

THE ACADEMIC ACHIEVEMENT OF
AMERICAN INDIANS

By

MARY ELIZABETH GILBERT

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Thesis Approved:

Larry M. Perkins
Thesis Adviser

Donald E. Allen

D. D. Durhan
Dean of the Graduate College

788275

PREFACE

In recent years educators and public officials have become increasingly concerned over the academic difficulty experienced by youngsters from minority groups. Since an individual's success in school largely determines his life chances, research and speculation over the determinants of this problem have proliferated. Many explanations have been presented, including the non-relevancy of subject matter, crowded classrooms, and inadequate instruction. Others have blamed discrimination against these youngsters and their subsequent development of poor self-images. Still others have noted the conflict between the minority group culture and white culture, stating that this leads to personality disturbances which block achievement. Several studies have involved the home, citing the lack of intellectual stimulation and adequate sex role models. These explanations tend to fall into two categories, those dealing with the environment of the school, and those dealing with the attributes of the students. This thesis will treat the latter area; it will discuss the characteristics of children which correlate with academic achievement.

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CHAPTER I

REVIEW OF LITERATURE

In the search for correlates of academic achievement scholars have investigated many variables. Factors such as social class, parental attitudes toward school, and the number of parents present at home have been related to achievement. The child's attitude toward school, his intelligence, and his self-concept have also been investigated. In the instance of the minority group child, the degree of integration of the school has been studied, and for Indians the degree of Indian blood has been tied to achievement.

Coombs et al., (1958) gave the California Achievement tests to 23,608 Indian and white pupils attending school in eleven states. The scores indicated a hierarchy of groups: white pupils in public schools, Indian pupils in public schools, Indian pupils in Federal schools, and Indian pupils in mission schools. With only one exception the smaller the amount of Indian blood in a group, the higher the group achieved. The authors stated there may be a slight indication that Indian pupils attending school where enrollment is at least one-half white achieve better than those attending school composed mostly of Indians.¹

Several individuals have discussed the lack of self-confidence among Indians. Kennedy (1955) said the Pomo seem to be ashamed of themselves, and the Spindlers (1957) indicate the personality type

they call "reaffirmative native" is ambivalent about white culture and has little faith in himself. West (1950), himself an Indian, notes that even prolonged residence in an urban center does not alleviate the feelings of alienation, inadequacy, and anxiety. Others state that this negative self-concept is a major factor in the Indian child's academic problems. Hobart (1963) gave several causes for the underachievement of minority group youngsters, and one of these is damaged self-concept. He indicates that the shock of transition from a segregated grade school to an integrated high school will awaken this poor self-concept. Anderson and Safar (1967) feel an inferior self-concept has a greater impact upon academic behavior than physical conditions in school such as teacher-pupil ratios.

John Bryde (1965) in his study of the scholastic and personality problems of Oglala Sioux Indian students, investigated their tendency to succeed satisfactorily up to adolescence, then show a steady decline in achievement during the remaining school years. Bryde compared 415 Indian and 223 white eighth, ninth, and twelfth graders on a standardized achievement test and the Minnesota Multiphasic Personality Inventory. On achievement the Indian students scored significantly higher than national test norms from the fourth through the sixth grade. At the eighth grade they were significantly below the national test norms. On personality variables the Indian groups consistently and significantly revealed themselves as feeling more depressed, rejected, withdrawn, and more socially and self-alienated. As degree of Indian blood increased, personality disruption increased. The blood groups did not differ significantly on achievement variables; however, Indian dropouts, compared with Indians who stayed in

school and with Indian twelfth graders, showed the greatest personality disturbance of all. Bryde concluded that the conflict between Indian and white culture comes to a focus at adolescence and causes severe personality disturbances which hinder achievement.²

Many studies completed in the last decade have been concerned with the relationship between self-concept and achievement in school. Some of these studies include: Shaw, Edson, and Bell (1960); Fink (1962); Shaw and Alves (1963); Bledsoe (1964); Greenberg et al., (1965); Coleman (1966); Quimby (1967); McDaniel (1968); Edmunds (1968); Lucas (1968); Butcher (1968); Peters (1968); Hall (1968). Most of these studies reported positive correlations between self-concept and academic achievement indicated by grades or achievement tests.

Fink (1962) matched twenty pairs of boys and twenty-four pairs of girls on intelligence measured by the California Test of Mental Maturity. The subjects were from the freshman class of a rural high school located in the Central Valley of California, and all had IQ's ranging from 90 to 110. Fink used grade point averages as his measure of academic achievement, and five measures of self-concept, including the California Psychological Inventory, Bender Visual Motor Gestalt Test, Draw-a-Person Test, Gough Adjective Check List completed by the pupil and by his teacher, and a brief essay describing "What I will be in 20 years." For boys he found a significant relationship between high academic achievement and adequate self-concept, and between inadequate self-concept and low achievement. Shaw, Edson, and Bell (1960) chose their subjects from high school juniors and seniors who had an IQ of 113 or above according to the Primary Mental Abilities

Test. A student was termed an achiever if his cumulative grade point average was 2.00 or above since entering school, and an under-achiever if it was 1.75 or below. Self-concept scores were obtained from the Sarbin Adjective Checklist, which contains two hundred adjectives which the subject checks if he feels they are descriptive of him. The researchers concluded that male achievers feel relatively more positive toward themselves than do male underachievers. The female underachievers tended to feel somewhat ambivalent about themselves. This may indicate that they see themselves both positively and negatively or may be confused regarding their feminine role. The sample included twenty male and twenty-one female achievers, and nineteen male and twenty-seven female underachievers.

Shaw and Alves (1963) studied high school juniors and seniors from a high school of 1600 who had an IQ of 110 or above on the California Test of Mental Maturity. A student was classified as an achiever if his grade point average was 3.0 or above, and as an under-achiever if it was 2.5 or below. Seventy-eight subjects were included in the final sample. The Bills Index of Adjustment and Values was used to measure self-concept. Shaw and Alves reported a direct association between negative self attitudes and under-achievement. The difference was significant for males, but it was not significant for females. Bledsoe (1964) used for his measure of self-concept a checklist of thirty trait-descriptive adjectives which the subject checked as characteristic of himself nearly always, about half the time, or just now and then. His sample included 271 fourth and sixth grade boys and girls from four schools of Clarke County, Georgia. He used the California Test of Mental Maturity to measure IQ, and the

California Achievement Test to measure achievement. Self-concept was positively related to the measures of intelligence and achievement, but only for boys was the relationship significant.

Greenberg et al., (1965) studied 115 fourth grade Negro children from a public school in a severely depressed urban area. Achievement was measured by grade equivalent scores on the Metropolitan Primary Reading Test, and self-concept was measured by a rating of "Myself" on six evaluative adjective pairs on a form of the Osgood Semantic Differential. The high achievers had more self-confidence; however, high achieving girls scored relatively low on the self scale.

