EDUCATIONAL GROUPING AND STUDENTS' SELF CONCEPT

by

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INTRODUCTION

The Problem

The question of ability grouping in education has achieved prominence, especially in recent years. Much of the emphasis placed on grouping students according to ability rather than chronological age is a product of modern times and progressive education. Although not accepted by all educators, there is a definite movement toward such a procedure in public schools today. It is held by the advocates of ability grouping that students will benefit more in a situation where they proceed at a rate prescribed by their ability rather than a hypothetical average or norm. Several well-controlled studies (3, 33, 44) have shown that in situations where students are grouped homogeneously according to respective ability there is an increase in achievement. All of these studies have compared performance and achievement under both systems of grouping and have showed that the homogeneously grouped students benefit more than students in a social promotion situation. The stand taken by the advocates of ability grouping is therefore expressed in terms of achievement and academic advantages. This, for the most part, comprises the reason for preference over traditional social promotion.

The argument against ability grouping is based primarily on social injustice to the student. Although this argument finds little support in terms of well-controlled research and empirical evidence, several articles (5, 17, 54) illustrate why many educators oppose ability grouping on the
basis of social injustice. There is little disagreement as to the merits of such a procedure in terms of student achievement, however. The concern lies rather in pupil adjustment in situations where he learns at a rate prescribed by his ability among only those possessing similar ability. Theoretically, this places students in all of the ability levels in restricted environments which in turn limits social interaction. If students do not learn to adjust to diverse social situations in the school and during these critical years of development, where and when will they learn? This is a major question raised by those who oppose ability grouping.

The possibility that ability grouping might not only inhibit adjustment in social situations, but also have a negative effect upon the self concept of students is also characteristic of this argument. An example of this would be the slow learner who is placed in a group which proceeds at a slower rate than that of others his age. This student recognizes that his performance and ability are inferior to those students in other groups. It is possible that in such a situation the student might acquire feelings of inferiority which may persist and develop into more serious emotional disorders later. This, the opposition to ability grouping would maintain, is of major concern.

Lindgren (35) stresses the importance for educators to recognize that individuals tend to act differently as members of groups from the way they act when not members of groups. It is further pointed out that although many educators recognize this, they often appear to ignore it. Students, therefore, should not be expected to behave the same within groups as they do away from them. The solution to this problem according
to the author, is an educational psychology which is concerned with the forces at work in the group situation which facilitate or prevent learning.

Ability grouping has also been labeled as "undemocratic." Under the democratic form of government present in the United States, many educators find little room for separating the fast learner from the slow learner. This segregation of students as it has been called comprises a further argument.

Research dealing with the specific effects of ability grouping upon the feelings of individual students is almost non-existent. The arguments for as well as against offer little insight into this problem and are characteristically opinions. Until sufficient empirical evidence is gathered regarding ability grouping as related to pupil adjustment, the arguments from both sides will offer little in the way of a solution to the problem.

An extensive evaluation of ability grouping is currently being carried out by the Utah State University Bureau of Educational Research. In light of the interest and concern in this area as well as the need for research, it seems highly likely that this evaluation, when complete, will supply many answers to questions regarding advantages and disadvantages of ability grouping in education. The study in its entirety is concerned with such areas as rate of achievement, attitudes and opinions of teachers, and effectiveness of study methods at the various ability levels. Of equal concern are evaluations of students' social and behavioral characteristics such as social isolation, behavior problems and their frequency in various ability groups, attitudes toward school and other people, degree of school
adjustment, degree of social adjustment, and student self-perceptions. Students from a school district employing heterogeneous grouping as well as students from a school district employing homogeneous ability grouping are under study. Comparisons are being made between the two districts, between various ability levels, and between sexes in all of the above mentioned areas. Since both school districts occupy the same geographical area and are of similar socio-economic levels, it is held that valid comparisons are possible.

Of concern in the following study are pupils' self-perceptions as related to ability level and grouping procedure. Using the Bills Index of Adjustment and Values, intra-district comparisons were made between sexes and ability levels as well as inter-district comparisons between comparable ability levels. Scores were derived on students' self concept, ideal self, acceptance of self, and a discrepancy score which is the difference between self concept and ideal self. Comparisons were then made on each of these four sub-measures.

A study concerned with ability grouping and traditional social promotion as related to students' self concept and adjustment would appear to supply at least a partial answer to the question presented. This is the task undertaken in the present study. It is the hope and intent of the author that the results of this research will shed light on the problem of educational grouping and pupil adjustment.
REVIEW OF LITERATURE

This paper will review the literature concerning characteristics of the self concept and its measurement as well as ability grouping with regard to the individual. Special emphasis has been placed upon measurement and evaluation of the self concept and self-regarding attitudes. Since the Bills Index of Adjustment and Values is being used in the research, careful evaluation of its worth will be included. A sample of typical opinion articles will also be included since they greatly outnumber studies pertinent to the problem. The review will be organized into: (a) methods and factors influencing ability grouping, (b) correlates and characteristics of the self concept, (c) methods of measuring the self concept and related research, and (d) the Bills Index of Adjustment and Values and related research.

Methods and Factors Influencing Ability Grouping

Worcester (57) has pointed out that grouping is but one method of acceleration. Other possibilities include: allowing entrance into kindergarten early, advancing students to a higher grade on the basis of performance, making summer school possible to those students who desire to attend, giving credit by examination rather than course work, and allowing students to enroll in extra or advanced subjects. This author feels that if grouping is used it is most effective if initiated at the time of entrance to school.

— Wilhelms (56) points out the importance of teacher attitudes in grouping students. The recognition of individual differences and the
dedication of grouping to individual well being are the most important attitudes for a teacher to have in the grouping situation. It is also pointed out that grouping is not a way of teaching, but simply a technique of classroom management which allows the teacher to create an environment conducive to better teaching. Shannon (48) states that it is the role of education to create such an environment in order to develop the peculiar talents that individuals possess which might otherwise lie dormant.

Magnifico (36) has pointed out that the term "social promotion," as chronological age grouping is called, is a misnomer. It is his contention that the concept of the heterogeneous class as a miniature of life is an unrealistic fallacy. This idea, however, is held by many school administrators who fear that special education might lead to social problems.

Lorge (37) has shown that gifted children make significant gains in achievement when placed in special classes as compared to their peers in normal progress classes. He further maintains that this superiority is not gained at the expense of social or personal adjustment. For the less able this provides fuller development of lesser potentialities. According to Lorge, attitudes regarding special education many times are based on emotion rather than evidence, the latter being the only valid criterion for evaluation of the merits and weaknesses of special education. The need for explanations of research in this area to the public, teachers, administrators, specialists, and researchers is further pointed out by Gowan (27). Until there is further understanding of such evidence the problem will remain a matter of opinion rather than empirical evaluation.
The realization that children differ in mental ability and therefore might benefit through special education has not until recent times been fully recognized in education (24). There is, however, a current widespread movement toward various forms of ability grouping. Grouping for the teaching of reading has become standard practice with an accompanying trend in mathematics and other subjects. Essex (24) points out that such grouping procedure is not exclusively concerned with the academically talented but is designed to benefit all children and all abilities. With the continued improvement of instruments for assessing pupil ability programs of ability grouping will improve and become more effective.

In the San Diego City Schools (29), gifted students were identified as being three standard deviations above the mean of an intelligence test. A program of enrichment was initiated which avoided segregation but at the same time allowed the gifted student to take courses accelerated to meet his needs. Recent evaluations in this district show a much smaller percentage of these gifted students having social problems than had appeared in 1947-1949.

Advantages of ability grouping over enrichment and other methods of special education have been stressed recently (26). The range of abilities in the classroom can be reduced by a more effective rate of instruction. Teaching methods and materials can be altered or adjusted more effectively to meet group needs. These, coupled with the idea that the classroom group will proceed at a more uniform rate, comprise this point of view. Braham (12) has pointed out that such a program can be ineffective unless based upon a number of considerations. Those suggested as most valuable are achievement scores, potential for learning, interests,
reading skills, work habits, educational goals, emotional stability, and special talents such as art and music. This calls for a flexible grouping plan and is for the most part impossible unless there are five hundred or more students involved, according to the author.

Although there are many considerations in favor and against ability grouping in general, Lawson (34) feels that they can be collected into categories. The first of these considerations is whether or not grouping is democratic. The second is whether or not effective grouping is possible. The third consideration is whether or not grouping has any effect upon pupil adjustment, and the last involves whether or not optimum individual challenge can be met in a grouping procedure. The author, being an advocate of ability grouping, resolves each of these considerations from a positive standpoint.

