
| | 2.855 | 3.341 | 3.461 | 3.625 | 3.723 | 3.723 | 3.341 | 3.461 | 3.461 |

1=ability grouped, accelerated
2=ability grouped, average
3=ability grouped, developmental
4=randomly grouped, accelerated
5=randomly grouped, average
6=randomly grouped, developmental
**1 percent level of confidence
*5 percent level of confidence
[a]Low score indicates higher socio-economic status.
[b]Sign test results: Grouped vs random, entire district, not significant (.000).
Grade 7 vs grade 9, ability and random groups combined, not significant (1.633).
Grade 7, ability-grouped vs randomly-grouped, not significant (1.73).
Grade 9, ability-grouped vs randomly-grouped, not significant (1.73).
[c]Overall socio-economic mean by district: Weber = 3.620
Ogden = 3.457

Table 17. Means and standard deviations for socio-economic status, Weber and Ogden, grades 7 and 9

| District | Group | Grade | Level | Mean | Standard deviation |
|---|---|---|---|---|---|
| Weber | ability | 9 | accelerated | 3.0937[a] | 2.116 |
| Weber | ability | 9 | average | 3.6250 | .989 |
| Weber | ability | 9 | developmental | 3.7234 | .911 |
| Ogden | random | 9 | accelerated | 2.855 | 1.184 |
| Ogden | random | 9 | average | 3.341 | 1.289 |
| Ogden | random | 9 | developmental | 3.461 | 1.238 |
| Weber | ability | 7 | accelerated | 3.516 | .921 |
| Weber | ability | 7 | average | 3.594 | 1.080 |
| Weber | ability | 7 | developmental | 4.117 | .638 |
| Ogden | random | 7 | accelerated | 3.709 | .852 |
| Ogden | random | 7 | average | 3.820 | 1.033 |
| Ogden | random | 7 | developmental | 4.600 | .565 |

[a]Low score indicates higher socio-economic status.

Table 18. Standard deviations on aspiration measures, grade 7

| Measure | Groups | | | | | |
|---|---|---|---|---|---|---|
| | Accelerated | | Average | | Developmental | |
| | 1[a] | 4[b] | 2[c] | 5[d] | 3[e] | 6[f] |
| Classroom aspiration | 1.65 | 2.29 | 2.98 | 2.12 | 3.08 | 2.10 |
| Social aspiration | 4.30 | 4.15 | 4.66 | 4.05 | 3.72 | 4.02 |
| Educational aspiration | 3.86 | 3.14 | 4.53 | 5.27 | 4.35 | 6.20 |
| Occupational aspiration | 9.02 | 10.53 | 13.08 | 9.28 | 10.33 | 13.35 |
| Value achievement | 3.74 | 4.28 | 4.60 | 3.86 | 3.92 | 4.64 |
| Laboratory aspiration | 11.70 | 9.62 | 10.63 | 10.22 | 8.76 | 11.20 |

[a]ability grouped, accelerated
[b]randomly grouped, accelerated
[c]ability grouped, average
[d]randomly grouped, average
[e]ability grouped, developmental
[f]randomly grouped, developmental

Table 19. Standard deviations on aspiration measures, grade 9

| Measure | Groups | | | | | |
|---|---|---|---|---|---|---|
| | Accelerated | | Average | | Developmental | |
| | 1[a] | 4[b] | 2[c] | 5[d] | 3[e] | 6[f] |
| Classroom aspiration | 2.10 | 2.06 | 2.58 | 2.57 | 2.30 | 2.69 |
| Social aspiration | 4.44 | 4.22 | 6.97 | 3.59 | 4.78 | 3.35 |
| Educational aspiration | 2.56 | 3.64 | 5.01 | 4.13 | 6.74 | 4.42 |
| Occupational aspiration | 11.74 | 8.49 | 12.35 | 9.60 | 11.55 | 11.61 |
| Value achievement | 4.30 | 4.60 | 5.20 | 4.60 | 4.23 | 4.03 |
| Laboratory aspiration | 13.79 | 12.51 | 11.16 | 12.97 | 11.76 | 9.45 |