Coleman et al., (1966) participated in a national survey carried out by the National Center for Educational Statistics of the United States Office of Education. The study included students from six racial and ethnic groups. Five standardized achievement tests were given to children at five grade levels, and self-concept was measured by the child's faith in his ability to learn, as indicated by responses to three statements. With some exceptions, especially Oriental Americans, the average minority pupil scored distinctly lower on the achievement tests than did the average white pupil. The minority pupil scored as much as one standard deviation below the white at the first grade, and at the twelfth grade the difference was greater.³ The attitudinal variables, including self-concept, had the strongest relation to achievement of all the variables measured in the study, including all measures of family background and all school variables.⁴ More Indians than any other group (44%) agreed to the statement, "I sometimes feel that I just can't learn."⁵

Quimby (1967) studied fifty-eight junior and senior high school

students. They were all attending school in Stockton, California, and they all scored 110 or more on the California Test of Mental Maturity. If a student had a cumulative grade point average of 3.00 or more, he was classified as an achiever; if it was 2.99 or less he was termed an underachiever. Twenty-eight students were under-achievers and thirty were achievers. The subjects took a Q sort, which they sorted twice to obtain the self-ideal self-concept relationship. The self-ideal relationship of the achievers was significantly higher than that of the underachievers. This confirmed the proposition that low self-concept is related to underachievement.

McDaniel (1968) chose 180 children from grades one through six who were attending sixteen public schools. The self-concept of the children was rated by teachers and counselors by means of a thirty item, five point scale. Achievement and IQ scores were obtained from school records, and were based upon standardized tests. No significant relationship was found between self-concept and achievement when IQ was held constant. Significant relationships were established between self-concept and intelligence for Negroes, males, females, and fifth and sixth graders. Edmunds (1968) chose for his subjects 135 students enrolled in an 11th grade English class in a southern California high school. He used two measures of self-image--one self report and one completed by the English teacher. No significant relationship was found between the self report self-concept and grades; however, the inferred self-image ratings of the English teacher were significantly related to achievement. Edmunds concluded that perhaps a multitude of variables are operative when an individual is asked to describe himself; inaccuracy of perception and

defense mechanisms may influence his responses.

Lucas (1968) measured self-concept by the Bills Index of Adjustment and Values, which contains scales for concept of self, ideal self, acceptance of self, and self-ideal self discrepancy. The study was carried out in seven high schools in Metropolitan Los Angeles. Lucas also gathered grade point averages covering grades nine through twelve, and obtained IQ scores by the California Test of Mental Maturity and the Iowa Test of Educational Development. Complete data were available for 390 high school seniors. For males all aspects of self-concept were significantly related to grade point average; for females only concepts of self and ideal self were significantly related. Significant differences were found in concepts of self and ideal self between ability groups; more adequate self-concepts were associated with more able groups.

Butcher (1967) studied 120 children randomly selected from grades three through six in the six highest achieving elementary schools in Flint, Michigan. He tested them by means of the Coopersmith Self-Esteem Inventory, standardized achievement tests, and the Kuhlmann-Anderson Test of Mental Abilities. He stated there is no conclusive evidence of a relationship between a child's self-concept and his achievement; only the fourth grade students exhibited such a relationship. A closer relationship was found between IQ scores and self-concept.

Peters (1968) also concluded that self-concept, measured by the Tennessee Self-Concept Scale, was not related to over- and under-achievement. She measured over- and underachievement by the residual between actual grade point average and grade point average predicted

from IQ. If a student's grade point average deviated .44 or more (on a 4.0 scale) from predicted grade point average, he was included in the study. Twenty-eight overachievers and 28 underachievers were identified. Hall (1968) found similar results in a sample including Mexican-American students. Four hundred sixty-eight students were given the Inventory of Self-Appraisal, an objective test designed to assess correlates of achievement and nonachievement, during their senior year of high school. During their first college semester, the McClelland Thematic Apperception Test of Achievement was administered to them. A first-semester college grade point average of 2.0 on a 4.0 scale was used as the criterion of achievement. Hall found that ISA self-concept scores did not distinguish between achievers and non-achievers, but did distinguish between middle and all low socioeconomic status subjects. Further, self-concept scores differentiated the nonachieving middle and low socioeconomic status subjects. Social class was measured by the Warner Index of Status Characteristics.

Several studies have found a relationship between social class, achievement, and self-concept. Bierl and Lobeck (1961) tested 89 males from nineteen to forty years of age who were enlisted in a men's Army Reserve unit and residents of the Bronx, New York. Many of the subjects were Jewish or Catholic. Self-concept was measured by the Inter-personal Checklist on dominance and love. Social class was determined by Hollingshead's two-factor index, on the basis of the father's occupation and education. The upper class subjects were found to have significantly higher dominance scores than the lower class subjects.

Klausner (1953) administered a sixty statement questionnaire to

106 white males sixteen to eighteen years old. Each subject indicated whether each statement was or was not descriptive of him. Klausner used the Warner, Meeker, and Eells occupation and source of income tables to determine social class. He found the lower class subjects to be characterized by "reactive aggression"--hiding insecurity and inferiority behind an aggressive facade. Mason (1967) in her study of Indian, Mexican-American, and white adolescents from deprived homes and with good academic potential but under-achievement, found low scores for all groups on feeling of well being and intellectual efficiency on the California Personality Inventory. The subjects were 100 thirteen and fourteen year olds referred by their junior high schools in north-western Washington. Female responses tended to emphasize more negative and poorly motivated attitudes. Mason concluded that the females accepted their roles in life with greater passivity and little expectation of change. Coleman (1966) found that self-concept scores were positively related with parents' education.

Most research indicates that social class is related to achievement in school. Deutsch (1960) made a three-year study in a large northern city, comparing two samples of fourth, fifth, and sixth grade school children, one from a Negro slum school, and the other from a white school in a similar neighborhood. The students were given the Stanford Achievement test. Both groups were behind national norms on achievement, with the Negro group below the white group, and falling more behind in the higher grades. Curry (1962) randomly selected 360 sixth grade pupils from 2,633 students in south-western United States. The California Test of Mental Maturity and the California Achievement Test were used to measure achievement and intelligence. Curry

concluded that as intelligence decreases, the effect of social and economic conditions on achievement increases greatly.

Rea (1967) selected a non-urban sample of over 400 subjects in the fifth and sixth grades from the public schools of southern Illinois. He divided them into groups according to income. Group one included families on public assistance; group two, families not on public assistance, but with incomes below \$4,000; and group three, families with incomes above \$4,000. Rea used the California Test of Mental Maturity, the Iowa Test of Basic Skills, and an achievement motivation projective technique. Economic group membership contributed significantly to academic achievement, over and above intelligence, need achievement, sex, and race. Vogler (1968) used 108 subjects, 27 each from four different ethnic and socioeconomic status groups--upper class whites, upper class Mexican-Americans, lower class whites, and lower class Mexican-Americans. He used the Pictorial Test of Intelligence, the Metropolitan Readiness Test, the Stanford Achievement Test, and grades in reading and arithmetic as his instruments. Significant differences were found, generally in favor of the white group and upper social status. Social status contributed more to group differences in the Pictorial Test of Intelligence than did ethnic group membership. Vogler concluded that this test discriminates against children from Mexican-American and lower social status cultures in the same way as most of the existing intelligence tests.