Results shown in a study by Baldwin (2) involving social acceptance of the mentally retarded pupil as compared to the normal pupil indicate some difference in degree of acceptance. Using 572 normal students, and 31 mentally retarded students, it was found that the degree of social acceptance was much lower for the mentally retarded than for the normal students. These differences on the Ohio Social Acceptance Scale were significant at the .01 level. The grouping procedure used placed the mentally retarded students in special classes for part of the school day. This factor alone might account for the observed differences in social acceptance.

A two-part study involving subject matter attainment and attitudes and social adjustment (31) in two types of grouping procedures indicated little, if any difference in either area. One procedure grouped students
at the start of the year and remained unchanged while the other procedure grouped students with each new task. The groups were matched in intelligence and socio-economic level. Although the statistical tool used for comparison was not mentioned, it was reported that there was very little difference between groups in arithmetic attainment and that the method of grouping appeared to have no effect upon the social structure of the class. The study was carried out only for one full school year and the two grouping techniques were not strikingly different which might account for the similarity observed.

French (25), comparing two types of public secondary schools, observed for the most part little or no difference in achievement in physics and trigonometry. One system provided a special college preparatory course for able students. The other made no such provision. Able students in both instances were identified as having higher scores on the School and College Abilities Test than would be expected on the basis of verbal and quantitative test results. The results of the study indicate no significant differences in achievement in either physics or trigonometry. These results were based on comparisons of the Cooperative Plane Trigonometry Test and the College Entrance Examination Board Physics Achievement Test.

A summary of research on class organization by Wrightstone (58) has provided some insight into the values of various procedures. Non-promotion or repeating of grade has been found ineffectual and does not increase learned matter. Ability grouping in the past has seldom been very satisfactory. The ungraded primary plan used at the elementary level has been found effective in terms of both academic and social adjustment. In this
procedure students are grouped for specific tasks such as reading or arithmetic on the basis of ability rather than age. Research on grouping at the secondary level indicates that there is no great uniformity of ability. This is perhaps the result of ineffective procedures in the classroom or inadequate identification of students of differing abilities for assignment to such classes. It is further pointed out that effective classroom organization is dependent upon flexibility, independence, and adequate control of the grouping procedure.

Loomis (36) points out that current trends in education are aimed at grouping based upon type of ability and interests rather than intelligence scores or previous all around achievement. This lends richness and diversity and at the same time keeps learning at a dynamic level. Two drawbacks of grouping based upon intelligence scores or previous achievement are designated as the stigma placed on the slow group and teacher reluctance to teach slow learners as a class.

Rudd (47) undertook a study of English schools to test the hypothesis that the attainments, attitudes, behavior, and personalities of a group of pupils involved in an organization based upon streaming or ability grouping are influenced by that organization. The sample included two groups, each of 90 pupils entering the same school at 11 years of age. The control group was organized into three forms whose membership did not change during the two years after entrance. The experimental group was organized into three forms and pupils were transferred between streams after each half-year examination. Results on the Cotswold Attainment Test showed no significant differences between the groups attributable to organization. Likert-type tests of Drummond showed no significant
attitude differences toward lessons, exams, or school life. Estimates of personality by teachers revealed no significant differences between groups. The pupils' self-estimates revealed an extensive, but probably temporary deterioration in personality following re-grouping. No general long-term effects attributable to streaming were discovered.

A study involving the effects of ability grouping upon students' self concept has been reported by Mann (39). The sample included 202 fifth grade children. A group questionnaire of five questions was administered. These self-report questions included: (a) the grade of the student, (b) which group the student was a member of, (c) the reason for being in the particular group, (d) whether or not the student's best friend was in his group, and (e) how many years the student had attended this particular school. Results showed that only 40 students identified their group according to ability level, but of these two-thirds were members of either the high section or low section. The two middle groups did not identify so distinctly. The author concluded that pupils in extreme groups identified these groups according to ability level more often than did the middle groups. There appeared to be some evidence of negative attitudes in the slow group. This is the only indication of some differences in self-attitudes reported and provides little in terms of conclusive evidence that ability grouping affects students' self concept in any way.

A questionnaire (43) originating at the University of Chicago was designed to find out if other schools were grouping two age or grade levels or more, and what school personnel felt about grouping in general. Of 435 questionnaires sent out, 51.7 per cent were returned. Of these,
39.1 per cent replied that they were using grouping. The median number of years that grouping had been employed was 5 years. Replies were received from universities, private schools, large city schools, medium-sized city schools, and small city schools. Small city schools had used grouping for the longest period of time followed by large city schools, private schools, medium-sized city schools, and universities. It was concluded that more than would be expected favored ability grouping and the advantages it provides.

In a larger survey of practices (55) it was shown that 80 per cent of the school systems were providing special learning experiences for gifted pupils at the junior high school level, with large school systems taking the lead. The provision of such experiences was observed to be directly related to the size of the school district. These experiences included enrichment, separate classes, and acceleration. The most common method was enrichment in heterogeneous classes. Of the high schools surveyed 76.7 per cent totaled those with special provisions. Enrichment in heterogeneous classes was the most common method observed, followed by enrichment and separate classes, separate classes only, enrichment and acceleration, and acceleration and separate classes.

A nationwide sampling of school administrators (1) indicated approximately a 60 to 40 split against ability grouping. A common argument against was that pupils learn through interaction with others of different ability levels. There was observed a nationwide indication that parents oppose ability grouping, which appears to be one of the main obstacles of grouping students according to ability. The primary arguments in favor of ability grouping appear to stem from the needs of the gifted
child and the fact that there exists in education a waste when the superior student is faced with an inadequate and unchallenging school situation.

The Self Concept: A Description

Taylor and Combs (53) have given the self a phenomenological interpretation. They define the adequate self as follows: "A phenomenal self is adequate to the degree to which it is capable of accepting into its organization any and all aspects of reality." (53, p. 89) It is further stated that the individual tends to behave in a manner subjectively consistent with his concept of himself or of his role, and that the self concept both influences and is influenced by the individual's behavior. The author points out that Allport, Murphy, Rogers, and Snygg all take this similar position.

Hilgard (30) believes that the self, as a social product, has full meaning only when expressed in social interaction. This is not obvious, however, since it is conceivable that it might be true only in a limited sense or perhaps not at all. The self, to Hilgard, is a product of interpersonal influences, but the question remains whether the end product is also interpersonal in its expression. Guthrie and Edwards (30) define the mechanisms of defense as "the reaction patterns which reestablish the ego." These mechanisms arise when the individual fears loss of status, or loss of security of the self.

The hypothesis that the well adjusted individual ought to be better able to accept more unflattering (and hence threatening) facts about himself than would be expected of the less well adjusted individual has
been tested (53). A sample of 205 sixth grade children were given the California Test of Personality. Subjects were divided into upper 50 per cent (adjusted) and lower 50 per cent (maladjusted). A list of 20 damaging statements were administered to all subjects with the instructions to check those statements true for them. The statements were designed to be true to some extent for everyone. Results showed that the well adjusted group checked significantly more damaging statements about themselves than did the poorly adjusted group. It was concluded that well-adjusted children accept more damaging statements about themselves than do poorly adjusted children.

**Correlates and Characteristics of the Self Concept**

Stock (52) has investigated the relationship between the self concept and feelings directed toward other persons and groups. Utilizing ten subjects in a non-directive counseling setting, responses regarding the self and responses regarding attitudes toward others were categorized. Two judges independently categorized all statements during three interviews with each subject. Interviews were averaged and a Pearson r was used to correlate the degree of relationship between feelings about others. The results of the study indicated that a definite relationship exists between the way an individual feels about himself and the way he feels about other persons. It was further concluded that an individual who holds negative feelings toward himself holds negative feelings toward others in general.

The role of the self concept in achievement has been studied by
Roth (46). Using reading improvement as the criterion of achievement and 80 self-reference statements as the self-concept measure, the relationship between self concept and achievement was measured. The sample of 54 was given 14 one-hour films on increasing reading speed, after which the subject answered questions regarding content of the films. Three groups were defined in terms of general defensiveness on the basis of the self-reference statements. Results showed that improvers had the smallest discrepancy between ideal self and self scores. Improvers were more concerned with the self as a student and the self as a reader than were the non-improvers. Propositions were that there were significant differences between the improver, non-improver, and attrition groups in terms of self perceptions. The data supported this proposition. The author concluded that the results supported the theory that those who achieve as well as those who do not do so as a result of the needs of their own self system.

