

A COMPARISON OF HIGH TESTED ABILITY LOW ACHIEVING
AND HIGH ACHIEVING SIXTH GRADERS ON: 1) PEER .
ACCEPTANCE, 2) GROUP MEMBERSHIP IDENTIFICATION,
AND 3) PARENT ATTITUDES

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ABSTRACT

The purpose of this study was to determine whether there were differences in the degree to which low achievers of high tested ability and high achievers of high tested ability were accepted by their peers, identified with group membership, and were reared by parents who differed, as a group, on goals set for independence training.

Twenty sixth graders having high tested ability but low achievement, as indicated by grade-point averages, were identified among the sixth grade class at Willson Elementary School, Bozeman, Montana. This group was matched by number and sex with classmates whose academic aptitude was comparable but whose academic achievement, as indicated by grade-point averages, was much greater.

Three assessments relative to the two groups were made and analyzed. They were 1) peer acceptance as measured by a sociometric device, 2) group membership as subjectively identified, and 3) goals for independence training as set by the parents of the students comprising the population for the study. No statistically significant differences were found between the two groups on the results of the above criteria.

It was concluded that: 1) low achievers did not seem to be accepted by their peers to a degree similar to that of high achieving counterparts, 2) there seemed to be no difference between the degree of subjective identification of group membership between the two groups, 3) the parents of low and high achievers did not seem to disagree significantly on goals they set for independence training in their children.

Recommendations made were that future investigation: 1) examine the degree to which low achievers as compared to high achievers of comparable tested ability take their immediate others into account in guiding behavior, 2) in studying the underachiever attempts should be made to identify school children's reference groups with the purpose of determining the nature of the guidance low and high achievers of comparable ability draw from them, 3) further assessment should be made of the motives underlying parental setting of goals for independence training, 4) future research should attempt to determine whether low peer acceptance might be a cause of or result of underachievement.

CHAPTER I

INTRODUCTION

The child who possessed tested ability to achieve well at school work, but who in fact did not, has often been known as an underachiever. This same child has commonly been called "lazy" by his teacher. On occasion, this "laziness" or "recalcitrance" was written off as the child began to achieve to a degree commensurate with his tested ability. According to his teacher, the child was no longer lazy or underachieving but had simply "blossomed" belatedly.

Educators have used terms such as "lazy" to explain underachievement when in reality the child may have lacked the motivation or will to persevere. Occasionally the same teacher referred to the same type child as "blossoming" if his expected achievement was reached. This writer interpreted the use of such terms as "lazy" and "blossomed" as indicative of weakness. This weakness seemed to lay in the tendency of teachers to name, rather than understand, that aspect of the child's behavior related to school achievement. The intent of this study, consequently, was to go beyond labelling behavior, especially that of the underachieving child, to an examination of certain relationships and attitudes that may affect the child's behavior, namely:

- 1) his peer acceptance,
- 2) the degree to which he identifies himself with group membership,
- 3) his parent's attitudes toward his independence training.

PROBLEM

The purpose of this study was to compare two groups of sixth graders, one identified as having high tested ability and low achievement; the other identified as having high tested ability and high achievement. Comparisons were made on the basis of: 1) parent performance on the Winterbottom Independence Training Inventory, 2) subjects' scores on the Twenty Statements Test, 3) subjects' peer-group sociometric results.

PROCEDURE

Sixth grade students who had been enrolled since the beginning of the 1966-67 school year in the Willson Elementary School, Bozeman, Montana composed the population from which high tested ability low and high achievers were selected. Forming this population were two hundred seventy eight sixth graders.

Low achieving and high achieving students were identified within this group by the method outlined below. A predicted grade point average (P:GPA) and an actual grade point average (A:GPA) were established for each student by a procedure proposed by Wellington (12). The P:GPA was determined by converting the scores of all sixth grade students on the Otis Quick-Scoring Mental Ability Test, Form A to a stanine scale. The A:GPA for each student was computed by averaging the first four of the student's six gradings for the school year and converting them to a stanine scale, also.

All sixth graders with an A:GPA located two stanine scores below their P:GPA were identified as low achievers. By this technique, thirty six, or roughly thirteen per cent of the class, were designated as low achievers. Wellington (12) claimed estimates of low achievers will range from five to twenty five per cent of the enrollment at the upper elementary and high school levels.

Low achievers for this study were further limited to those students who had a P:GPA of seven or greater. With this added limitation, only those students who had an I.Q. score of 124 or greater, as measured by the Otis Quick-Scoring Mental Ability Test, were selected; hence, the definition: high tested ability and low achievement.

High achievers were randomly selected from that group of sixth graders whose P:GPA was seven or greater and whose A:GPA was equivalent to or greater than their P:GPA. This group was matched by sex and number with the low achieving group. Twenty (fifteen boys and five girls) high ability low achievers were identified and matched by this process to form the two groups for comparison purposes.

Three data gathering devices were used to compile information on each of the two groups. These were: 1) a sociometric device, 2) the Twenty Statements Test, 3) the Winterbottom Independence Training Inventory.