[a]ability grouped, accelerated
[b]randomly grouped, accelerated
[c]ability grouped, average
[d]randomly grouped, average
[e]ability grouped, developmental
[f]randomly grouped, developmental

# APPENDIX B

# ASPIRATION LEVEL BATTERY

## General Directions

After the students have been seated, pass to each one a test booklet and be sure that each has a sharpened pencil.

The general directions for this battery of six aspirations tests are attached.

The examiner should open the testing situation with the following quotes:

"The packet of questions you have just been handed consists of several tests; I will explain fully each section before we begin; please do not begin any section until I have explained it and tell you to begin."

"Think about each question before you answer it and answer the questions as honestly as possible; work as quickly as possible."

"Now, let's look at the front page."

"Be certain that your name is in the space called for; first name first and then middle and then last name; now put your grade in the correct space--if you are in grade 7 then write SEVEN and if you are in grade 9 then write NINE; now write in the correct space the name of your school."

Examiner now turn to instruction sheet and follow the directions closely.

Aspiration, Test #1, 1 page

Instructions to be read aloud by the examiner:

"You are to answer each question by putting a circle around one of the five choices (Nearly best in my class; pretty good; about average; not so good; nearly poorest in my class) that best describes you or how you feel about yourself. Please do not write on this paper until I fully explain what you are to do."

"Look at number 1a "How good are you at sports right now?"; let us say that you think you are not so good; then you put a circle around the words 'Not so good' following question 1a. Now look at question 1b 'How good do you expect to become in sports?'; let us say that you expect to be about average in sports; then you put a circle around the words 'About average' that follows question 1b."

"You will notice that the questions on this page are in pairs such as 1a and 1b; then 2a and 2b and so on. Ordinarily it will be expected that you will rate yourself better on the 'b' part of each question. That is, you will probably expect to become better than you are right now at sports, math, science, and the others. This does not mean that it is impossible for you to think that you will become poorer rather than better in sports, math, science, and the others."

"If you are not taking science or math this year, please answer those questions concerning science or math on the basis of how good you were at these subjects when you last took them and how good you would like to become at them in the future."

"Answer each question by putting a circle around just one of the five possible answers that follow it. When you finish, go back and check to see that you have answered each question."

"This section should take you about 3 minutes."

"Are there any questions?"

"Begin."

After 3 minutes ask for a show of hands of those not finished and allow more time if needed.

Social Aspiration, Test #2, 2 pages

Instructions to be read aloud by examiner:

"The following two pages contain questions concerning the number of parties you expect to attend or the clubs you expect to join or the place you think your present and future families will fit in relation to other families."

"The first and second questions are in 3 parts, A, B, and C."

"Let's look at question no. 1; this question asks you to look at yourself one year, remember, one year, after you graduate from high school; it has three parts.

"Question no. 2 asks you to look at yourself five years, remember, five years, after you graduate from high school; it also has 3 parts.

"Now let's look at question no. 3 on the next page. 3a at the bottom of the page asks you which of the descriptions just above the question, description A, B, C, D, or E, best describes your family now."

"3b asks you which description, A, B, C, D, or E, best describes your future family -- your own family after you have married."

"You should put an X on just one of the five possible answers to each question."

"When you have finished, go back and check to see that you have put one and only one X to answer each question; be sure that you have answered every question."

"This section should take you about 7 minutes."

"Are there any questions?"

"Begin"

After 7 minutes ask for a show of hands of those not finished and allow more time if needed.

Educational Aspiration, Test #3, 2 pages.

Instructions to be read aloud by examiner:

"The following eight questions ask you how you feel about college."

"You should put one and only one X to answer each question."