Burnes (1968) included eight-year-old boys in her research, 20 upper middle class whites, 18 upper middle class blacks, 29 lower class whites, and 20 lower class blacks. Mean subtest scores for the upper middle class boys were substantially higher than those for the

lower class boys on the Wechsler Intelligence Scale for Children. Race had no effect. Subtest scores tended to vary together, seeming to indicate that strong and weak areas are not characteristic of either class or race.

In view of the tendency for minority groups to perform relatively poorly on conventional intelligence tests, psychologists have tried to devise a non-verbal intelligence test. An example of this attempt is the Goodenough Draw-a-Man Test (DAM), in which the child simply draws a picture of a man.⁶ Varying correlations have been found between DAM scores and scores on conventional intelligence tests. Overall the correlations have been rather low, indicating that the DAM taps a mental dimension not treated by the other tests. Correlations with the Stanford-Binet will be discussed first. Yepson (1929) studied 37 institutionalized mentally retarded boys, aged nine to eighteen, finding a correlation of .60 for the two tests; McElwee (1932) in a sample of 45 fourteen- and fifteen-year-olds, .72; Williams (1935) 100 children, aged three to fifteen, .65 to .80; Havighurst and Janke (1944) 70 ten-year-olds, .50; McHugh (1945) 90 kindergarten children, .41 to .45; Rottersman (1950) 50 six-year-olds, .36; Johnson et al., (1950) mentally subnormal children, .48; Ellis (1953) 116 children in an outpatient psychiatric clinic, aged four to nine years, .60 to .92; Vane and Kessler (1964) 280 white and Negro kindergarten children, .53 to .58. The correlations found with the Wechsler Intelligence Scale for Children include: Rottersman (1950) .38 to .47; Hanvik (1953) 25 psychiatric patients, five to twelve years of age, .18; Ellis (1953), .05 to .77.

Goodenough and Harris (1950), after a thorough review of the

literature, concluded that the moderate correlations of the DAM with other intelligence tests and measures of achievement signify that it cannot be treated as a substitute for Binet-type tests.⁷ Other scholars have attempted to determine precisely what it measures. Carney and Trowbridge (1962) administered the DAM to 37 Indian children of three age ranges. Initially DAM scores were above the norm and rose even higher in the older groups. The authors said this demonstrates that the effect of acculturation on school performance decreases as a child grows older. On the basis of cross-cultural data, Dennis (1966) concluded that a group's mean DAM score signifies its degree of emphasis upon art and/or contact with Western culture.

Several investigators have been interested in the relationship between attitudes toward school and achievement. Generally no relationship has been found between these variables, but Indian students have not been represented in the literature. Jackson and Getzels (1959) selected their subjects from midwestern private schools. The students, seventh graders through seniors, took the Student Opinion Poll. This poll is a sixty item questionnaire which includes items concerning general satisfaction or dissatisfaction with various aspects of school--teachers, curriculum, student body, and classroom procedures. The dissatisfied group included 27 boys and 20 girls; the satisfied, 25 boys and 20 girls. These two groups were compared on several tests, including the Binet intelligence test, the Cooperative Reading Test, the California Test of Personality, and standardized achievement tests. The satisfied and dissatisfied groups did not differ in general intellectual ability or in scholastic achievement. The groups were different in terms of psychological

variables; the satisfied group manifested a more adequate level of psychological functioning.

Brodie (1964) studied satisfied and dissatisfied students from a predominantly middle class high school. Satisfied and dissatisfied students were chosen from scores on the Student Opinion Poll. The dissatisfied group included 30 boys and 18 girls; the satisfied, 22 boys and 22 girls. The satisfied students scored higher than the dissatisfied on each test of the Iowa Test of Educational Development, with satisfied females generally highest, and dissatisfied females lowest. The differences for boys were small. Diedrich and Jackson (1969) gave 258 high school juniors the Student Opinion Poll. Achievement was indicated by grades in English and by the Cooperative English Test; intelligence, by the California Short-Form Test of Mental Maturity. Satisfaction with school was independent of social class, academic achievement, and intellectual ability.

Other investigators have been interested in the relationship between attitudes toward school and social class. Godbold (1968) found that eighth graders from a lower class school had better concepts of their school than those from a more affluent school. Self perception and attitude toward school were measured by two forms of Stern's Need-Press Indexes which were modified for use with eighth graders. Achievement and intelligence were measured by the Iowa Tests of Basic Skills, grade point average, and the California Test of Mental Maturity. The results also indicated that attitudes toward school do not necessarily influence the level of achievement on basic educational skills.

Neale and Proshek (1967) used a form of the semantic differential

to sample the attitudes of 350 children in the fourth through sixth grades of two elementary schools. School (1) rated low on socioeconomic indicators, while school (2) was near the median. School (2) children were significantly more positive toward "my teacher." As grade in school increased, however, the scores became significantly less positive. The children from school (1) had higher scores for "my school books" and "my school building." Girls were more positive toward "teachers," "my school building," and "my classroom." Walker (1968) used the Purdue Rating Scale of Instruction to ascertain student evaluations of teachers. Thirty junior-college teachers of various subjects were rated, and 1,447 student ratings were completed. The students tended to rate their teachers in the direction of their stated anticipated grades; the ratings did not differ by the sex or the classification of the student.

The effect of parental attitudes upon achievement and achievement related variables has been investigated, also. Coleman (1966) found that, for all groups, the parents' desires for the child's further education had the largest contribution to positive self-concept. Morrow and Wilson (1961) compared 48 high school boys making high grades with a group of 48 making average or poor grades. They matched the boys for grade in school, socioeconomic status, and intelligence; all had an IQ of 120 or above. The subjects described their family relations on sixteen Family Relations Scales, each scale containing six questions about relations with their parents. In contrast with the low and average achievers, the high achievers perceived their parents as stressing achievement.

Rolcik (1965) analyzed questionnaires completed by 4,963 junior

and senior high school students in Washington. He found a relationship between parents' interest in schoolwork and school grades. In happy complete homes, students whose parents often took an interest in schoolwork, as reported by the students, received a higher percentage of A's and B's than if the parents sometimes or never took an interest. These relationships held despite the students' level of interest. In broken homes and unhappy complete homes the relationship was not significant. Christopher (1966) selected a sample of 384 juniors and seniors, representing a rural population. He used three measures of achievement and intelligence, all obtained from the students' records. In addition, the students took the Academic Attitude Scale, developed for the study, and the Leary Interpersonal Check List. Christopher found partial support for a relationship between perceived parental valuing of achievement and achievement. The correlation held for average IQ and for girls.

Coleman (1967) wanted to determine if school-related attitudes of parents in the lower working class were similar to those of parents in the upper middle class when both sets of parents had sons who were successful in high school. Success in school was defined as being retained in school "in good standing." The sample included 52 middle class families, and 47 working class families from two relatively small mid-western cities. Interviews with the parents indicated that both groups of parents encouraged their sons to read. In addition, for both social classes parental expectations as to their sons' achievement tended to be higher than parental school-reinforcement behaviors warranted. School-reinforcement behaviors included such factors as assistance with homework, and provision for educational

experiences by the family.