The sociometric device consisted of three questions, each to be completed by the listing of a name of a classmate. These were administered by the social studies teachers to classes having students selected by the above procedures.

The Twenty Statements Test, likewise, was administered by the social studies teachers to all classes having either or both high tested ability low and high achievers. It was discovered that all ten sixth grade classes had one or more of these students.

Two copies of the Winterbottom Independence Training Inventory, a twenty one item questionnaire, were mailed to the parents of children of both groups. Each parent was invited by an accompanying letter from the Willson Elementary School principal to complete the inventory individually and return it at his earliest convenience. A follow-up letter with additional copies of the inventory was sent to parents for the purpose of encouraging greater response. At the time responses were computed, each group of forty parents had returned thirty seven completed questionnaires, or approximately ninety two per cent.

Results from the sociometric device were interpreted as scores of peer acceptance. A t test was computed to determine the acceptance or rejection of the null hypothesis. The null hypothesis was that there would be no significant difference between the means of the scores of the two groups.

The locus score (the number of responses that indicated a consensual reference) were determined for the subjects' performance on the Twenty Statements Test. The null hypothesis, there will be no significant difference between the mean locus scores of the two groups, was tested by the use of the t test, also.

Parents responded to each of the twenty one items on the parent inventory with a simple "yes" or "no". A "yes" meant the parent did include that particular item as a goal he wished his child to have achieved. If the parent answered "yes" to an item, he

was, also, to include the age at which he expected his child to have mastered that particular goal. Chi-square was used to determine if there was a statistically significant difference between the number of parents of each group who reported that an item was considered as a goal. This was done for each of the twenty one items. Further, a t test was computed to determine if there was a significant difference at the five per cent level between the mean age the parents of the two groups reported for each item.

DEFINITIONS

This investigator felt certain terms used in the body of this report merited further elaboration or definition. These terms have been commented on below.

1. Low and high achievers: For the purpose of this study, achievement of a student was determined by a grade point average. A child was designated either a high or low achiever based on the relationship of his grade point average to a predicted grade point average. This predicted grade point average was determined by a standardized test of mental ability. If the child's actual grade point average, as converted to a stanine scale, was as great or greater than his stanine scaled ability, he was considered a high achiever. If, however, his actual grade point average was less by two scales or more than his stanine scaled ability, he was considered a low achiever.

2. Self-attitudes: Self, as a central concept in the symbolic interaction approach to social psychology, has been variously defined. One definition has viewed the self as a conscious conceptualization of the organization by which one's behavior is directed.

This organization has been identified as a series of attitudes. Since these self-attitudes seemed to determine behavior, assessments of them have been attempted in order to better understand human behavior.

3. Consensual reference: With reference to responses on the Twenty Statements Test, a device used in this study, a response showing a consensual reference would be one that placed the testee in a social system. It has been defined by Kuhn and McPartland (6) as referring to anchorage or identification of self in a social system.

CHAPTER II

REVIEW OF LITERATURE

The literature reviewed was limited to that available at the library of Montana State University, Bozeman, Montana.

Shaw and Alvez (11) attempted to make an objective study of certain aspects of high school underachievers' self-concepts. This was done to further investigate findings made by Shaw in an earlier study in which he concluded that high school male underachievers tended to have a negative self-concept, while female counterparts expressed a certain ambivalence with respect to their self-concept. In an attempt to verify these findings through the use of a more objective technique, they identified a group of eighty high school students to which they administered the Bill's Index of Adjustment Values, an instrument designed to determine certain aspects of self-concept.

All of these students were within the top twenty-five per cent of the population in academic aptitude and approximately half of them performed, academically, at a level lower than fifty per cent of the population. The latter were identified as underachievers for the purposes of the study.

The results of this study indicated that, among male underachievers, three of the six areas measured by the device expressed a significant difference. Two of these differences were related to self-perception. Contrary to Shaw's earlier study, female underachievers in this study were found to be significantly more negative in their perception of how others perceived them.

Results of this study seemed to add credence to Shaw's findings in his earlier study in that they pointed to a direct association between negative self-attitudes and academic achievement. They cautioned, however, that no inference could be made as to the causal nature of this negative attitude with reference to underachievement.

Combs (2) pursued a topic similar to that outlined above when he explored differences in the ways that underachievers and achievers perceived themselves and their relationships with the world around them. In his research, achiever and underachiever groups, each consisting of twenty five high school junior boys with a Wechsler Adult Intelligence Scale, Full Scale I.Q. of 115 or better, were administered an apperceptive device. Using t and F tests with a five per cent Alpha level, significant differences were found between the group groups on all of the perception continua analyzed. These were:

- 1) sees self as adequate to inadequate,
- 2) sees self as acceptable to unacceptable,
- 3) sees peers as acceptable to unacceptable,
- 4) sees adults as acceptable to unacceptable,
- 5) approach to problems is positive to negative,
- 6) freedom of emotional expression is positive to negative.

Six contrasting statements were made to express the results of this investigation. First, underachievers seemed to see themselves as inadequate and unable to successfully handle those problems that could occur in the school setting while achievers seemed to feel more adequate to deal with problems and more confident of their own abilities. Second, underachievers often seemed to feel themselves not particularly liked or accepted by others and even threatened by the group while achievers seemed to feel well accepted and integrated.