Nahinski (41), using 74 junior officers leaving the Navy and 35 junior officers accepted as regulars studied the relationship between the self concept and the ideal self concept. An inventory of 100 statements was administered to each subject which he sorted to describe himself, the typical naval officer, and the ideal career naval officer. Three correlations were computed, one between the self and typical officers, another between the self and the ideal officer values, and a third between the ideal officer and the typical officer. Analysis of variance was used to compute the difference between groups on the three correlations. Results showed that officers leaving the Navy pictured themselves as less typical than did the regular officers. These group differences were significant.
The relationship between the self concept and differences in the strength and generality of achievement motivation has been reported by Martire (40). The sample included 53 male volunteers. Subjects were introduced to two environmental conditions. In one situation they were placed in a neutral environment, and in the other an achievement oriented situation. Towel's Scrambled Words Test was used as the achievement task. Weinberger's Self-Ideal Test was used as the self concept measure. It was observed that subjects who obtained high achievement scores under both conditions were found to have a higher discrepancy between their self ideal and self ratings on the 5 achievement-related traits than three other categories of subjects.

A study concerned with the examination of the individual's self image relative to the two major aspects of communication—the transmission and reception of information—has been undertaken by Crowell, Katcher, and Miyamoto (23). Two scales were used, one to allow the subject to evaluate his ability as a listener, and the second to evaluate his ability as a communicator. The measure was in questionnaire form and was administered to 240 subjects previously to determine reliability. Using the split-half technique, correlations of .92 for the communicator scale, and .87 for the communicant scale were derived. Subjects for the study included 27 male and 10 female students. The results supported the hypothesis that a person's self concepts of his communication skills are related to his performance in discussion groups. This was observed to be particularly true in areas of leadership and decision making.

Cowen, Heilizer, and Axelrod (21) have tested the hypothesis that self-concept conflict words, operationally defined in terms of self rating,
will elicit greater defensiveness in learning (as measured by elevation of learning thresholds) than will neutral ones. The sample of the present study included 94 male and female college freshmen. The procedure followed the assumption of Bills (21) that a discrepancy between self concept and ideal self reflects a measure of adjustment or area of disturbance. Forty-six of Bills adjectives were paired with nonsense syllables of zero to 13 per cent association value. Pairing was held constant, and order of presentation was randomized. Subjects learned to pair a maximal discrepancy word with a corresponding nonsense syllable of minimal value. After two correct responses the pair was discarded. A learning discrepancy score was computed for all subjects based on the total number of trials required to learn the neutral words. Nonsense syllables paired with words identified as conflictual by virtue of self rating discrepancies were found to take significantly longer to learn than comparable syllables paired with words without rating discrepancies.

Sherif, White, and Harvey (49) have studied judgments of performance as indices of status relations among members of small experimentally produced groups. They have found that when common goals are presented to a number of individuals a definite group structure takes form. Subjects for the present study were 12-year-old boys from upper-middle class Protestant families. These subjects were all placed in a bunkhouse and presented goals such as dam building, camping trips, hikes, and religious services. All subjects were asked to rate themselves as well as all other members of the group. It was observed that variations in judgments (both self and ratings of others) of performance were significantly related to status in the group. It was further concluded that the performance of
members of high status was overestimated while the performance of members of low status was underestimated.

The correlation between manifest anxiety and the self concept have been reported by Cowen, Heilizer, Axelrod, and Alexander (22). Instruments used as indices of personality included the Taylor Manifest Anxiety Scale and the Bills Index of Adjustment and Values. The authors concluded on the basis of the results that the two instruments used apparently tapped quite similar responses. Significant differences among anxiety groups were observed on the self concept index. Low anxiety scale scorers characteristically had more adequate self-regarding attitudes. A "cultural goodness" of response is reported as possible on both inventories.

Chase (18) has reported some differences in self-concept scores between adjusted and maladjusted hospital patients. The Q technique served as the measure of adjustment and self-regarding attitudes. Three basic adjustment measures were derived from correlations between concepts of the self and of the average other person and concepts of the ideal self average other person. The authors concluded that both groups saw the ideal self and average other person similarly, but the maladjusted group saw themselves as being different from their ideals and from their concepts of average other person, while the adjusted group did not.

The discrepancy between the self concept and objective reality is a common feature of maladjustment. A study was undertaken by Calvin (16) to examine the nature of the relationship between these discrepancies and "severity of maladjustment." The sample was made up of 79 male students, members of four fraternities (A, B, C, and D), all living in their respective houses. Initially, all subjects were given the MMPI.
Individual self evaluations as well as individual evaluations of respective groups followed. All subjects ranked themselves and their respective members on seven personality traits. This made possible the study of discrepancies between the self and group judgments of each subject. Each subject's final rank on a given trait represented the consensus of opinion of his associates. Results indicated that the tendency to enhance the self is inversely related to maladjustment; the more poorly adjusted the individual, the more self-depreciative he appears. It was further indicated that maladjustment as judged within a restricted normal range by an individual's associates is directly related to maladjustment as measured by a typical personality inventory, the MMPI. Individuals who manifest poor insight regarding their own level of adjustment are more likely to be maladjusted than are those who show good insight.

Changes in performance in relation to influences upon self-conceptualization has been studied by Benjamins (4). Students from relatively small high schools comprised the present study. Group intelligence tests were used as measures of performance. Subjects were asked to rank themselves in intellectual level in their group. They were then given false reports of their ranks on an initial intelligence test. Change in performance on a second intelligence test with changes in self ranking (made after false reports) and reaction to false reports were compared. The results of the study showed that predictions of direction of change and observed frequencies were significant at the .01 level.

Brownfain (13) has studied the self concept in terms of its stability as a dimension of personality. Stability in this case is operationally defined as the differences between positive and negative self ratings on
each of 25 items on the inventory. The difference score is referred to as the "stability index." The larger the discrepancy score, the more unstable the self concept is assumed to be. The subjects for the present study were 62 members of two men's cooperative houses. The self inventory was administered four times under differing circumstances designed to yield differing responses. These were: (a) the "private self," (b) the "positive self," (c) the "negative self," and (d) the "social self." Ratings were made on a scale from 1 to 8 on the private and social self and extended to 9 on the positive self and lowered to 0 on the negative self. A second discrepancy score was derived in two different frames of judgment which were "private" and "social" ratings. This discrepancy score is accordingly called the "social conflict index." All findings supported the theoretical prediction that subjects with stable self concepts are better adjusted than those with unstable self concepts. Furthermore, subjects with stable self concepts were observed to exhibit a higher level of self-esteem, were freer of inferiority feelings (on the Gamin), were better liked and were popular (group ratings), knew more people in their group, and showed less evidence of compensatory behavior of a defensive kind.

**Methods of Measuring the Self Concept and Related Research**

Spivack (51), using a response form, has formulated a method for appraising self-acceptance and self-rejection. The instrument consists of 132 items and takes between 20 and 40 minutes to complete. All items are formulated in pairs (each self-accepting form having a self-rejecting
Reliability coefficients of the self correlation range above .90 between halves or corresponding questions. Each item can be assigned to one of four categories including self-rejection, qualified self-rejection, self-acceptance, and qualified self-acceptance. The higher the score on the form, the greater the "self-rejection."

A method for assessing self and not-self attitudes during the therapeutic series has been developed by Bugental (14). This is termed the PNAV method and classifies self references into categories of positive, negative, ambivalent, and ambiguous. Analysis of references has been termed "The conceptual matrix." The study of verbatim subject-produced materials initiates the procedure. The three steps of organization include: (a) categorizing, (b) evaluating, and (c) analysis of material into component thought units. This method makes possible objective and quantitative descriptions of the therapeutic process. The conceptual matrix has appeared to be reasonably consistent from one interview to another, and adequate inter-rater reliability has been observed.

The "who are you" or "WAY" technique has been developed by Bugental and Zelen (15). In this method of investigation of the self concept, subjects are given a plain piece of paper and are told to answer a question which the experimenter administers verbally. Subjects are asked to give three answers and no advice was provided by the examiner. Subjects therefore answer in terms of their own needs related to their current situations. This method, although projective, structures responses to allow analysis along lines consistent with current theoretical viewpoints and statistical analysis control. The ten categories suggested by the authors are now under study for their adequacy. Previously, all but
two of these ten proposed categories showed frequencies such as could be considered reliable and stable at the .05 level of confidence at least. The categories proposed include: (a) name, (b) personal pronoun, (c) socio-scientific classifications, (d) sex, (e) age, (f) occupation, (g) family status, (h) social status, (i) neutral description, and (j) affective toning. The authors have concluded that "name" is a central aspect of the self concept and consider it the most consistent of the self perceptions.