Another variable which has been tied to academic achievement is the intactness of the student's home. Crescimbeni (1964) equated 92 pupils from united homes with 92 pupils from broken homes on age, intelligence, sex, grade, school, teacher, and socioeconomic level. The children were attending grades two through six in thirteen elementary schools in a Connecticut community of about 50,000. Crescimbeni gave the students the 1958 Metropolitan Achievement Tests in October of 1962 and October, 1963. In 1962 the children from intact homes were achieving .9 of a year beyond the children from broken homes; in 1963 the mean difference was one year. Rolcik (1965) found no significant difference in scholastic achievement between children from broken homes and those from unhappy complete homes. However, a significantly higher proportion of A's and B's were received by teenagers from happy complete homes than were received by those from broken or unhappy complete homes. Deutsch and Brown (1964) studied Negro and white first and fifth grade children in New York City public schools. The students took the Lorge-Thorndike non-verbal tests of intelligence, and their parents were interviewed and filled out questionnaires. Intelligence test performance was significantly related to race, socioeconomic status, and the presence or absence of a father in the home.

Sutton-Smith, Rosenberg, and Landy (1968) studied the effects of father absence for varying lengths of time on the American College Entrance Exam. The subjects were 760 sophomore members of a psychology course at Bowling Green State University. The groups of father-present and father-absent subjects did not differ on the Warner scale of socioeconomic status. In general, the father-absent group did less

well on the exam. Father absence had the greatest effect if it occurred during the first nine years of life. Carlsmith (1964) studied subjects whose fathers were temporarily absent during World War II. The sample included 881 Harvard freshmen in the class of 1963 and 307 in the class of 1964, and 272 seniors at three public high schools. The father-absent and father-present groups were compared on the Verbal and Math aptitude scores from the College Entrance Examination Board test. Early and long separation from their fathers resulted in relatively greater ability in verbal areas than in mathematics. Carlsmith suggested that these findings are consistent with sex-role identification theory. Superior ability in math reflects a typically masculine way of thinking or "conceptual approach."

Shelton (1968) chose as his subjects 162 students from a junior high school in Sioux City, Iowa. They included an equal number of one-parent and two-parent students. He used grade point averages as the measure of achievement, and Otis intelligence scores to control for individual differences in ability. The two-parent group achieved significantly better in both academic and non-academic subjects than did the one-parent group. The difference between the two groups of boys was significant at the .01 level; the difference between the girls was not significant. Students living with mothers and those living with fathers did not differ in achievement.

Cortes and Fleming (1968) selected their subjects from a list of 302 fourth grade boys enrolled in five public schools located in an economically depressed area. They chose 35 Negro boys whose fathers had been absent since the age of five or six, and 35 boys with their fathers present. No differences were found between the groups on the

Kuhlman Anderson IQ Test or on standardized achievement tests; both groups of boys were underachievers. All the boys in the sample showed disturbances in several areas of school adjustment, inferred from the Michigan Picture Test. In addition, the teacher ratings on the Rating Scale for Pupil Adjustment indicated that the father-absent subjects were more emotionally maladjusted, immature, emotionally insecure, depressed, and unhappy.

The preceding research has, in some instances, led to contradictory findings. This is in part due to the many different types of instruments used and populations studied. One can only accept the conclusions of the majority of research, with the knowledge that a new trend may develop in the future. The small number of studies concerning Indian youngsters indicate that they experience academic problems. The correlates of these problems have not been thoroughly researched, so one must largely rely upon data concerning other cultural groups. Self-concept, on the whole, tends to be positively related to achievement; the relationship being stronger for males than for females. However, since several studies did not support this conclusion, one must consider it tentative. Intelligence and self-concept seem to be positively related, also. The results cited on these variables tend to be more clear cut; in some instances IQ and self-concept were more strongly associated than achievement and self-concept. The same was true for social status and both self-concept and achievement. Lower-status subjects, almost without exception, seemed to have more negative self-concepts and to achieve less well.

Parental attitudes, with almost no exception, had a positive relationship with achievement in school. The findings concerning

student attitudes were mixed, but most studies found no relationship; students with lower IQ's and lower grades, on the whole, were as likely to view school positively as students with high grades and IQ's. The relationship of social class and attitude toward school was not clear—the findings evenly balanced between a significantly positive relationship and no relationship at all. Intactness of the student's home tends to be reflected in achievement. Students from intact homes generally achieve more adequately, especially those from happy homes. This trend was well supported in the literature review. Studies dealing with the Goodenough DAM indicate that its correlations with conventional intelligence tests and academic achievement tend to be rather low. In this study it will be used to measure the child's awareness of his environment.

FOOTNOTES

¹L. M. Coombs et al., The Indian Child Goes to School: A Study of Interracial Differences, U. S. Department of Interior, Bureau of Indian Affairs (Washington, 1958), pp. 2-8.

²Several scholars have informally discussed the possibility of discrepancies in these findings. At this point no conclusions have been made.

³James S. Coleman et al., Equality of Educational Opportunity, U. S. Government Printing Office (Washington, 1966), p. 21.

⁴Ibid., pp. 319-320.

⁵Ibid., p. 288.

⁶Florence L. Goodenough, Measurement of Intelligence by Drawings (New York, 1926).

⁷Florence L. Goodenough and Dale B. Harris, "Studies in the Psychology of Children's Drawings: II," Psychological Bulletin, XLVII (1950), p. 399.

CHAPTER II

METHODOLOGY

The research concerning academic achievement has included students of various cultural groups and age levels. Relatively few studies, however, have involved American Indians. This makes it difficult to formulate specific hypotheses concerning the characteristics of the Indian student who succeeds in school. In general, the findings indicate that he is a mixed blood from an intact home of middle class status whose parents stress academic achievement, and is characterized by a positive self-concept, positive attitudes toward white culture, and adequate intelligence. The conflicting information concerning school integration and the inadequacy of data on attitude toward Indian culture prevents the formulation of hypotheses in these areas. If self-concept is a function of the attitudes of others, as many scholars feel, the Indian child's self-esteem should be affected by his experiences with whites and with Indians (Bloom 1960, Videbeck 1960, Anderson and Safar 1967). These experiences should, in turn, be reflected in the child's attitudes toward white and Indian cultures. Therefore, one would expect a child with an adequate self-concept to have positive attitudes toward Indian culture, especially if he were a full blood.

Self-concept will be treated as a conscious awareness of who one is and how one stands in relation to others. This definition has been

termed the phenomenal self.¹ Studies have referred to the phenomenal self in a number of different ways. For example, terms such as "self-regard," "self-identification," "self-concept," "self-perception," and "ideal self" all refer to the phenomenal self because each asks a respondent to describe who he is, who he would like to be, or how he relates to others. Therefore, these terms will be used almost interchangeably as references to the phenomenal self. The phenomenal self is not intended to have the same meaning as other terms, such as Freud's concept of ego, or Mead's concepts of "I" and "Me," which fit into the category of subjective concepts, of which the individual is unaware.²

The data for this study were obtained from questionnaires, interviews, the Goodenough Draw-a-Man Test, and school records. The questionnaires included a twenty statement Likert-type instrument designed to measure self-concept, and an Osgood semantic differential which determined attitudes toward oneself, white culture, and Indian culture.