Third, underachievers seemed to be threatened by peers and to see them as persons of little value while achievers saw their peers as persons who should be approached with sympathy and understanding. Fourth, underachievers seemed to regard adults as being generally unacceptable and as persons whose motivations were somewhat questionable while achievers seemed to see adults as quite acceptable and as persons worthy of respect and understanding. Fifth, underachievers seemed to be less direct and efficient in approaching problems while achievers seemed to use opportunities to gain direct satisfaction and were willing to accept reasonable limits. Last, underachievers seemed to have difficulty in expressing their emotions directly and overtly while achievers seemed to be able to express their emotions in a manner and degree that seemed appropriate to the situation.

Lum (7) examined attitudes of female college students for the purpose of determining if factors other than the reported use of effective study habits might characterize under or overachievers. To assess this she classified three groups of twenty female students, all equated for scholastic aptitude, as underachievers (U), as normal achievers (N), and as overachievers (O). This was done by comparing the subject's scholastic aptitude to her scholastic achievement and identifying her accordingly. All subjects were in their second year at the University of Hawaii and, consequently, had established grade point averages as freshmen at that institution.

Each subject was administered the Brown and Holtzmann Survey of Study Habits and Attitudes, an instrument having six

subscales and a total scale scoring design. When O's were compared to U's, significant differences at the one per cent level were found on four of the subscores. No differences were found among the three groups in their reported use of effective study procedures.

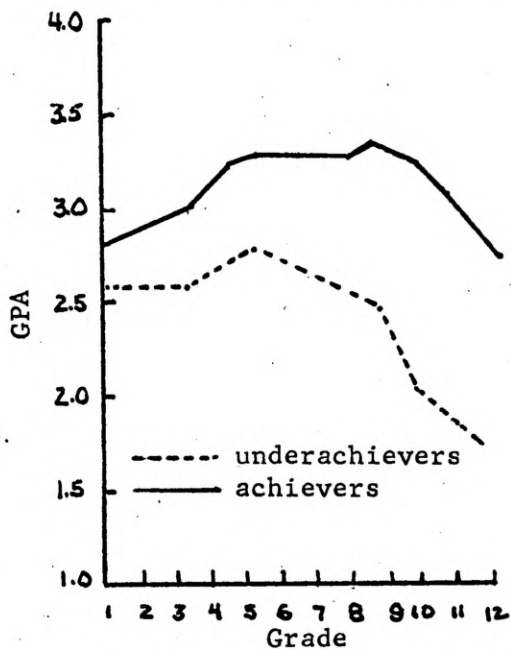
The researcher concluded that the differences between successful and less successful students of similar aptitude are primarily those of attitude and motivation rather than of reported study habits. Academic drive, according to the author, seemed to differentiate the overachiever from the underachiever. Self-confidence seemed not to characterize the underachiever and procrastination seemed to be a characteristic of the underachiever.

The author indicated further that the Self Confidence Scale of the Survey of Study Habits and Attitudes seemed to measure "emotional stability" and attributed the underachievers' relatively poor performance on this scale to a weakness in the functioning of their personality. She recommended further research in this area.

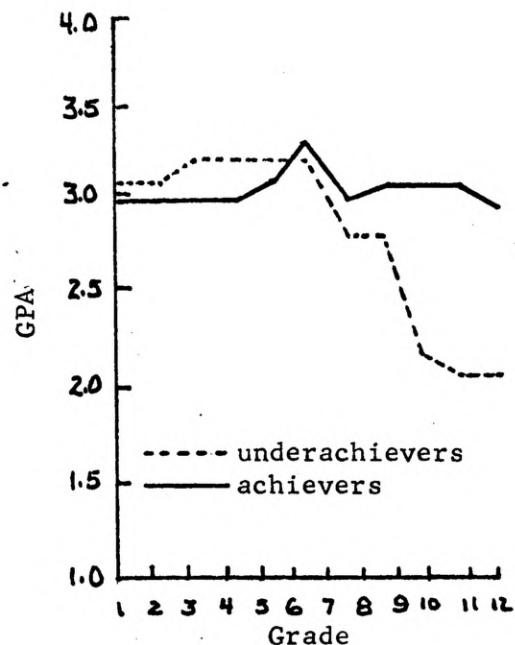
Shaw and McCuen (12) undertook a study to determine whether there was any specific academic level at which academic underachievement could be said to begin and to determine if there was a subsequent pattern of achievement. From one high school district with a combined enrollment of six thousand, one hundred sixty eight students were selected for the study. These were all twelfth graders who had received all their schooling in a school district served by the high schools in the study. Underachievement was based on the mean of ninth, tenth, and eleventh grade GPA's as compared to scholastic aptitude. This group was matched with an achieving group similarly chosen.

Following the identification of subjects, academic records for each student from grade one through eleven were compiled and mean grade point averages for each group at each level were computed. Underachievers were compared with achievers on the basis of these grade point averages at each grade level by means of the F and t tests.