"Let's look at question no. 1; it asks you how important is a college education; you should think this over carefully and answer it honestly; "A college education to you is the most important thing in your life, very important, quite important, not very important, not at all important."

"You should put an X beside one of the five possible answers to question no. 1; for example, if a college education is not very important to you, you should put an X beside the next to the last possible answer on question No. 1."

"Think over each question carefully and answer all eight questions."

"This section should take you about 5 minutes."

"Are there any questions?"

"Begin."

After 5 minutes ask for a show of hands of those not finished and allow more time if needed.

Occupational Aspiration, Test #4, 6 pages.

Instructions to be read aloud by the examiner:

"Let's read together the six points on the front page of this section."

Read these aloud with the students reading silently.

"Now let's turn the page to the practice questions."

"Practice question A asks: 'Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?'

"Look over the 10 possible answers and choose the one that best fits your personal situation."

"If you didn't know what one of the jobs is, just ignore it and consider only those jobs about which you know."

"Be sure to answer every question with just one X; be sure to answer the two practice questions and the eight questions that follow:

"When you finish this section, go back and check to make sure that you have answered all questions."

"This section should take you about 6 minutes."

"Are there any questions?"

"Begin."

After 6 minutes ask for a show of hands of those not finished and allow more time if needed.

Value Achievement, Text #5, 2 pages

Instructions to be read aloud by examiner:

"Let's read the instructions together."

Read these aloud while the student reads them silently.

"Let's look at question no. 1; it states: 'I enjoy work as much as play'; think over carefully the statement; now if you strongly agree with this statement, put a circle around the letters SA just to the left of the statement, or if you disagree with this statement, put a circle around the letter D to the left of the statement."

"You should circle an SA, A, question mark, D, or SD for each of the 20 questions; be sure you have but one answer for each question."

"When you finish this section, go back and make sure that you have answered each of the 20 questions and that you do not have two answers for any one question."

"This section should take you about 5 minutes."

"Are there any questions?"

"Begin."

After 5 minutes ask for a show of hands of those not finished and allow more time if needed.

Coding Tests, Test #6, 5 pages

Instructions to be read aloud by examiner:

"This is a coding test in which you are to write A, B, C, etc. in the boxes as you go along. An A must always go above an x, a B above a question mark, and so on."

"Look at the sample in the top row. The numbers under the boxes are to show you just how far you get. Actually the boxes at the top of the page are the key for the Code, to show you what you have to substitute all the way along. For instance, if you look at the first box you see you have always to write a capital A above an x. You have always to write a B when you see a question mark. For a dash you write C; for o, a D. Two dots must have E written above them and a slanting line must always have F, and so on."

"Just to show that you know what to do, fill in the rest of the squares at the top of the page and then stop. Do it now."

Proctors should circulate and observe for correctness.

"Now I'm going to give you one minute exactly and I want to see how far you can get down the page, filling in along the five rows you see. You must go steadily along the line, not jumping from place to place. And if you make a mistake, cross it out and put it right as you go. Remember, work fast and do as many of these codings as you can. Are there any questions?"

"Ready, Go."

"Stop." (End of minute).

"At the bottom of the page fill in the number that you completed. Now that you know how many you did make the best estimate you can of how many you will do on the next page in exactly the same time. Write the numbers where it says "estimate."

"Turn to Page 2. You are to do exactly as you did on the previous page. Any questions?" "Ready, Go."

"Stop." (End of minute).

"Write down the number you completed. Turn back to see how it compares with what you did last time and then write down your estimate for next time."

"Turn to Page 3 and do the same things."

"Ready, Go."

"Stop." (End of minute).

"Fill in the number you completed. Turn back to see how it compares with the number you did last time and then write the number you estimate for next time."

"Turn to page 4 and do the same thing."

"Ready, Go."

"Stop." (End of minute)

"Fill in the number you completed. Turn back to see how it compares with the number you did last time and then write the number you estimate for next time."