The twenty statement questionnaire was adapted from a fifty statement instrument designed by Coopersmith (1957). The assumption underlying this test is that an individual has different evaluations of himself in different situations, based upon his experiences in those areas. In addition, each person has a general and relatively consistent self picture which is most heavily influenced by his experiences in those situations significant to him. Therefore, this questionnaire included items referring to feelings about the home, schoolwork, peer relations, and general feelings of competence.³ On this instrument the student was asked to check "like me" or "not like

me" in response to each statement. A zero was given if the response indicated a negative self-concept, and a one if it indicated a positive self-concept; therefore, the possible scores ranged from zero to twenty. This questionnaire is easy to read and answer, just requiring a check in the appropriate column. In addition, it contains items to which the student can easily relate. On the other hand, the small number of possible answers may force a child to mark a choice that is unrepresentative of his feelings.

The semantic differential which was used was similar to that developed by Osgood (Snider and Osgood, 1969). The child was asked to indicate his attitudes toward "Myself," "Indians," "Tribe's Way of Life," "This School," "Teachers," and "White People's Way of Life" by checking a list of seven adjective pairs on a six-point continuum, ranging from positive to negative. The adjective pairs were Good-Bad, Worthless-Valuable, Weak-Strong, Happy-Unhappy, Lazy-Active, Smart-Dumb, and Friendly-Unfriendly. Attitude toward Indian culture was derived from the combined scores on "Indians" and "Tribe's Way of Life." The possible scores for any one item ranged from 7 to 42; a score of one was given for the most negative answer, and 6 for the most positive. The scores were categorized as high or low according to which part of the range a score occupied. Thus, for "Myself," if the child scored from 7 to 35, his self-concept was considered low; if he scored from 36 to 42 it was termed high. A score of 35 means that the child averaged a score of 5 on each adjective pair, 5 and 6 being the positive responses. The critical scores for attitude toward white culture were 14 to 70 and 71 to 84; for attitude toward Indian culture, 21 to 105 and 106 to 126.

The semantic differential has a well-formulated theoretical rationale. Considerable research has been done which indicates it can be used for attitude measurement, for investigating meanings within a culture, and for making comparisons among groups. This instrument does not require extensive reading by the subjects, and it can be scored objectively. Its semi-projective nature should enable it to probe more deeply than a direct question technique. However, in this research more children failed to complete the semantic differential than the Likert-type questionnaire. This may indicate that the former test is more difficult to answer, that more of the items were irrelevant to the students, or that its greater length caused more disinterest. In addition, the children's answers were quite similar, indicating less discrimination over scale points. The answers tended to be highly positive on almost all items, suggesting that the respondents tended to give socially acceptable answers.

The intelligence test used for this study is the Goodenough Draw-a-Man Test (DAM). Since 1926 the DAM has been used to test the intelligence of children from various cultural groups. The test is easily administered, the instructions being to "draw the best man that you can." The only instruments required are a sheet of paper and a pencil. Intelligence is determined by counting the accuracy and number of details in the figure drawn. Actually, the test measures perceptual ability, since the child is rated according to the accuracy with which he represents a man. Goodenough originally considered the DAM a culture-free measure of intelligence since no language skills are required, as with traditional intelligence tests. Since that time evidence of cultural influences on children's DAM scores has been

discovered.⁴ This prompted Goodenough to modify her position:

Considering all the evidence thus far described, it is clear that cultural differences do appear to a greater or less extent in the drawings of children. The present writers would like to express the opinion that the search for a culture-free test, whether of intelligence, artistic ability, personal-social characteristics, or any other measurable trait is illusory, and that the naive assumption that the mere freedom from verbal requirements renders a test equally suitable for all groups is no longer tenable.⁵

In this study, the DAM was given as a measure of mental alertness. Due to the generally low scores of Indian children on school achievement tests, it was decided to use a test which did not require the ability to read. Draw-a-Man scores were collected for fifth and sixth graders only, for they are considered invalid at higher age levels. All the drawings were sent to the Chicago field center for scoring according to the original Goodenough criteria.⁶ The entire set of pictures was scored by either one of two persons, and inter-rater reliability on twenty pictures was established among three scorers. The final raw score correlations among the three raters were: 0.96, 0.97, and 0.98.⁷ The scores were then converted into mental age equivalents by the author, also following Goodenough's directions.⁸

The test instruments in most cases were administered individually; at this time the interview was also conducted. Two questions from the interview schedule were selected to ascertain the child's perception of his parents' attitudes toward school. These questions were: "What do you tell your parents about school?" and "What do your parents say about school?" The child's answer was coded according to the degree to which he perceived his parents as stressing academic achievement. The categories ranged from not discussing school, to discussing non-academic subjects, to talking about academic subjects.

At the beginning of the interview the child was asked with whom he lived, the education and occupation of his parent(s) or guardian(s), and his degree of Indian blood. Due to the large number of full bloods (40 children out of 87), he was placed in one of three categories: half Indian or less, greater than half but less than full blood, and full blood. When the child was unsure of his degree of Indianness, he was placed in the half or less category, the rationale being that an individual with a small amount of Indian blood would be less aware of his Indianness.

The information concerning the child's parent(s) or guardian(s) was used to determine if the child was from a broken home and the employment status of his family. The parent with the greater occupational and educational attainment was chosen to represent the family. In ascertaining employment level the Alba M. Edwards social-economic grouping of occupations was consulted.⁹ This is the most widely used classification of workers in the United States, utilized by the U. S. Census since 1930. The first three groupings of this scale were termed middle level: professional and technical workers, business managers and officials, and clerical and sales workers. The working level included the next three groupings: craftsmen and foremen; operatives; and unskilled, service, and domestic workers. Due to the relatively large number of unemployed parents, a new category, unemployed, was added for statistical analysis. Parents' education and occupation were treated as separate variables to ascertain differential predictive ability. Parents' education was coded into the following categories: less than high school, high school, and post high school.

Academic achievement was measured by cumulative grade point averages on a four-point scale. In most cases the grades for the last two years of school work were used, and all courses were given equal credit. Grades were chosen as the criterion of achievement because they are the means by which the child is judged successful or unsuccessful in school, not only by educators, but also by the larger community. One of the major flaws of this research is that the author was unable to obtain grades for 16 of the subjects. Coupled with the usual nonresponse to some interview and questionnaire items, this decreased the sample size for several tests, causing problems in attempting to generalize the findings to a larger group.

The statistics employed in this study include: chi square, Yule's Q, analysis of variance, correlation, and the t test for difference of means. Chi square and Yule's Q both utilize frequencies of occurrence. Chi square is used to determine whether frequencies which have been empirically obtained differ significantly from those which could be expected if no relationship existed between the variables. This test is useful when a normal distribution of population variables cannot be assumed, and when two or more nominal categories are being compared.¹⁰ For example, chi square was used in this study to determine if children of a particular employment level were concentrated in one school. Yule's Q, or Kendall's Q, as it is sometimes called, is also used with nominal data, but only when two variables of two categories each are being tested. This test has the advantage of providing a measure of the degree of association, perfect association indicated by $+ 1.0$, and independence indicated by 0.0 .¹¹ Yule's Q was chosen to determine if a relationship existed between degree of Indian

blood (full blood or mixed blood), intactness of home, and several other variables.