For male achievers and underachievers this comparison indicated a difference, significant at the one per cent level, in GPA beginning at the third grade. This difference increased in significance at each grade up to grade ten where it decreased somewhat. Comparison of female achievers and underachievers demonstrated that there was no significant difference in GPA until grade nine, and from then on it remained significant. The following graphs taken from Shaw and McCuen (12) illustrated these differences.



Comparison of the achievement patterns of male achievers and underachievers from Grade one through eleven.



Comparison of the achievement patterns of female achievers and underachievers from Grade one through eleven.

From their data the authors concluded that with regard to the male underachievers it appeared reasonable to say that the predisposition to underachieve academically was present upon entrance into school. The problem also seemed to become steadily more serious until grade ten where it became only slightly less serious due primarily to a drop in GPA on the part of the achiever.

They went on to add that the fact that actual underachievement among female groups did not show itself until grade six did not rule out the possibility of the presence of a predisposition factor at the time the female underachiever entered school.

The authors concluded that underachievement seemed not to be a temporary phenomenon but rather chronic and that, since it seemed the child brought the predisposition to school with him, perhaps pre-school parental influence was a determining factor.

Broedel et al., (1) studied the effects of group counseling on improving the mental orientation and academic performance of gifted underachieving adolescents. They identified underachievers as those ninth graders in one school whose academic aptitude ranked them in the top decile of their class while their academic performance was in the ninth decile or below. Twenty-nine subjects divided into four groups were selected for the study.

The researchers postulated that group counseling would increase the subjects' acceptance of themselves and improve their ability to relate to others. Their postulations were based on the

assumptions they supported by citing earlier research. These assumptions were: 1) the underachiever had a low level of self acceptance, 2) he seemed unsociable i.e., he had difficulty in relating with others.

Growth in three areas were assessed by an elaborate means of pre and post testing. It was assumed that if there was a significant difference in testing results it would be due to the group counseling conducted over a four week period in the interim. The three areas compared were: 1) acceptance of self and others, 2) academic performance, 3) interpersonal relations..

The authors concluded that three of the four groups achieved significant growth. Positive changes in subjects were noted in improved scores on achievement tests, increased acceptance of self and others, and improved ability to relate to others. However, much of this improvement was only temporal, for a follow-up testing and analysis did not support the earlier findings.

Passow and Goldberg (9) instituted a special high school class of two years duration for the purpose of examining the academic, personal and social characteristics of underachievers. This arrangement was planned to test the hypothesis that if underachieving students could share their common problems and identify with and receive support from a teacher, their attitude and scholastic performance would improve.

Two groups of underachievers were identified in the ninth grade class. One was designated as a control group; the other the experimental. A third group equated for scholastic aptitude with the first two but having high achievement was identified as an additional control group.

A quasi-self-contained classroom was organized for the experimental group and two periods fused into one called social studies were handled by one teacher. This was done in the hopes that the additional exposure to one teacher might give that teacher the chance to gain unique insights into the underachiever's problems. This added dimension, it was assumed, would allow this teacher greater latitude in meeting the special needs of these youngsters.

Following the two years under this system, two tentative conclusions were reached. They were: 1) academic underachievement appeared to be a symptom of a variety of more basic personal and social problems, 2) grouping underachievers in a class may not have been wise since they tended to give each other negative support.

Ford (4) tested the hypothesis that two groups of junior high school students who were tested to have approximately equal potential for academic work but who differed in actual performance should differ significantly with respect to each of selected test variables. Forty eight students, half high and half low achievers, were extensively interviewed using an interview schedule designed to secure both social and attitudinal data.

Statistically significant differences were found on six of the thirty data items. Summary statements were made with reference to these six. They were: 1) few low achievers were girls while most high achievers were girls, 2) parents of high achievers maintained membership in parent-teacher associations, 3) low achievers expressed a dislike for school while the opposite was true for high achievers, 4) few low achievers were aware of any occupational aspirations their parents might have had for them, 5) high achievers expressed

definite occupational objectives, 6) in contrast to high achievers, low achievers felt their parents would punish them for getting low grades.

The authors concluded by saying that parental interest in, aspirations for, and relations with their children exerted a powerful influence on the children's schoolwork.

Gowan (5), in a paper summarizing research findings on causes and prevention of underachievement in gifted students, stated there was considerable evidence to indicate that achievement both in high school and later (college) stemmed from habits, interests, attitudes and motivation established in elementary school. He gave special attention to a study of high school and college underachievers in which he tentatively concluded that academic achievement was a form of social behavior. He also cited a study conducted in Toronto, Ontario that noted early (elementary) development of an underachieving pattern and an exhibition of neutral attitudes toward education by parents of underachievers.

In summarizing, Gowan selected common elements from the research reports that seemed related to underachievement among the gifted. These were:

1. Socialization and social interaction versus withdrawal and self-sufficiency.
2. Positive character integration versus psychotic or neurotic tendency.
3. Permissiveness, intraception and creativity versus authoritarianism in parental home environment or the gifted individual himself.
4. Awareness of and concern for others versus disinterest.