"Turn to page 5 and do the same thing."

"Ready, Go."

"Stop." (End of minute)

"Fill in the number you completed."

"Now estimate for the last time the number that you think you could do."

NAME_____
GRADE_____
SCHOOL_____

The way you answer the following questions will tell how you rate yourself right now in a particular subject and how well you would like to rate in this particular subject.

| | | CIRCLE ONE FOR EACH QUESTION | | |
|---|---|---|---|---|
| 1a. | How good are you at sports right now: | Nearly best in my grade | Pretty good | About average |
| | | Not so good | Nearly poorest in my grade | |
| 1b. | How good do you expect to become in sports: | Nearly best in my grade | Pretty good | About average |
| | | Not so good | Nearly poorest in my grade | |
| 2a. | How good are you at math right now: | Nearly best in my grade | Pretty good | About average |
| | | Not so good | Nearly poorest in my grade | |
| 2b. | How good do you expect to become in math: | Nearly best in my grade | Pretty good | About average |
| | | Not so good | Nearly poorest in my grade | |
| 3a. | How good are you at science right now: | Nearly best in my grade | Pretty good | About average |
| | | Not so good | Nearly poorest in my grade | |
| 3b. | How good do you expect to become in science: | Nearly best in my grade | Pretty good | About average |
| | | Not so good | Nearly poorest in my grade | |
| 4a. | How good are you at reading right now: | Nearly best in my grade | Pretty good | About average |
| | | Not so good | Nearly poorest in my grade | |

| | | |
|---|---|---|
| 4b. | How good do you <u>expect</u> to become in <u>reading</u>: | Nearly best in my grade / Pretty good / About average / Not so good / Nearly poorest in my grade |
| 5a. | How good are you at <u>talking</u> in front of the class: | Nearly best in my grade / Pretty good / About average / Not so good / Nearly poorest in my grade |
| 5b. | How good do you <u>expect</u> to become at <u>talking</u> in front of the class: | Nearly best in my grade / Pretty good / About average / Not so good / Nearly poorest in my grade |
| 6a. | How good are you as a <u>leader</u> of your classmates right now: | Nearly best in my grade / Pretty good / About average / Not so good / Nearly poorest in my grade |
| 6b. | How good do you <u>expect</u> to become as a <u>leader</u> of your classmates: | Nearly best in my grade / Pretty good / About average / Not so good / Nearly poorest in my grade |

1. Look ahead and try to see yourself as you might be one year after you graduate from high school and answer the following:

   A. How many social functions (parties, club meetings, dinners, etc.) do you expect to attend during an average month?

   _____more than 6
   _____5-6
   _____3-4
   _____1-2
   _____none

   B. How many times do you expect your name to appear in the newspaper in connection with a social affair during an average month?

   _____more than 6
   _____5-6
   _____3-4
   _____1-2
   _____none

   C. At what level do you expect to be an officer in an organization such as the Lions Club, Rotary Club, Country Club, Toastmaster's Club, or other similar organizations?

   _____President
   _____Vice President
   _____Minor Officer
   _____Just a member
   _____Not a member

2. Look ahead and try to see yourself as you might be five years after you graduate from high school and answer the following:

   A. How many social functions (parties, club meetings, dinners, etc.) do you expect to attend during an average month?

   _____more than 6
   _____5-6
   _____3-4
   _____1-2
   _____none

   B. How many times do you expect your name to appear in the newspaper in connection with a social affair during an average month?

   _____more than 6
   _____5-6
   _____3-4
   _____1-2
   _____none

C. At what level do you expect to be an officer in an organization such as the Lions Club, Rotary Club, Country Club, Toastmaster's Club, or some similar organization?

_____President
_____Vice President
_____Minor officer
_____Just a member
_____Not a member

3. Please look at the descriptions below and answer the questions that follow. It is not necessary that <u>every</u> item under a description fit your family, just so most of the items <u>generally</u> describe your family.