The t test for difference of means, analysis of variance, and correlation all require an interval type of measurement. In addition, the t test and analysis of variance require the assumption that the population of the variable is distributed normally. The t test is also helpful when one's sample numbers less than 50 subjects.¹² In this study it was used to determine if the sexes differed in mean grade point average or mean IQ. The t test is actually an adaptation of analysis of variance, for the latter test measures the difference between the means of more than two samples. This test was employed in the event of three or more nominal or higher order categories which could be compared according to interval data.¹³ An example of this is education of parents and grade point average. Correlation measures the strength of association between two interval scales which measure a dependent and an independent variable.¹⁴ Therefore, it was chosen to determine a relationship between age and grade point average and between semantic differential measures or twenty statement self-concept and grade point average. The rationale underlying the use of correlation with the twenty statement self-concept scores is that many questions were employed to measure this variable, and many scores were possible, from zero to twenty. Correlation was used with the semantic differential due to its composite nature; the score for each variable was measured by seven adjective-pairs which ranged along a six point continuum. Osgood also used this test in his research.¹⁵

The sample for this study included 87 fifth, sixth, eighth, eleventh, and twelfth graders attending three schools in south-central

United States during the spring of 1969. All the Indian students at a particular grade level attending these schools were included. The fifth and sixth graders were from two schools; an all Indian rural school, school 1, and school 2, 25% Indian and located in a town of 2,500. Seven fifth and five sixth graders were from school 1, and seventeen fifth graders were from school 2. Seventeen of the eighth graders attended school 2, and twenty attended two junior high schools of about 5% Indian located in a town of 25,000.¹⁶ The three schools located in this town which were included in the study will be referred to as school 3. Three of the seniors attended school 2; the eight juniors and ten seniors attended school 3. For purposes of analysis juniors and seniors were considered as one grade level; fifth and sixth graders were treated similarly. The sample, then, included 29 fifth and sixth graders, 37 eighth graders, and 21 juniors and seniors. The particular schools which were sampled were chosen for their accessibility and for the varying proportions of Indians attending them. The fifth, eighth, and twelfth grades were studied to sample students at all age levels.

FOOTNOTES

¹Carl Rogers, Client-centered Therapy: Its Current Practices, Implications and Theory (Boston, 1951), p. 136.

²Charles W. Tucker, "Some Methodological Problems of Kuhn's Self Theory," Sociological Quarterly, VII (1966), p. 346.

³Stanley Coopersmith, "Self Esteem as a Determinant of Selective Recall and Repetition" (unpub. Ph.D. dissertation, Cornell University, 1957), p. 7.

⁴Some of these studies include: Dennis (1942); Havighurst, Gunther, and Pratt (1946); Dennis (1957); Sternlof, Parker, and McCoy (1968).

⁵Florence L. Goodenough and Dale B. Harris, "Studies in the Psychology of Children's Drawings: II," Psychological Bulletin, XLVII (1950), pp. 398-399.

⁶Florence L. Goodenough, Measurement of Intelligence by Drawings (New York, 1926), pp. 90-161.

⁷These figures were quoted in a letter from Kay F. Levensky of the Chicago field center.

⁸Goodenough, p. 39.

⁹Alba M. Edwards, Occupation Statistics for the United States, U. S. Government Printing Office (Washington, 1934), pp. 164-169.

¹⁰Hubert M. Blalock, Jr., Social Statistics (New York, 1960), p. 212.

¹¹Ibid., p. 231.

¹²Ibid., pp. 172-173.

¹³Ibid., p. 242.

¹⁴Ibid., p. 285.

¹⁵James G. Snider and Charles E. Osgood, ed., Semantic Differential Technique: A Sourcebook (Chicago, 1969), pp. 46-47.

¹⁶Population figures were based upon 1960 census data.

CHAPTER III

RESULTS AND CONCLUSION

Many of the trends in the literature were supported by this research. For this sample of children, self-concept was related to achievement in school. In addition, age was related to both self-concept and scholastic attainment. The intactness of the student's home, his parents' attitudes toward school, and their employment status also seemed to play a role in his adjustment to school.

The Goodenough Draw-a-Man scores were not significantly related to any variable. They were available for 26 fifth and sixth graders, a relatively small N, for which significance is difficult to establish. The average score for the 15 fifth graders attending school 2, which was about 25% Indian, was 90.87, with a standard deviation of 16.70. The mean score for the 11 fifth and sixth graders from the all Indian school, school 1, was 95.91, with a standard deviation of 16.67.¹ An IQ of 100 is considered typical for a particular age level. These figures can be compared with results published by Goodenough. In a group of children from southern and western United States, the mean IQ for 138 ten-year-old boys and 111 girls was 95.3 and 101.1, respectively. The standard deviations were 18.3 for boys and 15.9 for girls. The 87 eleven-year-old boys had an average score of 90.8 with a standard deviation of 18.1; the 87 girls scored 92.0 with a standard deviation of 14.9. This seems to indicate that the

mean scores of the Indian children are typical.²

Tests involving several other variables indicated no inter-relationships. These items included attitude toward "Indians," "Teachers," and "White People's Way of Life," white culture, and Indian culture. They were all measured by semantic differential, the last two being combinations of variables. Also, parental education did not yield significant results in any test, although parental employment status did.

TABLE I
MEAN SEMANTIC DIFFERENTIAL SCORES

Attitude Measured	Mean Score	N
"Myself"	33.35	77
"Indians"	33.78	73
"Tribe's Way of Life"	34.07	74
"This School"	36.48	69
"Teachers"	35.31	70
"White People's Way of Life"	34.40	75

As noted earlier, the semantic differential responses tended to be highly positive. In addition, more students failed to complete these measurements than the Likert-type questions. This is quite noticeable in Table I, which gives the mean score for each item

and the corresponding N. In comparison, the mean score for the twenty statement self-concept was 12.8, with 20 being the highest possible score. The entire 20 questions were completed by 80 subjects, and so few were omitted by the other 7 subjects that their total scores were useable. One must conclude that the semantic differential was too lengthy, causing disinterest, and that it elicited socially desirable answers.

One of the most significant findings of this research appeared in a correlation matrix consisting of grade point averages, ages, and scores on the ten and twenty statement self-concept instruments. The ten item score consisted of half of the twenty Likert-type questions, the half which dealt with the child's general attitude toward himself, or questions not involving his home, friends, or school. This ten item score was obtained to ascertain if self-concept could be measured by a shorter instrument. This correlation matrix is shown in Table II.