Shaw (10) compared parental attitudes of sixty four

academic achievers and fifty one academic underachievers. The attitudes concerned behavioral goals parents may or may not have set in rearing their child. In an interview setting parents were asked to indicate which of the goals they set for their child and at which age they expected the child to have achieved these goals. Eighty per cent of the achievers' parents and seventy per cent of the underachievers parents consented to the interview - a possible weakness in the study.

With the data he did compile, the researcher proposed some reasonable hypotheses for further research. These included the following:

1. Parents of achievers make demands that are more clearly defined and specific than do parents of underachievers,
2. Parents of achievers are concerned with developing in their children the ability to make their own decisions.
3. Parents of achievers expect them to be more adult in their behavior at an earlier age than do parents of underachievers.
4. Parents of underachievers are concerned with having their children learn to protect their personal rights.

McGillivray (8) identified fifty high achievers and fifty low achievers in a group of two hundred eighty gifted students from a seventh grade class of 6,000 in the Toronto Public Schools. He interviewed all students of the two groups and nearly all parents of the students in an effort to gather information on home background for purposes of comparison.

Using Chi-square tests to determine differences between data gathered, the researcher found significant differences

at the five per cent level in three areas. These were: 1) mothers of high achievers and fathers of low achievers were more dominant, 2) more of the high achievers' parents had ambitions of higher education for their children, 3) high achieving children themselves had greater educational aspirations.

SUMMARY

The literature reviewed defined the underachiever as one whose academic performance was significantly less than that of those members of his peer group (classmates and grade-mates) whose academic aptitude was equivalent.

From the literature, it also seemed reasonable to conclude that academic underachievement was a behavioral phenomenon. This behavior, in turn, was that of an individual who seemed to have difficulty in relating to other persons. The underachiever seemed to think of himself as being unwanted or unaccepted by others: his peers, his parents and other adults. In addition, difficulty in communicating with others was mentioned in the literature as a possible characteristic of the underachiever. A general mistrust seemed to pervade his dealings with adults and evidences of a dislike of contact with adults were pointed out.

In the home of the underachiever, the mother seemed less demanding and domineering than did the father. Concerning attitudes of parents with reference to setting goals for the development of independence in their children, parents of underachievers seemed to emphasize the child's execution of his personal rights. At the same time, they also seemed to place little stress on behaving in a manner

that took cognizance of the rights of others. These latter assumptions were based on the one study by Shaw (10) which fell far short of being conclusive, in the opinion of this writer, in that few differences were found to be significant and most conclusions were little more than postulations.

CHAPTER III

TREATMENT OF THE DATA

The data compiled through procedures outlined above were analyzed in this order: 1) sociometric results, 2) Twenty Statements Test, 3) Independence Training Inventory results. Procedures for application of F and t tests and the application of Chi-square, as used below, were followed from those prescribed by Ferguson (3).

SOCIOMETRIC TEST

A sociometric device was administered according to the directions outlined in Table 1.

TABLE 1. SOCIOMETRIC TECHNIQUE ADMINISTERED TO DETERMINE DEGREE OF PEER ACCEPTANCE OF LOW ACHIEVERS AND HIGH ACHIEVERS

"For each of the three questions below answer by writing the name of one of your classmates. It is not necessary that you include your name on your paper."

1. You and one of our classmates are to be co-chairman of a committee. What person from your class would you want to be co-chairman with?
 2. If you and one of your classmates are to do some research and study in the library, which of our classmates would you chose to go with you?
 3. If you were sick and could not give your report in social studies, which classmate would you like to substitue for you?
-

The mean was determined for acceptance scores (the number of times a child's name was listed by his classmates) for the two groups of students. An F test was used to determine if there was any statistically significant difference between the variances for the two groups. There was none beyond the five per cent level, as noted by the summary Table 2.

TABLE 2. SUMMARY OF STATISTICAL TREATMENT OF DATA GATHERED BY THE ADMINISTRATION OF THE SOCIOMETRIC DEVICE SHOWING F AND t TEST VALUES

LOW ACHIEVERS	HIGH ACHIEVERS
N = 20	N = 20
$\sum X = 52$	$\sum X = 88$
$\bar{X} = 2.6$	$\bar{X} = 4.4$
$\sum X^2 = 226$	$\sum X^2 = 530$
$\alpha = 2.12$	$\alpha = 2.60$
F = 1.54 (not significant beyond the five per cent level)	
t = 2.28 (significant beyond the five per cent level)	

To test for a significant difference between the means of the two groups, a t test was computed. A significant difference beyond the five per cent level was found and the null hypothesis was rejected. Based on these finding this writer concluded that there seemed to be a significant statistical difference between the degree of peer acceptance of low and high achievers making up the population of this study.

This sociometric assessment was conducted to determine whether or not the low achiever was accepted by his peers to a degree significantly different from his high achieving counterpart. Since literature reviewed seemed to conclude that the underachiever saw himself as not accepted by others, one might have suspected that this should have been borne out by results of a sociometric assessment of acceptance. Statistical treatment of the data seemed to bear this out as indicated by summary Table 2.