Smith (50) has attempted to categorize self ratings in a way so as to permit a sensitive evaluation of change in psychiatric patients during therapy. A self-rating device of 70 bipolar adjectives descriptive of human personality was given to 120 adult male psychiatric patients. Ratings on all 70 scales were dichotomized at the median. A 70 by 70 matrix of phi coefficients was generated. Five interpretable factors were found including: (a) self-esteem, (b) anxiety-tension, (c) independence (leadership), (d) estrangement (relationship to others), and (e) body image. These five categories appear to the authors to be very useful in their applicability in self-report techniques. The investigators point out that perhaps many self-report indices and such techniques have failed because others have unwittingly confounded several self-concept measures.

Cowen (19) has reported a study of the relationship between the Bills Index of Adjustment and Values and the Brownfain Self-Rating Inventory. Both instruments yield "discrepancy scores" and these were compared in 139 cases. The results showed absolutely no relationship between the two discrepancy type measures by correlation analysis. The
author feels that although designed as structurally the same, the two instruments do not measure the same thing. The discrepancy score of the Bills Index appears to relate significantly to "independent measures" of self-regarding attitudes, whereas the same on the Brownfain remains questionable.

The effects of order of administration on self-concept measures has been the subject of a study by Palermo (42). Self-concept measures were administered to 120 male and 120 female introductory psychology students. Measures of self-ideal, actual self, and social self were administered in differing order followed by correlation analysis. The results of the study show that males and females show a great deal of similarity in trait rankings regardless of order of administration.

Grigg (28) has initiated a test of self-ideal discrepancy. The hypothesis that there is a significant positive relationship between magnitude of the self-ideal discrepancy and a feeling of maladjustment was tested using Osgood's semantic differential technique. A further hypothesis states that there is a significant negative relationship between the frequency of selection of maladjusted adjectives and the distance between meaning assigned to self and to neurotic. Students enrolled in undergraduate abnormal psychology were asked to indicate the meaning of their "self," their "ideal self," and "neurotic" by Osgood's semantic differential technique. They were then asked to check those adjectives from a 90 item list which they felt were descriptive. Three counseling psychologists checked those adjectives that they felt were most common among maladjusted students. Forty students completed all of the forms for this study. Results showed that self-ideal
discrepancy as a measure of self-esteem or adjustment and the prediction of such is not validated by the study. None of the hypotheses were verified. Contrary to prediction, in the sample studied, there is no significant relationship between self-neurotic discrepancy and use of maladjusted adjectives as self descriptive. With the normal college students used, the relationship between self-ideal discrepancy and number of maladjusted adjectives checked as self descriptive is not significantly positive (as had been predicted), nor is there a significant relationship between self-ideal discrepancy and the distance in meaning assigned to self and that assigned to neurotic.

Cowen (20) has studied the negative self concept as a personality measure. One hundred thirty-nine subjects were given the Brownfain Self-Rating Inventory, the Bills Index of Adjustment and Values, and the California F Scale. A high self-concept group (N=58), and a low self-concept group (N=81) were compared on all sub-measures of these three instruments. Results indicated that in all of the measures used except problem solving, rigidity and threat expectancy, subjects in the high self-concept group responded in a manner indicative of good adjustment while subjects in the low self-concept group characteristically exhibited methods of poorer adjustment. The idea that the negative self concept is characterized by stress and tension within the individual is pointed out by Jervis (32). In this study, the self concepts of 850 college students were measured and related to attitude toward others, prediction of academic achievement, and actual academic performance. A self-discrepancy inventory giving a discrepancy score, a self score, and an ideal self score was administered to all subjects. Results indicated that positive self concept
sub-groups were differentiated by attitude toward others. There was no significant relationship found between self concept scores and grades.

The Bills Index of Adjustment and Values and Related Research

The Bills Index of adjustment and Values (11) is comprised of 49 traits, each rated on a 5-point scale by the examinee. The ratings are arranged in three columns which are designated as concept of self, acceptance of self, and concept of the ideal self. A fourth score termed the "discrepancy," is obtained by totaling the differences between concept of self and concept of the ideal self. Thus the total of the discrepancies between the self concept and the concept of the ideal self serves as a measure of adjustment. Bills (6) points out that many writers assert that the basic human drive is to preserve and enhance self-organization. The enhancement of psychological organization implies two characteristics—the first being that the individual has information relative to his present self-organization, and the second that the individual has a view of himself as he wishes to be. Phenomenological psychology defines maladjustment as any discrepancy between the "concept of self" and the "concept of the ideal self." This index is designed to test these theoretical formulations, to serve as a research tool, and to assess changes in adjustment which occur during psychotherapy.

The Index of Adjustment and Values was administered to 237 college students to determine reliability. When odd numbered items in column two (acceptance of self) were correlated with even numbered items, a correlation of ".91" was obtained. The index was re-administered to 175 of the
above 237 subjects six weeks after the first testing. The test-retest reliability for the self scores was ".83". The test-retest reliability for the discrepancy scores was ".87". These data show that the acceptance of self and discrepancy scores are reliable measures. The acceptance of self and discrepancy scores correlated -.77. This is significantly different from zero at less than the .001 level of confidence. These data show that those persons who score high on acceptance of self show low discrepancy scores.

Some evidence of validity of the Bills Index was shown in the initial study. It was predicted that gains in adjustment in client centered therapy would be reflected in a change of scores on the index. This was shown seven times the expected number in statistical criteria on a test-retest situation.

Column two of the index measures acceptance of self. Those subjects who rate themselves below the mean are therefore less accepting of themselves than the mean of the population. One hundred and forty-two students were given the index, and asked one week later to list the reasons that they were somewhat unhappy. These items were then judged independently by two judges to determine "direction of perceived threat." Agreement ran 75 per cent in one class, and 74 per cent in the other. In the disagreed cases agreement was reached through a conference. A dichotomous chi-square was computed using scores above and below the mean in acceptance of self, the other threat from self versus threat from outside. This proved significant at the .001 level of confidence. Acceptance of self scores below the mean were significantly related to threat from self.
Acceptance of self scores above the population mean were significantly related to threat from others.

The two most common criteria for personality test validation are correlations with other personality tests, and clinical reports based on case studies. Roberts (45), feeling the inadequacies of these methods, uses data from an experimental situation. The Bills Index of Adjustment and Values was the personality test under investigation. The hypothesis that there would be no difference in reaction time between high and low ratings on the concept of self was tested. It was further hypothesized that longer reaction times would occur on those traits wherein a person rejects himself. It was also expected that longer reaction times would occur on those words in which there was a discrepancy between the concept of self and the concept of the ideal self. A homogeneous group was chosen with respect to age, sex (female), and education level. Each subject was given the index of 49 traits in a "free association" test using a chronoscope and voice key to time responses. All subjects had previously taken the index before being chosen for the study, this time in its regular form. As each word was presented to the subject, the experimenter recorded the reaction time, and any signs of overt emotionality. The reaction times were used to test the hypotheses stated previously.

The results showed that ratings of acceptance of self can be considered as indices of emotionality (longer reaction times). A discrepancy between the concept of self and the concept of the ideal self may also be considered an index of emotionality. This was supported by the observation that longer reaction times were observed on those items in which there was a discrepancy. Ratings on the concept of the self may not be considered
as indices of emotionality. The rating of concepts of self is not an
index of emotionality unless accompanying a low rating of concepts of
self or shows a discrepancy between concept of self and concept of

self. self-test

By this method a similar study of retention times for emotion-

ity. Fifty volunteer students served as subjects. All were given the
index at the beginning of the semester in the form of a follow-up
after the free association of the 40 traits. Subjects were instructed to
respond as quickly as possible. After 14 weeks, subjects were re-tested
in the same manner as the first time. By this method a similar study of
retention times for emotionality of the traits for the subjects. These
results show the similarity

between study by Rogers (45).

Fifty subjects participated in a study to determine if emotionality

of self should be established that emotionality of

of self as measured by the "index" and by self-interviews and essentially the

same. This is the object of the following study.