TABLE II
VALUES OF RHO FOR SELF-CONCEPT, AGE,
AND GRADE POINT AVERAGE

	20 Item	10 Item	Grade Point	Age
20 Item	1.000	0.988	0.942	0.959
10 Item		1.000	0.918	0.951
Grade Point			1.000	0.912
Age				1.000

This matrix applies to those students for whom these four items of information were available; this included 70 subjects. All four items are positively and highly correlated. A shorter ten item questionnaire could be substituted for the twenty item questionnaire with practically the same results. The rho value for these two items, 0.988, was the highest for the group. The ten and twenty item self-concept scores and the ages of the students were highly correlated with grade point average. A partial explanation for this result is that students who perform less well and have less self-confidence are more likely to drop out of school, so they are poorly represented at the higher age levels. The correlation of self-concept with grade point average may indicate that a low self-concept prevents the child from performing according to his potential, leading him to feel that he could not succeed anyway. On the other hand, lack of success in school might result in a loss of self-confidence, or a combination of these factors may be evident here. Probably several variables are operating, including some not covered by this research.

TABLE III

TWENTY ITEM AND SEMANTIC DIFFERENTIAL SELF-CONCEPTS

Semantic Differential	20 Item Mean	Variance	N	t	p
Low	12	11	47	2.79	.007
High	14	17	37		

The results of the t test shown in Table III indicate that an individual who scored low on the semantic differential "Myself" was significantly more likely to score low than high on the twenty item self-concept test. This implies that the two self-concept scores are, on the average, approximations for one another. If a child scored from 7 to 35 on "Myself," his self-concept was considered low; if he scored from 36 to 42 it was termed high. As indicated earlier, a score of 35 means an average response of 5 for each adjective pair; 5 and 6 are the clearly positive answers.

Several other variables were significantly related to self-concept. The children from intact homes (living with parents or parent and spouse) scored significantly higher on both the twenty item self-concept and semantic differential "Myself" tests than the children from broken homes. Of the two tests of self-concept, the semantic differential appeared to discriminate more clearly between the two groups of children. The probability level for "Myself" was .012, compared with .049 for the Likert-type instrument.

TABLE IV
SELF-CONCEPT AND INTACTNESS OF HOME

Home	Twenty Item				
	Mean	Variance	N	t	p
Not Intact	12	15	31	1.97	.049
Intact	14	15	56		

TABLE IV (continued)

Home	"Myself"				
	Mean	Variance	N	t	p
Not Intact	29	63	30	2.57	.012
Intact	34	42	54		

Males tended to have higher semantic differential self-concepts than females. The mean score for "Myself" for the 33 males was 34, while the 51 females had a mean score of 31. The result of this test, significant at the .03 level, is interesting in light of another finding. A greater proportion of females (.42) than males (.26) were from broken homes. This gives further support to the theory that self-concept can be negatively affected by the absence of a parent from the home, or, more realistically, that a broken home is a manifestation of a complex of variables which may lead to a lower self-concept. This leads to a series of questions that this research cannot answer, including how a broken home differs from an intact home, both before and after the break-up. In a broken home a sex-model is absent, giving the child less opportunity to relate to persons of this sex. This may lead to a feeling of uncertainty in social relationships, which can be incorporated into the child's self-image. Or, a child may feel rejected when a parent leaves home; however, this emotion may be just as acute during the period of bickering preceding the break-up, while the home is still intact.

In other words, an unhappy but intact home can be damaging to a child's self-concept, also. At any rate, this series of tests does not show a simple cause and effect relationship; it only indicates a possibility for further research.

TABLE V
SEX AND INTACTNESS OF HOME

Home	Male	Female	Total	Yule's Q
Not Intact	9	22	31	0.327
Intact	25	31	56	
Total	34	53	87	

Children who perceived their parents as stressing the importance of education appeared to have more positive self-concepts than their counterparts. Although this t test was not significant, it was quite close to significance ($p = .057$). Coleman et al., (1966) made a similar conclusion; for all groups the parents' desires for the child's further education made an important contribution to positive self-concept.³ In that study self-concept was measured by the child's faith in his ability to learn; in this study a more general measure of self-concept was used. Perhaps a parent's preoccupation with his child's education is a manifestation of a general concern for him. The parent who shows his concern in this area may be more likely to

show it in others. The child may interpret this interest to mean that he is a valuable and worthwhile individual.

TABLE VI
"MYSELF" SCORES AND PARENTAL ATTITUDES TOWARD SCHOOL

Parental Attitude	Mean "Myself"	Variance	N	t	p
Parents Stress Achievement	34	33	43	1.91	.057
All other Responses	31	72	41		

The category "all other responses" in Table VI includes those students who indicated that their parents discussed non-academic subjects with them, and also those who said they did not discuss school at home. When one considers that half of the students answering this question, 43 out of 84, responded that their parents feel an education is important, one realizes that a sizeable proportion of these children are being encouraged to finish school. Now, is this encouragement paying off in the child's adjustment to school? Children who perceived their parents as stressing education did have more positive attitudes toward "This School." The two groups did not differ significantly in grade point average, although the group with a more positive perception did have a higher mean grade point average, 2.18,

compared with 1.79. This gives some evidence that parental encouragement positively affects performance in school.

TABLE VII
PARENTAL AND STUDENT ATTITUDES TOWARD SCHOOL

Parental Attitude	Mean "This School" Score	Variance	N	t	p
Parents Stress Achievement	36	25	42	2.52	.013
All other Responses	31	107	40		

Another test concerning attitude toward school was significant. Children from intact homes had more positive attitudes toward "This School." However, these children did not perceive their parents as giving significantly more educational encouragement. Obviously several factors are involved here. The children from intact homes had more positive self-concepts, and this may lead them to a more optimistic view of life in general, school just being one part of it.

Upon investigating Table IX one learns that fewer children from the higher grades were from broken homes. This might indicate that the child from a broken home is more likely to drop out of school. This conclusion is supported by Table VIII, which shows that this child has less positive attitudes toward school.

TABLE VIII
STUDENT ATTITUDES TOWARD SCHOOL AND
THE INTACTNESS OF THEIR HOMES

Home	Mean "This School" Score	Variance	N	t	p
Not Intact	30	67	29	2.79	.007
Intact	36	63	53		

TABLE IX
GRADE AND INTACTNESS OF HOME

Home	5&6	8	11&12	Total	Chi ²	p
Not Intact	16	13	2	31	11.07	.004
Intact	13	24	19	56		
Total	29	37	21	87		

Parental employment status also was significantly related to grade point average. The average grade point improves as one moves from unemployed to working, and is highest at the middle employment level. Most noticeable is the score for children whose parents are unemployed; their grade point average is 1.6, less than a "C" value. However, grades were available for only 9 of these children.

TABLE X
GRADES AND PARENTAL EMPLOYMENT STATUS

Employment Status	Mean GPA	N	F	p	df
Unemployed	1.6	9	3.69	.03	2
Working	2.0	32			
Middle	2.2	20			

The analysis of variance concerning the employment status of parents and twenty item self-concept scores was .065, close to significance. Notice in Table XI the relatively lower mean self-concept for children of unemployed parents; there is virtually no difference between children of working and middle class parents. Several investigators have found a relationship between social class and self-concept, including Hall (1968), Bieri and Lobeck (1961), Klausner (1953), Mason (1967), and Coleman et al., (1966). Coleman's measure of status was the education of the parents; the other investigators included occupation in their determination of status. Logically one would assume a relationship between these two variables, considering the mercenary orientation of American culture.

The result of another analysis of variance, shown in Table XII, implies that Indian children become less acculturated to the Indian way of life the longer they attend school. However, two other statistical tests indicate that this relationship may be due to an

intervening variable, the smaller proportion of full bloods at the higher grade levels.