These findings suggested that the low achiever was not accepted to the degree his high achieving counterpart was. Based on these findings, however, it did not seem reasonable to conclude that low peer acceptance contributed to low achievement. That is, this investigator did not wish to assign a causal value relative to a child's academic achievement to peer acceptance.

TWENTY STATEMENTS TEST

The means of the locus scores (the number of responses identifying group membership) for the two populations were determined. An F test was employed to determine if there was any statistically significant difference between the variances for the two groups. None was found. No significant difference between the means was found at the one per cent level using the t test. The null hypothesis was accepted. The findings were summarized as noted in Table 3.

TABLE 3. SUMMARY OF STATISTICAL TREATMENT OF DATA GATHERED BY THE ADMINISTRATION OF THE TWENTY STATEMENTS TEST SHOWING F AND t VALUES

LOW ACHIEVERS	HIGH ACHIEVERS
$N = 20$	$N = 20$
$\sum X = 41$	$\sum X = 41$
$\bar{X} = 2.05$	$\bar{X} = 2.05$
$\sum X^2 = 155$	$\sum X^2 = 195$
$\alpha = 1.74$	$\alpha = 1.87$

TABLE 3. (Cont.)

$F = 1.16$ (not significant beyond the five per cent level)

$t = 0$ (not significant beyond the five per cent level)

The use of the Twenty Statements Test was based on the following reasoning. Surveyed literature seemed to reveal that under-achieving behavior had social underpinnings; that it was couched in or was an expression of one's broader social bearings. As reported by Gowan (5), the underachiever seemed to have a high degree of unsocialability. He appeared to lack the ability to handle himself well in social interaction i.e., taking the attitudes of immediate individuals or social groups into account in guiding his behavior. He further seemed to have no peer group from which he gained behavioral guidance or direction.

This investigator chose the Twenty Statements Test, developed by Kuhn and McPartland (6), as the device by which a comparison between low and high achievers might have been made with reference to subjective identification with social groups or group membership. The Twenty Statements Test administration procedures can be noted in Table 4.

TABLE 4. REPRODUCTION OF THE TWENTY STATEMENTS TEST DEVELOPED BY KUHN AND McPARTLAND (6)

The device consisted of a single sheet of blank paper upon which the students were to reply to the following directions.

"Number twenty spaces on your paper. Please write twenty answers, or as near to twenty as you can, to the question, 'Who am I?' in the blanks. Please do not repeat answers. Write the answers in the order that you think of them. Do not take too much time."

The design of this test was based on the authors' assumptions that:

1) human behavior is organized and directed, 2) the organization and direction are supplied by the individual's attitudes toward himself, 3) in order to gain insights into human behavior, social psychology should attempt to assess self-attitudes. The authors further contended that identification with groups on the test indicated that the subject took these groups into account in determining his self-attitudes and, consequently, organization and direction of his behavior. With this background, this investigator reasoned that: 1) since the Twenty Statements Test seemed to indicate the extent the subject took social groups into account, 2) since literature seemed to indicate the underachiever failed to take social groups into account in guiding his behavior, then 3) perhaps there might be a difference in the degree to which the low achiever identified with social groups as compared to the high achiever.

However, in the treatment of the data gathered through administration of the Twenty Statements Test, no statistically significant difference between the means of the two groups was found. Based on these findings, it seemed reasonable to conclude that: 1) this investigator's reasoning was at fault or 2) variables not foreseen by this investigator had an influence on the students responses to the Twenty Statements Test. In pure conjecture, this investigator tentatively concluded that perhaps more crucial than the group with which one identified were the attitudes one acquired through this identification. Presumably, these attitudes could have had negative or positive, or even neutral, values in affecting one's behavior. Future investigation might possibly attempt to assess these values with reference to behavior guidance in underachievers.

A phenomenon worthy of note was that, in identifying themselves on the TST, high achievers (almost two to one over low achievers) reported school-oriented identification. Examples of these were: "a person who likes social studies", "one who has never had to go to the office", "a B student", or "a person who likes all my teachers". This investigator surmised that such responses could have been a measure of the student's identification with subgroups within the framework of the school and from which they might have drawn behavior guidance. A further point of interest lay in the fact that a portion of the statements made by low achievers were negatively stated. That is, the student noted: "I am not one who likes science" or "I am not a good writer". No such negative statements were made by high achievers. Possibly, these statements were a reflection of the student's evaluation of himself. If they could have been interpreted as such, one might have concluded that perhaps his low achieving orientation could be attributed to or a cause of such self-evaluations.

INDEPENDENCE TRAINING INVENTORY

Chi-square was applied to determine whether there was a statistically significant difference between the number of "yes" responses of parents of low achievers and high achievers on each of the twenty one items of the inventory. On none of the items was a significant difference at the five per cent level found. Summaries of this treatment were included in Table 5.