A. This family earns more money than it can spend; college does not mean much to them; they belong to the "best" or most exclusive clubs; they often live in very large houses with large yards; they frequently have servants; they usually drive "big" cars (Cadillac, Lincoln, etc.).

B. This family has professional jobs (such as doctors and lawyers); they usually go to college and graduate; they are usually very active in clubs and organizations; they frequently live in large houses which they own; they frequently own two cars.

C. This family works for wages and salaries; they may own small businesses or farms; they usually spend most of the money they make; they sometimes use a college education as a means of getting them into social clubs and similar organizations; they frequently drive a relatively new car (not more than 4 or 5 years old); this is the typical "American family."

D. This family usually doesn't have much money; they work hard; the children usually do not go to college; they often live in rather small homes (3 or 4 rooms) which they may not own but rent; they often drive "older" cars (more than 4 or 5 years old.)

E. The job the father of this family has usually doesn't pay much money; the father frequently changes jobs; they usually drive a "real old" car (maybe 8 or more years old) or if they drive a newer car they have trouble paying for it; they are often "in hoc."

3a. Check the above description which best fits your family <u>now</u>.

_____A _____C
_____B _____D
_____E

3b. After you have married and have established a family and home, into which of the above categories do you think your family will fall?

_____A _____C
_____B _____D
_____E

1. How important to you is getting a college education?

_____Most important thing in my life
_____Very important
_____Quite important
_____Not very important
_____Not at all important

2. In terms of grades, what level are you trying to reach this year?

_____In the top 10% of my class
_____In the top one-third of my class
_____A little better than average
_____About average
_____Below average

3. How far do you feel you must go in school to be satisfied with yourself?

_____Continue in school beyond 4 years of college (like a professional school for doctors or lawyers)
_____Graduate from college
_____Attend college but not for the full 4 years
_____Graduate from a trade school, business school, electronics school or some similar type school
_____Graduate from high school

4. How many years of education do you expect to complete after high school?

_____More than four years
_____Four years
_____Two years
_____One year
_____None

5. What level of education would you like your children to have?

_____Go to school beyond 4 years of college (like professional school for doctors or lawyers)
_____Graduate from college
_____Attend college but not for the full 4 years
_____Graduate from a trade school, business school, electronics school or some similar type school
_____Graduate from high school

6. What level of education do you expect your children to reach?

_____Go to school beyond 4 years of college (like a professional school for doctors or lawyers)
_____Graduate from college
_____Attend college but not for the full 4 years
_____Graduate from a trade school, business school, electronics school or some similar type school
_____Graduate from high school

7. Are you planning to go on to school after high school?

_____I am absolutely sure that I am
_____Yes, definitely
_____Probably
_____Don't care
_____No

8. Check the one description below that best tells your feelings about the expense of college.

_____I would go to college even if I had to work all the way through
_____I would go to college even if I had only enough money to get started and hope that something would happen so that I could continue
_____I would not go to college unless I could be sure that I had enough money to get me through several years
_____I would not start college unless I could be sure that I had enough money to get completely through college
_____I would not go to college even if I had all the money that it takes