Verbal reports and interviews of recent social experiences were collected from

12 people. The responses were classified according to content and attitude

statements were classified according to self, others, work, environment in

general, miscellaneous, and type of attitude (positive, negative, and

neutral). Two judges, working independently scored all interviews. All

interviews were scored according to concepts of self, shown in the interviews

material and the index. A correlation of 48 was derived between the two

measures. It was concluded that what a subject says about himself in an


interview corresponds highly with the ratings he gives himself on the
Bills Index of Adjustment and Values.

The hypothesis that depression is related to the discrepancy score
on the index was also tested by Bills (10). Fifty-six subjects were
chosen on the basis of discrepancy score on the index. Twenty-eight
were one standard deviation above the mean, and 28 were one standard
deviation below the mean. All subjects were given the Rorschach which
has six measures of depression. Five of these six depression indicators
showed significant differences between the two groups. This supports the
hypothesis that the discrepancy score on the index is significantly
related to depression as measured by the Rorschach.

Bills (9) states that it seems likely that people who score high
in acceptance of self on the index should differ in general in their
personality characteristics from people who score low on the same measure.
The Rorschach purports to give a description of an individual's personality
and was used in this study as related to the Bills Index of Adjustment
and Values. Twenty volunteer female students served as subjects. They
were tested with both measures and divided into two groups on the basis
of acceptance of self scores above or below the mean of the group on
which the norms were based. A second group of 50 subjects were then
processed in the same manner. One group was in excess of one standard
deviation below the mean of the norm group. After analysis of the data
obtained, it was concluded that distinct Rorschach personality character-
istics distinguish subjects who are high in acceptance of self from those
who are low in acceptance of self.

It was predicted by Bills (6) that personal level of aspiration as
revealed by the index would be significantly correlated with level of
aspiration as determined by experimental tasks of a motor and verbal
character. Thirty female college students were administered five level
of aspiration tasks. Four types of data including level of aspiration
scores, estimates of performance, recall of performance, and attitude
toward performance were obtained. It was concluded that the index
scores were, to some degree, related to level of aspiration as measured
by the experimental tasks. It was also shown that acceptance of self
as shown by the index was significantly related to attitude toward per­
formance.

Wylie (59) has concluded that much more information is available
on the norms, reliability, and validity of the Bills Index of Adjustment
and Values than on any other measure of the self concept included in a
survey of self report techniques.

Summary

With the increase of research in the area of educational grouping
much new light will be shed on educational philosophy of the future. As
methods of assessing students' abilities, aptitudes, interests, and per­
sonality characteristics improve, schools will be more able to alter and
improve instruction to meet the demands of modern society. Only through
careful and continual evaluation of educational philosophy substantiated
by experimental evidence can schools continue to improve and meet their
ultimate goal and responsibility, that of educating students in the most
effective manner possible.
HYPOTHESES

I. There are no significant differences between boys and girls of comparable ability in either school district on any of the four variables.

II. There are no significant differences between high, average, and low ability groups in the district employing random grouping on any of the four variables.

III. There are no significant differences between pupils in high, average, and low ability groups in the district employing ability grouping on any of the four variables.

IV. There are no significant differences between students grouped according to ability and comparable students grouped randomly on any of the four variables.
PROCEDURE

Subjects

Subjects included 989 fifth grade students from Ogden City, Utah, and Weber County, Utah schools in the following categories:

(a) 56 accelerated Weber boys
(b) 72 accelerated Weber girls
(c) 122 average Weber boys
(d) 90 average Weber girls
(e) 53 developmental Weber boys
(f) 28 developmental Weber girls
(g) 120 accelerated Ogden boys
(h) 130 accelerated Ogden girls
(i) 104 average Ogden boys
(j) 109 average Ogden girls
(k) 73 developmental Ogden boys
(l) 32 developmental Ogden girls

Weber total = 568 (ability grouped)
Ogden total = 421 (randomly grouped)

Subgroups of the total sample differ in size due to the availability of fifth grade subjects at each ability level in each district. In the schools chosen for the study, the number of students at each ability level differed within schools, from school to school, between districts, and between sexes. All fifth grade students from the schools chosen are included in the sample with the exception of those having incomplete records
such as absence of a designation of ability level or absence of any responses on the Bills Index of Adjustment and Values. Any subject who failed to follow instructions to check only one of three possible alternatives was also eliminated. The total number in both districts eliminated on the basis of such incomplete records was 74.

A fifth grade sample was chosen due to availability of sufficient numbers at all ability levels and time spent under respective grouping methods. The Weber fifth grade students were in the second school year under the ability grouping procedure at the time the present tests were given.

Schools included in the total study were chosen after interviews with school personnel to insure that they were of comparable socio-economic level. This was necessary before valid inter- and intra-district comparisons could be made. Schools found not representative of the total sample were eliminated. Thus, the 22 schools included in the study were selected on the basis of socio-economic comparability.

Students in both Ogden City and Weber County were categorized into accelerated, average, and developmental ability levels in October 1958. This categorization was done in both districts on the basis of California Achievement Test scores. Weber County schools then grouped students according to these three ability levels. This was initiated at the beginning of the 1957-58 school year. Since that time, instruction in the Weber County schools has been designed to meet the needs of each of these ability level groups individually.

Ogden City schools have made no attempt to group students on the basis of ability. Instruction in this district is designed to fulfill
the needs of a heterogeneous group containing students of widely diverse abilities and talents.

The nature of this study made necessary the use of a self-report index which would yield scores of students' self concept and emotional adjustment. From literature in this area it is apparent that the Bills Index of Adjustment and Values has been subjected to more research and careful scrutiny than other similar indexes. The value of this index, as illustrated in previous research and shown in chapter two (6, 7, 8, 9, 10, 45), coupled with the purpose of the study, led to its selection.

The Bills Elementary school Index of Adjustment and Values is comprised of 19 trait questions such as "Are you truthful?" "Are you helpful?" "Are you honest?" and "Are you friendly?" These questions are read aloud to subjects who in turn circle "yes", "no", or "sometimes" or "don't care" on their answer sheets. They are then asked, "Do you like the way you are?" and response is made in the same way. A third question, "Would you like to be ____?" is asked, and again response is made in the same way. These three questions are asked regarding each statement until all 19 have been completed. Scores of students' self concept, ideal self, acceptance of self, and a discrepancy score, which is the difference between the self concept score and the ideal self score, are derived.

Responses are scored on a three point basis. "Yes" responses are scored three points, "sometimes" or "don't care" responses are scored two points, and "no" responses are scored one point. "Sometimes" and "don't care" responses differ only in that one fits some particular questions better than the other. They do, however, indicate the same response and are dealt with accordingly. After each response is scored,
all questions are totaled yielding total scores on self concept, ideal self, and acceptance of self. The "self concept" total score is then subtracted from the "ideal self" score which yields the "discrepancy score." Although the acceptance of self score and the discrepancy score are considered measures of adjustment, the discrepancy score is considered the more subtle and valid of the two.

Since all questions presented to subjects are stated positively and are culturally accepted traits, such as "Are you helpful?" the higher the self concept total score the higher the subject regards himself on the traits. The lower he scores himself on the self concept questions, the lower he regards himself on the traits.

Subjects' concepts of the ideal self are scored in the same manner. A "Would you like to be _______?" question scored three for a "yes" response would indicate a desire on the part of the subject to have that particular trait. The higher the total score on the ideal self measure, the greater the indication is that the subject desires the positive personality traits responded to. The lower the total ideal self score, the less the individual wishes to incorporate the traits into his personality.

The acceptance of self questions, which are stated "Do you like the way you are?" are scored on the same basis as the self concept and the ideal self. The higher the total acceptance of self score is, the more the individual is considered to accept himself as he sees himself. The lower the total acceptance of self score is, the less the individual is considered to accept himself.

The size of the discrepancy score depends upon the difference between the self concept total score and the ideal self total score. The larger
the difference between the self concept and the ideal self, the larger
the discrepancy will be. The larger the discrepancy score, or difference
between the self concept and ideal self, the less well adjusted the indi-
vidual is considered to be.

Group means and standard deviations were first computed for each sex
at each ability level in both districts. This was done to make possible
comparisons for sex differences. Intra-district comparisons were made
between ability levels followed by inter-district comparisons between
comparable ability level groups. Critical ratios were computed and t
tests were used to determine the significance of the difference between
means by the standard error of the difference formula between uncorrelated
means:

$$d = \frac{\sigma^2}{N_1} + \frac{\sigma^2}{N_2}$$

The critical ratio was then found

$$CR = \frac{M_1 - M_2}{d}$$

to determine the level of significance. This procedure was carried out
for all comparisons made.
RESULTS

Intra-District Comparisons

Table 1 summarizes the means and standard deviations of each sex group at the three ability levels in both districts. Comparisons between all of these sex groups revealed no significant differences on any of the four variables. Scores on the self concept, ideal self, discrepancy score, and acceptance of self revealed no significant differences in the way boys and girls of comparable abilities in both districts responded on the Bills Index of Adjustment and Values.