TABLE 5. SUMMARY OF CHI SQUARE VALUES USED IN DETERMINING THE SIGNIFICANCE OF DIFFERENCE BETWEEN NUMBERED GOALS REPORTED BY PARENTS OF LOW AND HIGH ACHIEVERS ON INDEPENDENCE TRAINING FOR THEIR CHILDREN

Item	Parents of Low Achievers Reporting Item as a Goal	Parents of High Achievers Reporting Item as a Goal	Chi Square Value*
1	26	26	0.000
2	27	23	.863
3	27	28	.054
4	26	21	1.323
5	23	25	.207
6	28	21	1.583
7	20	21	.049
8	26	22	.833
9	17	21	.701
10	27	24	.219
11	29	23	2.075
12	28	25	.403
13	27	26	.055
14	29	26	.144
15	28	26	.227
16	19	14	1.175
17	28	23	.911
18	25	24	.052
19	26	24	.407
20	24	23	.050
21	14	18	.571

*None of the Chi-square values was significant beyond the five per cent level.

A t test was computed for each of the items to determine whether there was a significant difference between the mean ages of the two groups reported. No statistically significant difference was found at the five per cent level for the twenty one items, as was summarized by Table 6.

TABLE 6. SUMMARY OF MEAN AGES PARENTS OF LOW AND HIGH ACHIEVERS REPORTEDLY EXPECTED CHILD ACHIEVEMENT OF GOALS WITH t VALUES SHOWN

Item	Mean Age of Those Reported by Parents of Low Achievers	Mean Age of Those Reported by Parents of High Achievers	t Value*
1	4.9	4.9	0.00
2	5.9	6.1	.35
3	3.9	4.2	.84
4	4.1	4.9	1.74
5	4.1	4.6	1.25
6	4.1	4.9	1.86
7	6.9	8.0	1.53
8	5.5	7.1	1.84
9	6.4	7.6	1.50
10	5.1	5.3	.43
11	4.7	5.6	1.58
12	5.0	4.6	.87
13	6.0	6.3	.91
14	4.1	4.7	1.71
15	5.7	6.8	1.93
16	10.3	9.5	1.21
17	5.7	6.4	1.47

TABLE 6. (Cont.)

18	8.3	8.9	1.88
19	9.0	9.9	1.77
20	8.2	8.8	.76
21	<u>6.6</u>	<u>6.8</u>	.24
	Mean Age 6.0	Mean Age 6.5	

*None of the t values was significant beyond the five per cent level.

These findings did not seem to totally complement those postulations proposed by Shaw (10). His proposals were based on "tentative conclusions" arising out of an investigation he conducted using the Independence Training Inventory developed by Winterbottom. Table 7 reproduced that inventory.

TABLE 7. INVENTORY SENT TO PARENTS OF HIGH AND LOW ACHIEVERS IDENTIFIED FOR THE STUDY.

PARENT ATTITUDE INVENTORY	
Yes or No	Age
_____	1. To stand up for his own rights with other children.
_____	2. To know his way around his part of the city so that he can play where he wants to without getting lost.
_____	3. To go outside to play when he wants to be noisy or boisterous.
_____	4. To be willing to try new things on his own without depending on his mother to help.
_____	5. To be active and energetic in climbing, jumping, and sports.
_____	6. To show pride in his own ability to do things well.
_____	7. To take part in his parents' interests and conversations.
_____	8. To try hard things for himself without asking for help.
_____	9. To be able to lead other children and assert himself in children's groups.
_____	10. To make his own friends among children his own age.
_____	11. To hang up his own clothes and look after his own possessions.

TABLE 7. (Cont.)

Yes or No	Age	
_____	_____	12. To be able to eat alone without help in cutting and handling food.
_____	_____	13. To do well in school on his own.
_____	_____	14. To be able to undress and go to bed by himself.
_____	_____	15. To have interests and hobbies of his own. To be able to entertain himself.
_____	_____	16. To earn his own spending money.
_____	_____	17. To do some regular tasks around the house.
_____	_____	18. To be able to stay alone at home during the day.
_____	_____	19. To make decisions like choosing his clothes or deciding how to spend his money by himself.
_____	_____	20. To do well in competition with other children. To try hard to come out on top in games and sports.
_____	_____	21. Not to play with children the parents don't approve of.

As was true of this investigation, Shaw requested parents to designate which of the items they included as goals in training their child and the age at which they expected the child to have mastered the designated goal.

Shaw suggested that parents of achievers expect their children to be more adult in their behavior at an earlier age. Results from data gathered in this investigation did not seem to support Shaw's view. As reported above, there was no significant difference in mean ages for each item between the two groups. Table 6 has summarized the values of statistical difference between the mean age of each item as determined by t test application. Further, parents of low achievers almost consistently (except for items 1, 12, and 16) reported an earlier age for goal achievement than did parents of high achievers. Parents of low achievers seemed to expect their children to master the goals earlier (mean for all

goals of 6.0 years) while parents of high achievers seemed to expect their children to master the goals later (mean for all goals of 6.5 years).

Except for goals 3, 5, 7, 9, and 20, more parents of low achievers than parents of high achievers reported the items as goals in training their child. No common element or relationship among the six goals upon which to base a speculative statement could be found by this investigator.