1. This set of eight questions concerns jobs.

2. Read EACH QUESTION carefully, they are not always the same.

3. YOU ARE TO CHECK ONE JOB IN EACH QUESTION. MAKE SURE IT IS THE BEST ANSWER YOU CAN GIVE TO THE QUESTION.

4. Answer every question. Don't omit any.

5. If you don't know what one of the jobs is, just ignore it.

6. On the next page there are two practice questions. Let's try them.

Practice Question A. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

A.1 _____Watchmaker

A.2 _____Senator

A.3 _____Public relations man

A.4 _____Ditch digger

A.5 _____News-stand operator

A.6 _____Beautician

A.7 _____Fireman

A.8 _____Boxer

A.9 _____Secretary

A.10_____Movie star

Practice Question B. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

B.1 _____File clerk

B.2 _____Steeple jack

B.3 _____Floor walker in a store

B.4 _____Ambassador to a foreign country

B.5 _____Grocery clerk

B.6 _____Wrestler

B.7 _____Nurse

B.8 _____T.V. sports announcer

B.9 _____Forest ranger

B.10_____Music teacher

Question 1. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

1.1 _____Welfare worker for a city government

1.2 _____United States representative in Congress

1.3 _____United States Supreme Court Justice

1.4 _____Sociologist

1.5 _____Filling station attendent

1.6 _____Night watchman

1.7 _____Policeman

1.8 _____Corporal in the Army

1.9 _____County agricultural agent

1.10_____Lawyer

Question 2. Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

2.1 _____Singer in a night club

2.2 _____Member of the board of directors of a large corporation

2.3 _____Railroad conductor

2.4 _____Railroad engineer

2.5 _____Undertaker

2.6 _____Physician (doctor)

2.7 _____Clothes presser in a laundry

2.8 _____Banker

2.9 _____Accountant for a large business

2.10_____Machine operator in a factory

Question 3. Of the jobs listed in this question which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

3.1 _____Dock worker

3.2 _____Owner-operator of a lunch stand

3.3 _____Public school teacher

3.4 _____Trained machinist

3.5 _____Scientist

3.6 _____Lumberjack

3.7 _____Playground director

3.8 _____Shoeshiner

3.9 _____Owner of a factory that employs about 100 people

3.10_____Dentist

Question 4. Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY OF THEM you wished when your SCHOOLING IS OVER?

4.1 _____Restaurant waiter

4.2 _____Electrician

4.3 _____Truck driver

4.4 _____Chemist

4.5 _____Street sweeper

4.6 _____College professor

4.7 _____Local official of a labor union

4.8 _____Building contractor

4.9 _____Traveling salesman for a wholesale concern

4.10_____Artist who paints pictures that are exhibited in gallaries.

Question 5. Of the jobs listed in this question, which is the BEST you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

5.1 _____Farm hand

5.2 _____Mail carrier

5.3 _____County judge

5.4 _____Biologist

5.5 _____Barber

5.6 _____Official of an international labor union

5.7 _____Soda fountain clerk

5.8 _____Reporter for a daily newspaper

5.9 _____State govenor

5.10_____Nuclear physicist

Question 6. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY OF THEM you wished?

6.1 _____Janitor

6.2 _____Head of a department in state government

6.3 _____Cabinet member in the federal government

6.4 _____Musician in a symphony orchestra

6.5 _____Carpenter

6.6 _____Clerk in a store

6.7 _____Coal miner

6.8 _____Psychologist

6.9 _____Manager of a small store in a city

6.10_____Radio announcer

Question 7. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

7.1 _____Mayor of a large city

7.2 _____Milk route man

7.3 _____Captain in the army

7.4 _____Garbage collector

7.5 _____Garage mechanic

7.6 _____Insurance agent

7.7 _____ Architect

7.8 _____Owner-operator of a printing shop

7.9 _____Airline pilot

7.10_____Railroad section hand

Question 8. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

8.1 _____Civil engineer

8.2 _____Author of novels

8.3 _____Diplomat in the United States Foreign Service

8.4 _____Taxi driver

8.5 _____Newspaper columnist

8.6 _____Share cropper (one who owns no livestock or farm machinery, and does not manage the farm)

8.7 _____Plumber

8.8 _____Bookkeeper

8.9 _____Streetcar motorman or city bus driver

8.10_____Minister or Priest

Instructions: Below are a number of statements people often say they believe. You will probably find that you agree with some and disagree with others. Indicate your degree of agreement or disagreement with each of the statements by circling the answers in the left hand margin, as follows:

SA - I strongly agree
A - I agree
? - I am undecided
D - I disagree
SD - I strongly disagree

---

SA A ? D SD 1. I enjoy work as much as play.