The essence of these findings lies in the evidence that regardless of grouping technique under which students are placed or their ability level boys and girls of comparable ability do not differ in self concept, ideal self, discrepancy score, or acceptance of self. Of major concern in the research was to determine whether or not such differences existed, and whether or not one sex appeared better adjusted than the other. The evidence that such differences did not exist made possible comparisons on the above four variables on the basis of ability level and grouping technique regardless of sex.

Table 2 shows intra-district comparisons made between ability levels on the self concept, ideal self, discrepancy score, and acceptance of self. The results of these comparisons will be presented in the order of the above four variables.
Table 1. Summary of means and standard deviations for Ogden City and Weber County sex and ability level groups on four variables

<table>
<thead>
<tr>
<th>Group</th>
<th>Self concept</th>
<th>Ideal self</th>
<th>Discrepancy score</th>
<th>Acceptance of self</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Ogden</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated boys</td>
<td>45.60</td>
<td>3.85</td>
<td>50.00</td>
<td>2.39</td>
</tr>
<tr>
<td>Accelerated girls</td>
<td>45.80</td>
<td>3.72</td>
<td>49.80</td>
<td>1.78</td>
</tr>
<tr>
<td>Average boys</td>
<td>45.10</td>
<td>4.48</td>
<td>49.80</td>
<td>2.93</td>
</tr>
<tr>
<td>Average girls</td>
<td>45.10</td>
<td>4.46</td>
<td>49.70</td>
<td>1.66</td>
</tr>
<tr>
<td>Developmental boys</td>
<td>45.20</td>
<td>4.52</td>
<td>49.50</td>
<td>3.51</td>
</tr>
<tr>
<td>Developmental girls</td>
<td>45.30</td>
<td>4.19</td>
<td>49.00</td>
<td>2.73</td>
</tr>
<tr>
<td>Weber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated boys</td>
<td>43.80</td>
<td>4.05</td>
<td>49.93</td>
<td>3.95</td>
</tr>
<tr>
<td>Accelerated girls</td>
<td>44.50</td>
<td>3.42</td>
<td>50.51</td>
<td>2.21</td>
</tr>
<tr>
<td>Average boys</td>
<td>44.54</td>
<td>5.20</td>
<td>49.63</td>
<td>3.58</td>
</tr>
<tr>
<td>Average girls</td>
<td>44.12</td>
<td>4.04</td>
<td>49.57</td>
<td>1.96</td>
</tr>
<tr>
<td>Developmental boys</td>
<td>44.53</td>
<td>4.58</td>
<td>48.96</td>
<td>3.58</td>
</tr>
<tr>
<td>Developmental girls</td>
<td>44.39</td>
<td>5.82</td>
<td>49.62</td>
<td>2.65</td>
</tr>
</tbody>
</table>
Analysis of the data shown in Table 2 revealed no significant differences between accelerated, average, and developmental students in either district on the self concept. This shows that in each district the students score themselves similarly on self concept regardless of their ability level.

The only ideal self comparison which proved significant was that between accelerated Weber students and developmental Weber students. Since the higher a subject scores on the ideal self the more desirous he is of the favorable personality traits it appears as though Weber accelerated students are more desirous of these traits than are the Weber developmental students. This difference is significant at the .05 level. With this exception there appears to be no significant difference in the way students at the various ability levels in either district respond to ideal self items.

Intra-district comparisons in both Ogden and Weber revealed no significant group mean differences in discrepancy scores between the three ability levels. These intra-district comparisons suggest that there are no significant differences between accelerated, average, and developmental students in either district in general adjustment as measured by the discrepancy score.

The only significant intra-district mean difference on acceptance of self revealed through analysis of the data shown in Table 2 occurred between accelerated Ogden students and average Ogden students. The mean difference between these two groups is significant at the .05 level of confidence.
Table 2. Significance of the difference between means on four variables; intra-district ability level comparisons in Ogden City and Weber County

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>Variable</th>
<th>Ma</th>
<th>Mb</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self concept</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs average (O)</td>
<td>45.72</td>
<td>45.11</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs developmental (O)</td>
<td>45.72</td>
<td>45.25</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Average (O) vs developmental (O)</td>
<td>45.11</td>
<td>45.25</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (W) vs average (W)</td>
<td>44.20</td>
<td>44.36</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (W) vs developmental (W)</td>
<td>44.20</td>
<td>44.48</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Average (W) vs developmental (W)</td>
<td>44.36</td>
<td>44.48</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Ideal self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs average (O)</td>
<td>49.86</td>
<td>49.79</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs developmental (O)</td>
<td>49.86</td>
<td>49.32</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Average (O) vs developmental (O)</td>
<td>49.79</td>
<td>49.32</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (W) vs average (W)</td>
<td>50.26</td>
<td>49.60</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (W) vs developmental (W)</td>
<td>50.26</td>
<td>49.20</td>
<td>2.30**</td>
<td></td>
</tr>
<tr>
<td>Average (O) vs developmental (W)</td>
<td>49.60</td>
<td>49.20</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Discrepancy score</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs average (O)</td>
<td>4.36</td>
<td>4.85</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs developmental (O)</td>
<td>4.36</td>
<td>4.53</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Average (O) vs developmental (O)</td>
<td>4.85</td>
<td>4.53</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (W) vs average (W)</td>
<td>6.27</td>
<td>5.74</td>
<td>N.S.</td>
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</tr>
<tr>
<td>Accelerated (W) vs developmental (W)</td>
<td>6.27</td>
<td>5.16</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Average (W) vs developmental (W)</td>
<td>5.74</td>
<td>5.16</td>
<td>N.S.</td>
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<tr>
<td>Acceptance of self</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs average (O)</td>
<td>49.40</td>
<td>50.94</td>
<td>2.27**</td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs developmental (O)</td>
<td>49.40</td>
<td>50.18</td>
<td>N.S.</td>
<td></td>
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<tr>
<td>Average (O) vs developmental (O)</td>
<td>50.94</td>
<td>50.18</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (W) vs average (W)</td>
<td>46.18</td>
<td>47.19</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Accelerated (W) vs developmental (W)</td>
<td>46.18</td>
<td>47.16</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Average (W) vs developmental (W)</td>
<td>47.19</td>
<td>47.16</td>
<td>N.S.</td>
<td></td>
</tr>
</tbody>
</table>

(0) = Ogden randomly grouped students.
(W) = Weber ability grouped students.
* Significant at .01 level.
** Significant at .05 level.
N.S. = not significant.
Since a high score on acceptance of self implies that the subject accepts his self perceptions to a greater degree, the average Ogden students surpass in general the accelerated Ogden students in this respect.

**Inter-District Comparisons**

Table 3 summarizes data comparing groups of ability grouped and similar random grouped pupils on the four self concept variables.

Analysis of the data regarding the self concept shows that the only significant difference exists between the accelerated Ogden students (grouped randomly) and accelerated Weber students (grouped according to ability). This indicates that the randomly grouped accelerated students in Ogden score themselves higher on favorable personality traits than do the accelerated students grouped according to ability in Weber. Of further interest is the observation that Ogden students consistently scored themselves higher on the favorable personality traits than did the Weber students. This is apparent in all three ability levels and although statistically significant only between the accelerated groups, there is a definite consistency shown that the randomly grouped Ogden students tend to score themselves higher on the favorable personality traits than do their ability grouped counterparts in Weber schools.