Worthy of note, however, was the fact that a greater number of items were reported by parents of low achievers as goals. In the view of this investigator, this could possibly have been interpreted to imply that parents of low achievers were more likely than parents of high achievers to set goals in the rearing of their children. Similarly reasoned, this investigator postulated that perhaps parents of high achievers were less likely to set goals in rearing their children.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this study was to determine whether there were differences in the degree to which low achievers of high tested ability and high achievers of high tested ability were accepted by their peers, identified with group membership and were reared by parents who differed as a group on goals for independence training.

To assess these criteria a sociometric technique, a subjective self-identity technique and a parent attitude inventory were used.

The population from which the students were selected for the study was that of all sixth graders enrolled in the Willson Elementary School, Bozeman, Montana. Two groups of twenty students each were identified as either low achievers of high tested ability or high achievers of high tested ability.

The study was conducted over a period of four of the six grading periods for the 1966-67 academic year.

CONCLUSIONS

Conclusions based on the analysis of data gathered with the sociometric device, the Twenty Statements Test, and the Parent Attitude Inventory were summarized in the statements below.

1. High achievers seemed to be accepted to a greater degree by their peers than were low achievers.

2. There seemed to be no difference in the degree to which low and high achievers subjectively identified with group membership. However, more high achievers identified themselves

with school-oriented group membership than did low achievers.

3. Although there was no statistically significant difference between the goals set by parents and the ages they expected mastery of these goals, parents of low achievers tended to set more goals and expected mastery of them at an earlier age than did parents of high achievers. These findings seemed to be contrary to those claimed by Shaw (10) who indicated that parents of high achievers expected their children to be more adult at an earlier age than did parents of low achievers of equivalent academic aptitude.

RECOMMENDATIONS

Four recommendations arising out of this analysis of the data gathered in this study have been made by this investigator.

1. This investigator recommends that future study examine the degree to which the low achiever as compared to the high achiever takes his significant others into account i.e., relies on the gestures and spoken responses made by others to his behavior in guiding or directing his behavior.

2. It is also recommended that in studying underachievement, as defined in this paper, future investigation should: 1) identify those reference groups that school children seem to identify with and 2) attempt to assess the nature of the guidance, if any, that low and high achievers of equivalent ability draw from them.

3. It is further recommended that an assessment be made of parental influences insofar as they might attribute to the achievement orientation of the child. For instance, this might take the form of analyzing the reasons out of which parental goals for independence training in children have arisen. Due to the earlier age in goal setting reported by parents of low achievers, it was suspected by this investigator that a parent may have set and expected mastery of these goals because they would have relieved him of some custodial responsibility to the child rather than because they would have established a tendency to achieve in the child.

4. A final recommendation is that future research investigate the effect of increased peer acceptance on academic achievement. Under experimental conditions, perhaps attempts could be made to induce greater peer acceptance of identified underachievers and a simultaneous assessment of growth in achievement conducted. Measures of this nature may indicate some correlation between academic achievement and effects on it caused by fluctuations in peer acceptance.

LITERATURE CITED

1. Broedel, John, and Others. "The Effects of Group Counseling on Gifted Underachieving Adolescents." Journal of Counseling Psychology 7:163-170; Fall 1960.
2. Combs, Charles F. "Perception of Self and Scholastic Underachievement in the Academically Capable." Personnel and Guidance Journal 42:47-51; September 1964.
3. Ferguson, George A. Statistical Analysis in Psychology and Education: Second Edition. McGraw-Hill, Inc.; 1966, 446 pp.
4. Ford, Thomas R. "Social Factors Affecting Academic Performance: Further Evidence." The School Review 65:415-422; Winter 1957.
5. Gowan, John Curtis. "Dynamics of the Underachievement of Gifted Students." Exceptional Children 24:98-122; November 1957.
6. Kuhn, Manford H., and McPartland, Thomas S. "An Impirical Investigation of Self-Attitudes." Readings in Social Psychology. (Edited by Milton Bloombaum) New York: Selected Academic Readings, Inc., (No Date) pp. KHN-1A-KHN-9A.
7. Lum, Mabel K. "A Comparison of Under and Overachieving Female College Students." Journal of Educational Psychology 51:109-113; June 1960.
8. McGillivray, Robert H. "Differences in Home Background Between High-achieving and Low-achieving Gifted Children: A Study of One Hundred Grade Eight Pupils in the City of Toronto Public Schools." Ontario Journal of Educational Research 6,2:99-106; Spring 1964.
9. Passow, Harry A., and Goldberg, Miriam L. "Study of Underachieving Gifted." Educational Leadership 16:121-125; November 1958.
10. Shaw, Merville C. "Note on Parent Attitudes Toward Independence Training and the Academic Achievement of their Children." Journal of Educational Psychology 55:371-374; June 1964.
11. Shaw, Merville, and Alvez, Gerald J. "The Self-Concept of Bright Academic Underachievers: Continued." Personnel and Guidance Journal 42:401-403; December 1963.
12. Shaw, Merville C., and McCuen, John T. "The Onset of Academic Underachievement in Bright Children." Journal of Educational Psychology 51:103-108; June 1960.
13. Wellington, C. Burleigh, and Wellington, Jean. The Underachiever: Challenges and Guidelines. Chicago: Rand McNally and Company, 1963, 122 pp.