SA A ? D SD 2. The only purpose of working is to make money.

SA A ? D SD 3. I nearly always strive hard for personal achievement.

SA A ? D SD 4. I don't like to have to make appointments.

SA A ? D SD 5. I feel that my future peace and self respect depends upon my accomplishing some notable piece of work.

SA A ? D SD 6. I would be unhappy living away from my relatives.

SA A ? D SD 7. On the whole, the old ways of doing things are the best.

SA A ? D SD 8. I enjoy relaxation wholeheartedly only when it follows the successful completion of a substantial piece of work.

SA A ? D SD 9. I like to see new things and meet new people.

SA A ? D SD 10. I set difficult goals for myself which I attempt to reach.

SA A ? D SD 11. The happiest people are those who do things the way their parents did.

SA A ? D SD 12. I work like a slave at everything I undertake until I am satisfied with the results.

SA A ? D SD 13. When a boy becomes a man, he should leave home.

SA A ? D SD 14. Life would be boring without new experiences.

(GO ON TO THE NEXT PAGE)

SA A ? D SD 15. When a man is no longer anxious to do better than well, he is done for.

SA A ? D SD 16. People who can't leave their hometowns are hard for me to understand.

SA A ? D SD 17. I feel that nothing else which life can offer is a substitute for great achievement.

SA A ? D SD 18. The more school a person gets the better off he is.

SA A ? D SD 19. I like people who are willing to change.

SA A ? D SD 20. I think that people should be ambitious because only ambition makes one's mind active.

# CODING TEST

KEY

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| x | ? | - | o | : | \ | ✓ |

EXAMPLE

| | | | | | |
|---|---|---|---|---|---|
| | | | | | STOP |
| ? | o | - | ✓ | x | HERE. |

A.

| x | \ | ✓ | ? | o | x | ? | ? | x | - | ? | o | ? | - | ✓ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

B.

| x | : | x | - | ? | o | ✓ | x | ? | x | o | - | : | \ | ✓ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |

C.

| ? | o | \ | ✓ | - | x | o | : | ? | ✓ | ? | o | \ | ✓ | - |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |

D.

| - | ? | x | ? | : | o | ✓ | \ | x | o | ✓ | ? | ? | : | o |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |

E.

| \ | o | : | x | ✓ | ? | ? | - | o | ? | : | ✓ | x | \ | ? |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |

Number completed_____
Estimate for next time_____

Do not turn the page until the signal is given

KEY

| A | B | C | D | E | F | G |
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| x | ? | - | o | : | \ | ✓ |

A.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| o | : | x | - | ✓ | o | ? | o | ✓ | x | o | - | : | x | ✓ |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

B.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ? | o | ? | \ | - | x | o | : | o | ✓ | ? | o | x | ? | - |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |

C.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x | \ | ? | ✓ | o | o | ? | ✓ | x | - | ? | o | ✓ | - | ? |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |

D.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | ? | x | ✓ | : | o | ? | : | x | o | ✓ | ? | \ | : | o |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |

E.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x | o | : | x | ✓ | \ | ? | - | o | : | ? | ✓ | x | x | ? |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |

Number completed_____

Estimate_____

Do not turn the page until the signal is given

KEY

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| x | ? | - | o | : | \ | ✓ |

A.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| \ | - | : | x | ✓ | : | .? | - | o | - | : | ✓ | x | \ | ? |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

B.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x | \ | - | : | o | - | ? | x | x | - | ? | o | : | - | : |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |

C.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ? | o | ? | \ | - | x | o | : | : | ✓ | ? | o | \ | ✓ | - |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |

D.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | ? | x | o | : | o | ✓ | \ | x | o | ✓ | ? | ? | : | o |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |

E.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | : | x | - | ? | o | \ | - | ? | x | o | - | : | \ | ✓ |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |

Number completed_____
Estimate_____

Do not turn the page until the signal is given

KEY

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| x | ? | - | o | : | \ | ✓ |

A.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | ? | x | x | : | o | ? | \ | x | : | ✓ | ? | x | : | o |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

B.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ✓ | : | x | - | x | o | ? | ✓ | x | x | o | - | : | \ | ✓ |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |

C.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x | \ | ? | x | o | \ | ? | o | x | - | ? | o | x | - | ? |

D.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ? | o | ? | \ | - | x | \ | : | o | ✓ | ? | o | \ | ? | - |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |

E.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| \ | o | : | x | ✓ | o | ? | - | o | \ | ? | ✓ | x | \ | ? |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |

Number completed_____

Estimate_____

Do not turn the page until the signal is given

KEY

| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| x | ? | - | o | : | \ | ✓ |

A.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| \ | ? | : | x | ✓ | x | ? | - | o | ? | x | ✓ | x | \ | ? |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

B.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x | \ | ? | x | o | - | ? | \ | x | - | ? | o | x | - | : |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |

C.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ? | o | ? | \ | - | x | - | : | o | ✓ | ? | o | \ | ? | - |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |

D.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| \ | : | x | - | ✓ | o | ? | o | ✓ | x | o | - | : | \ | ✓ |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |

E.

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | ? | x | ✓ | : | o | ? | \ | x | o | ✓ | ? | ✓ | : | o |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |

Number completed_____

Estimate_____

SOCIO-ECONOMIC SCALE

Please read the job descriptions below and answer the questions that follow:

a. These jobs, as a rule, can be entered only after long periods of education and training, and a broad knowledge of the job is necessary. These jobs often require training beyond four years of college.

Examples: accountants; chemists; college teachers; engineers; lawyers; doctors, etc.

b. These jobs are those in which a person owns a business or farm, or works for someone else but "is his own boss."

Examples: office, store, or business manager; government inspectors; postmasters; city, state, or United States official; pilot; elementary or high school teacher; officer in the army, navy, or marines; etc.

c. These jobs usually involve routine office activities such as preparing and filing written records and reports; operating office machines; making appointments; typing; answering telephones; etc.

Examples: bookkeepers, cashiers; office machine operators; secretaries, salesmen or clerks, non-commissioned officers in the army, navy, or marines, etc.

d. These jobs usually require a rather long period of training (not necessarily schooling) or apprenticeship; these workers often "boss" other people under them, but they have a "boss" over them; most of the "skilled trades" fit here.

Examples: foremen, bakers, carpenters, bricklayers, electricians; inspectors; telephone linemen; machinists; painters; plumbers; auto machanics, etc.

e. These jobs usually do not require any particular training or education; they are usually the same "day in and day out" with little change in what is done; these workers almost always have a "boss" over them and they do not "boss" anyone themselves.

Examples: bus or truck driver, laborers; workers in a gas station; railroad switchmen and brakemen; housekeepers, firemen or policemen; janitors; barbers; soldiers or sailors or marines, factory workers, etc.

1. Which job description above best fits the work your father does? If your father is not living or is not now living with your family, select the job description that best fits the person in your family who is supporting the family now: Look over the descriptions again and be sure you check the one that best fits.

_____a _____b _____c _____d _____e

2. Where does your father (or person who supports your family) work? Examples: Western Transport Company, Sears-Roebuck Co., City of Ogden, Telephone Co., Hill Air Force Base, etc.

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3. Please write in the space below the title your father (or person who supports your family) has in his work. Examples: foreman, dentist, typist, laborer, bricklayer, etc. If the person who supports your family is in the military, please give his rank.

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4. Please write below a description of the work your father does. Examples: digs holes for the telephone company, sells sporting goods for Sears, teaches science at Weber High School, drives a city transportation bus, repairs washers for Hi-Dry Laundry, etc.

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