Inter-district comparisons on the ideal self, as shown in Table 3 showed no significant mean group differences between the two districts' three comparable ability levels. This observation indicates that the subjects tested do not differ significantly, regardless of grouping technique employed, in the way they score ideal self items.
Table 3. Significance of the difference between means on four variables; inter-district comparable ability level comparisons

<table>
<thead>
<tr>
<th>Groups compared</th>
<th>Variable</th>
<th>A</th>
<th>B</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Self concept</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs accelerated (W)</td>
<td>45.72</td>
<td>44.20</td>
<td>3.74*</td>
<td></td>
</tr>
<tr>
<td>Average (O) vs average (W)</td>
<td>45.11</td>
<td>44.36</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Developmental (O) vs developmental (W)</td>
<td>45.25</td>
<td>44.48</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Ideal self</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs accelerated (W)</td>
<td>49.86</td>
<td>50.26</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Average (O) vs average (W)</td>
<td>49.79</td>
<td>49.60</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td>Developmental (O) vs developmental (W)</td>
<td>49.32</td>
<td>49.20</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Discrepancy score</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs accelerated (W)</td>
<td>4.36</td>
<td>6.27</td>
<td>4.24*</td>
<td></td>
</tr>
<tr>
<td>Average (O) vs average (W)</td>
<td>4.35</td>
<td>5.74</td>
<td>2.28**</td>
<td></td>
</tr>
<tr>
<td>Developmental (O) vs developmental (W)</td>
<td>4.53</td>
<td>5.16</td>
<td>N.S.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Acceptance of self</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accelerated (O) vs accelerated (W)</td>
<td>49.40</td>
<td>46.18</td>
<td>3.32*</td>
<td></td>
</tr>
<tr>
<td>Average (O) vs average (W)</td>
<td>50.94</td>
<td>47.19</td>
<td>4.93*</td>
<td></td>
</tr>
<tr>
<td>Developmental (O) vs developmental (W)</td>
<td>50.18</td>
<td>47.16</td>
<td>2.11**</td>
<td></td>
</tr>
</tbody>
</table>

(O) = Ogden randomly grouped students.
(W) = Weber ability grouped students.
* Significant at .01 level.
** Significant at .05 level.
N.S. = not significant.
Inter-district comparisons between comparable ability levels revealed significant differences in discrepancy score means. Accelerated Weber students showed a significantly higher discrepancy score mean than did accelerated Ogden students. This suggests that the accelerated students in Weber grouped according to ability are somewhat less well adjusted than students of comparable ability grouped randomly in Ogden. The mean difference between these two groups in discrepancy score proved to be significant at the .01 level of confidence.

Average Weber students also showed a higher discrepancy score than did average Ogden students. Hence the former show a lesser degree of adjustment than the latter. The mean difference between these two groups proved to be significant at the .05 level of confidence.

Although not statistically significant, developmental Weber students showed a higher discrepancy score mean than did developmental Ogden students. This completes a trend that the students grouped according to ability in Weber show higher discrepancy scores at all three ability levels than do students of comparable ability grouped randomly in Ogden.

Since the discrepancy score is merely the difference between the self concept score and the ideal self score, differences in the latter two would affect the size of the discrepancy score. There was no trend or significant difference apparent between the two districts in ideal self score means, the only significant difference being between accelerated Weber students and developmental Weber students.

It would appear, then, that the mean ideal self scores in both districts did not differ significantly enough to increase differences between the self concept means and ideal self score means (discrepancy
score). Differences between the two districts are apparent, however, in mean self concept scores. Ogden students at all three ability levels scored higher on the self concept measure than did students at comparable ability levels in Weber. The randomly grouped Ogden students therefore scored themselves more favorably on the 19 personality traits than did the ability grouped Weber students. The fact that Weber students scored themselves less favorably than did Ogden students, resulting in smaller self concept mean scores, sheds further importance on the differences shown between the two districts on discrepancy score means. Since Weber students scored themselves lower on the self concept measure the difference between the ideal self mean scores and the self concept mean scores (discrepancy score) is less than if Weber students had scored themselves the same as did Ogden students on the self concept measure. This substantiates the observation that Weber students who are grouped according to ability appear less well adjusted than Ogden students, who are grouped randomly as measured by the discrepancy score on the Bills Index of Adjustment and Values.

Inter-group comparisons of acceptance of self means revealed significant differences at all three ability levels. Ogden randomly grouped students showed higher acceptance of self scores at the accelerated, average, and developmental levels of ability. Accelerated Ogden students and accelerated Weber students showed a mean difference significant at the .01 level of confidence. Ogden average students and Weber average students also showed a group mean difference which proved significant at the .01 level, while developmental Ogden students and developmental Weber students showed a group mean difference significant at the .05 level of confidence.
At all three ability levels, Ogden randomly grouped students scored higher on the acceptance of self measure and appear to accept themselves with respect to their self perception to a greater degree than do the ability grouped Weber students.

The characteristically higher scores on acceptance of self of Ogden students over Weber students at all ability levels further substantiates the differences in level of adjustment as measured by the discrepancy score. Since both the acceptance of self score and the discrepancy score serve as measures of adjustment, and both show inter-group differences in the same direction, there are considerable and valid differences implied between the two districts in this respect. Larger discrepancy scores observed in ability grouped Weber students, which suggests a lesser degree of adjustment, coupled with smaller mean acceptance of self scores implying a lesser degree of acceptance of self illustrate this difference between the two districts.
DISCUSSION

Before the results of any form of research can be used intelligently the limitations and applications of that research must be taken into account. It is realized that even in the area dealt with in this research there is a need for further study and evaluation. Since the measure used is but one of many valid indices of the self concept and adjustment, it is conceivable that further research using these other measures might substantiate or even refute the present research. This is a major challenge presented by the study.

The results of the study revealed no significant differences between sexes on the self concept, ideal self, discrepancy score, or acceptance of self. This was evident in both the district employing ability grouping and the district employing random grouping. It was therefore observed that the fifth grade students of comparable ability studied scored similarly on these four measures regardless of sex.

Having eliminated the possibility of sex differences, it was possible to combine sexes into ability groups in the two districts. Intra-district comparisons between ability levels revealed no significant mean differences on the self concept measure. This suggests that regardless of ability level the students studied rate themselves similarly on favorable personality traits. This was true in both districts.

Accelerated Weber students and developmental Weber students showed mean differences significant at the .05 level of confidence on the ideal self measure. This suggests that the Weber accelerated students show a
greater desire to incorporate these favorable personality traits into their behavior than do the developmental Weber students. With this exception there were no significant ability level mean differences observed on the ideal self measure in either district.

Intra-district comparisons between ability levels on the discrepancy score revealed no significant mean differences. Since the discrepancy score serves as a measure of general adjustment, it is suggested that the students in each district do not differ significantly in adjustment regardless of ability level.

The group mean difference between accelerated Ogden students and average Ogden students on acceptance of self proved to be significant at the .05 level of confidence. This observation suggests that the accelerated Ogden students tend to accept their self perceptions to a greater degree than do the average Ogden students. This is the only intra-district comparison on acceptance of self which proved to be significant.

Inter-district comparisons between comparable ability levels revealed only one significant difference on the self concept measure, that between accelerated Ogden students (grouped randomly) and accelerated Weber students (grouped according to ability). In this case the Ogden students grouped randomly scored themselves higher on the favorable personality traits than did students of comparable ability grouped according to ability in Weber. Although this is the only significant mean difference noted on the self concept, Ogden students at all three ability levels scored themselves higher on the self concept measure.

Inter-district comparisons between comparable ability levels revealed
no significant differences in the way students responded to ideal self items. It is therefore suggested that the students of comparable ability do not differ significantly in the desire to possess the favorable personality traits presented in the measure.

Weber students (grouped according to ability) showed higher discrepancy scores at every ability level than did students grouped randomly in Ogden. The mean difference between the two accelerated groups proved to be significant at the .01 level of confidence. The mean difference between the two average groups was significant at the .05 level of confidence, and although developmental Weber students showed a higher mean than did the Ogden students, this difference was not significant. This suggests that at all three ability levels the Weber students grouped according to ability appear less well adjusted than do the Ogden students grouped randomly.

Ogden students showed significantly higher acceptance of self scores at all three ability levels than did Weber students. Between accelerated groups the mean difference proved to be significant at the .01 level of confidence. Between the average groups the mean difference proved to be significant also at the .01 level of confidence while the mean difference between developmental groups showed significance at the .05 level of confidence. At all three ability levels this suggests that the Ogden students grouped randomly tend to accept their self perceptions to a greater degree than do the Weber students grouped according to ability.

Differences between the two districts on the self concept measure, in which randomly grouped Ogden students scored themselves higher at all three ability levels than did ability grouped Weber students, suggest that
the randomly grouped students regard themselves higher in terms of self concept than do the ability grouped students. Larger discrepancy score means shown by the ability grouped students suggest that they are somewhat less well adjusted than are the randomly grouped students. Lower acceptance of self score means apparent in the ability grouped sample at all three ability levels suggest that they accept their self perceptions to a lesser degree than do the randomly grouped students.

It is conceivable that all three of these inter-district differences might be the result of the grouping procedure employed. Lower self concept means, larger discrepancy score means, and lower acceptance of self apparent in the ability grouped district all suggest a degree of lesser adjustment than is shown by the district employing random grouping. These differences were observed between the two districts at all three ability levels. Accelerated students in the ability grouped district are placed in a classroom situation in which competition is much greater than that found in the classroom grouped randomly. This acute competition might very well account for the inter-district differences at the accelerated level. The average and developmental students in the ability grouped district undoubtedly recognize that they are not in the accelerated group. This conceivably might account for the above differences of these two ability levels between the districts. The difference between the two districts in general adjustment as measured by the discrepancy score proved to be significant only at the accelerated and average levels, however, and not at the developmental level, while mean differences in acceptance of self proved to be significant at every ability level.
SUMMARY AND CONCLUSIONS

Hypothesis I stating that no sex differences existed in either the district employing ability grouping or the district employing random grouping was substantiated by the results of the study. Hypothesis II stating that no differences existed between ability levels in the district employing random grouping on any of the four variables was rejected on the basis of the results. A significant difference was noted in this district between accelerated and average students on acceptance of self. This, however, was the only significant ability level difference apparent on any of the four variables. Hypothesis III, which stated that no significant differences existed between ability levels on any of the four variables in the district employing ability grouping, was also rejected on the basis of the results of the study. A significant ability level difference was observed on the ideal self variable between accelerated students and developmental students. This, however, was the only significant difference observed on any of the four variables in the ability grouped district.

Hypothesis IV, which stated that no significant differences existed on any of the four variables between comparable ability levels in the two districts, was rejected on the basis of the results. Inter-group significant differences were observed on the self concept, discrepancy score, and acceptance of self score. In all three cases the Weber students grouped according to ability showed lower positive self concepts and a lesser degree of adjustment than did the Ogden students grouped randomly.
The tentative conclusions which can be drawn on the basis of the results are:

1. Boys and girls of comparable ability at the fifth grade level in an ability grouped situation do not differ significantly in their self concept, ideal self, acceptance of self, or general adjustment.

2. Boys and girls of comparable ability at the fifth grade level in a randomly grouped situation do not differ significantly in their self concept, ideal self, acceptance of self, or general adjustment.

3. There are no significant differences between accelerated, average, and developmental fifth grade students in an ability grouped situation in terms of self concept or level of adjustment.

4. There are no significant differences between accelerated, average, and developmental fifth grade students in a randomly grouped situation in terms of self concept or level of adjustment.

5. Accelerated fifth grade students grouped randomly have significantly higher self concepts than do accelerated fifth grade students according to ability.

6. The concept of the ideal self held by accelerated, average, and developmental fifth grade students in the ability grouped situation does not differ significantly from the concept of the ideal self held by accelerated, average, and developmental fifth grade students grouped randomly.

7. Accelerated and average fifth grade students grouped according to ability are significantly less well adjusted than are accelerated and
average students grouped randomly.

8. Fifth grade students at the accelerated, average, and develop-
mental levels in an ability grouped situation accept their self-
perceptions to a significantly lesser degree than do fifth grade
students of comparable ability grouped randomly.
LITERATURE CITED


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(49) Sherif, M., White, B. J., and Harvey, O. J. Status in experimentally produced groups. Amer. J. Sociol., 1955, 60, 370-379.


(52) Stock, D. An investigation into the interrelations between the self concept and feelings directed toward other persons and groups. J. Consult. Psychol., 1949, 13, 176-180.


ADMINISTRATION INSTRUCTIONS

ELEMENTARY SCHOOL INDEX OF ADJUSTMENT AND VALUES

"Self Evaluation Form"

DIRECTIONS: Read over the items and directions and examine the answer sheet before attempting to administer this test. Give each child a copy of the answer sheet and a small piece of paper that he can use as a marker. Then say, "FILL IN YOUR NAME, GRADE, SCHOOL, AND TEACHER'S NAME AT THE TOP OF THE PAGE. TODAY'S DATE IS _______. EACH ONE OF US WOULD LIKE TO KNOW MORE ABOUT HIMSELF: SO LET'S SEE IF WE CAN DO JUST THAT BY PLAYING THIS GAME. I AM GOING TO READ SOME SENTENCES TO YOU. I WANT YOU TO ANSWER JUST EXACTLY HOW YOU FEEL. THERE ARE NO RIGHT OR WRONG ANSWERS, BECAUSE EVERYONE IS DIFFERENT. NOW PLACE YOUR MARKER UNDER THE THREE WORDS NEAR THE NUMBER 1. YOU SEE THAT THESE THREE WORDS ARE 'YES,' 'NO' AND 'SOMETIMES.' NOW I AM GOING TO ASK YOU A QUESTION. 'ARE YOU TRUTHFUL?' IF YOU ARE, PUT A CIRCLE AROUND THE WORD 'YES.' IF YOU ARE NOT TRUTHFUL, PUT A CIRCLE AROUND THE WORD 'NO.' IF YOU ARE TRUTHFUL SOMETIMES AND NOT TRUTHFUL SOMETIMES, PUT A CIRCLE AROUND THE WORD 'SOMETIMES.' NOW MOVE YOUR MARKER DOWN ONE LINE. DO YOU LIKE THE WAY YOU ARE? IF YOU DO, PUT A CIRCLE AROUND THE WORD 'YES.' IF YOU DO NOT LIKE THIS WAY, PUT A CIRCLE AROUND THE WORD 'NO.' IF YOU DON'T CARE, PUT A CIRCLE AROUND THE WORDS 'DON'T CARE.' NOW MOVE YOUR MARKER DOWN ONE LINE. WOULD YOU LIKE TO BE TRUTHFUL? IF YOU WOULD, PUT A CIRCLE AROUND THE WORD 'YES.' IF YOU WOULD NOT LIKE TO BE TRUTHFUL, PUT A CIRCLE AROUND THE WORD 'NO.' IF YOU DON'T CARE, PUT A CIRCLE AROUND THE WORDS 'DON'T CARE.' NOW MOVE YOUR MARKER DOWN ONE LINE. YOU SHOULD NOW SEE THE NUMBER 2 AND THE THREE WORDS 'YES,'
'NO, AND SOMETIMES.' The examiner continues in this vein until 19 items of the "Self" index have been covered. These items are listed on the following page.
ADMINISTRATION INSTRUCTIONS

ELEMENTARY SCHOOL INDEX OF ADJUSTMENT AND VALUES

"Self Evaluation Form"

1. Are you truthful?
   Do you like the way you are?
   Would you like to be truthful?

2. Are you helpful?
   Do you like the way you are?
   Would you like to be helpful?

3. Do you play fair?
   Do you like the way you are about being fair?
   Would you like to be fair?

4. Are you kind?
   Do you like the way you are?
   Would you like to be kind?

5. Are you smart?
   Do you like the way you are?
   Would you like to be smart?

6. Are you healthy?
   Do you like the way you are?
   Would you like to be healthy?

7. Are you happy?
   Are you glad you are this way?
   Would you like to be happy?

8. Are you brave?
   Do you like the way you are?
   Would you like to be brave?

9. Are you friendly?
   Do you like the way you are?
   Would you like to be friendly?

10. Do you share your toys?
    Do you like the way you are?
    Would you like to share your toys?

11. Are you nice looking?
    Do you like the way you are?
    Would you like to be nice looking?

12. Are you honest?
    Do you like the way you are?
    Would you like to be honest?

13. Do you play with others?
    Do you like the way you are?
    Would you like to play with others?

14. Do you get mad?
    Do you like the way you are?
    Do you like to get mad?

15. Do you make fun of others?
    Do you like the way you are?
    Do you like to make fun of others?

16. Do you say and do funny things?
    Do you like the way you are?
    Would you like to say and do funny things?

17. Do you like grown ups?
    Do you like the way you are?
    Do you want to like grown ups?

18. Are you a good worker?
    Do you like the way you are?
    Would you like to do good work?

19. Do you get scared?
    Do you like the way you are?
    Would you like to get scared?
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1. | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |
|    | Yes | No | Don't care |   | Yes | No | Sometimes |   | Yes | No | Don't care |   | Yes | No | Sometimes |   | Yes | No | Don't care |
| 2. | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Don't care |
|    | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |
| 3. | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Don't care |
|    | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |
| 4. | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Don't care |
|    | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |
| 5. | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Don't care |
|    | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |
| 6. | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Don't care |
|    | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |
| 7. | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Sometimes |   | Yes | No | Don't care |
|    | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |   | Yes | No | Don't care |