TABLE XI
PARENTAL EMPLOYMENT STATUS AND SELF-CONCEPT

Employment Status	Mean Self-Concept	N	F	p	df
Unemployed	11.1	17	2.81	.065	2
Working	13.5	36			
Middle	13.6	22			

TABLE XII
ATTITUDE TOWARD TRIBE AND GRADE LEVEL

Grade	Mean "Tribe" Score	N	F	p	df
5&6	36.7	26	4.16	.019	2
8	31.7	34			
11&12	29.8	18			

A finding related to the above is that full bloods had a significantly higher score for "Tribe's Way of Life" than mixed bloods.

This may be due to the greater likelihood of full bloods being knowledgeable about the way their ancestors lived, since more of their immediate relatives would be in a position to tell them. This may also indicate that full bloods are on the borderline between two cultures psychologically, since they felt just as positively toward white culture as did mixed bloods. The stresses inherent in such a position are obvious, especially when the two cultures dictate widely different actions in similar circumstances. Even if the child is unaware of the specific action acceptable to Indian culture, the very fact of his positive orientation toward it will cause him pain in the knowledge that white culture has virtually destroyed this way of life.

TABLE XIII
ATTITUDE TOWARD TRIBE AND DEGREE OF INDIAN BLOOD

Degree Indian	Mean "Tribe" Score	N	t	p
Mixed Blood	31	42	2.17	.031
Full Blood	35	36		

As grade in school increased, the proportion of full bloods decreased. This indicates that the less positive score for "Tribe's Way of Life" among older children is due to the smaller proportion

of full bloods among them. This also signifies that full bloods are less likely to finish school than mixed bloods.

TABLE XIV
PROPORTION OF FULL BLOODS BY GRADE LEVEL

Grade	Full Blood	Mixed Blood	Total	Proportion
5&6	18	11	29	.62
8	19	18	37	.51
11&12	3	18	21	.14
Total	40	47	87	

To summarize, the Indian students in this study manifested a significant relationship between grade point average and both self-concept and parental employment status. Further, children from intact homes had higher self-concepts than those from broken homes. This relationship held when tested for sex; males as a group had higher self-concepts than females, and a greater proportion of males were from intact homes. Children who perceived their parents as believing in education had higher self-concepts and more positive attitudes toward "This School" than their counterparts. They also had a higher mean grade point average, although it was not significantly higher. Children with more positive attitudes toward school were more likely to come from intact homes. In addition, there is some evidence that

children from broken homes, full bloods, and those with less positive self-concepts are more likely to drop out of school. This conclusion about full bloods must be tempered with the knowledge that they have the option of getting their diplomas at a government boarding school. Perhaps they are more likely than mixed bloods to drop out of public school, but this conclusion is only suggestive. Full bloods were more likely to feel positively toward their tribe's way of life than mixed bloods, but felt no differently toward white people's way of life.

The results of this study indicate that Indian children with various social characteristics have some difficulty adjusting to school. Students from broken homes and those whose parents are unemployed are especially likely to have problems. In addition, there is some evidence that full bloods are more likely to drop out of public school before graduating. Although self-concept did differentiate the children in this study, it is not known whether a relatively low self-concept is prior to the achievement of a lower grade point average, results from it, or a combination of these factors is at work. More than likely a complex interplay of variables operates, with no single factor leading to another. At any rate, self-concept is difficult to use as a predictor of academic adjustment. The results of this study do signify that children from broken homes whose parents are unemployed need special help, and that one form this might take is more praise of their accomplishments and less criticism of their shortcomings.

Needless to say, more research involving Indians should be carried out. Matched groups of Indians and whites should be studied to determine how they differ. Perhaps these children are no different

from their white counterparts, although the author suspects that unemployment and divorce, when added to cultural factors, create problems for these children that are more serious than those encountered by white children. Also, Indian dropouts should be studied to learn how they differ from those who finish school. If this difference is learned, potential dropouts can be pinpointed and given help, before they start making poor grades. The widespread adoption of a certain educational philosophy is especially important—that of adjusting the school to the child, not expecting the child to adjust to the school.

As far as methodology is concerned, this study indicates that a ten item Likert-type measure of self-concept will lead to approximately the same results as an instrument twice that long. The use of a shorter instrument can save time in administering the test and in evaluating the results. The semantic differential which was used differentiated groups inadequately. The questions elicited highly positive answers and had a relatively low completion rate. One can only conclude that, for this group, attitudes toward Indians and whites must be obtained in a more indirect manner.

To summarize, a larger sample of children should be studied, including dropouts, and a group of whites with similar characteristics might be chosen for purposes of comparison. An indirect measure of attitudes toward Indians and whites is needed in order to gain an unbiased picture of the child's feelings toward these two cultures. A precise and generally acceptable definition of self-concept and instrument to measure it must be established before this variable can be used for predictive purposes.

FOOTNOTES

¹These figures were quoted in a letter from Kay F. Levensky of the Chicago field center, who participated in the determination of Goodenough scores for the national study.

²Florence L. Goodenough, Measurement of Intelligence by Drawings (New York, 1926), p. 46.

³James S. Coleman et al., Equality of Educational Opportunity, U. S. Government Printing Office (Washington, 1966), p. 324.

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APPENDIX A

NATIONAL STUDY OF AMERICAN INDIAN EDUCATION

STUDENT INVENTORY A

Name _____

Code Number _____

Age _____

Sex _____

School _____

Please mark each sentence in the following way:

If the sentence describes how you usually feel, put a check () in the column, "Like Me."

If the sentence does not describe how you usually feel, put a check () in the column "Not Like Me."

Remember, there are no right or wrong answers.

THIS IS: LIKE ME NOT LIKE ME

- | | | |
|---|-------|-------|
| 1. I think I'm as good as everybody else.* | _____ | _____ |
| 2. I usually do the wrong things.* | _____ | _____ |
| 3. Things often bother me.* | _____ | _____ |
| 4. I am much like other people.* | _____ | _____ |
| 5. I find it hard to talk in front of the class. | _____ | _____ |
| 6. I do all right in school. | _____ | _____ |
| 7. No one pays much attention to me at home. | _____ | _____ |
| 8. I often feel left out of things that are going on around here. | _____ | _____ |

THIS IS: LIKE ME NOT LIKE ME

- | | | |
|--|-------|-------|
| 9. There are many times that I'd like to leave school. | _____ | _____ |
| 10. I am usually able to get the things I need by myself.* | _____ | _____ |
| 11. No one pays much attention to me at school. | _____ | _____ |
| 12. Kids usually pick on me. | _____ | _____ |
| 13. There are many times I'd like to leave home. | _____ | _____ |
| 14. I can make up my mind without too much trouble.* | _____ | _____ |
| 15. I think most people understand the way I feel about things.* | _____ | _____ |
| 16. Others have to help me in the things I need.* | _____ | _____ |
| 17. I usually do what my parents want me to do. | _____ | _____ |
| 18. I have trouble making up my mind.* | _____ | _____ |
| 19. My parents expect too much of me. | _____ | _____ |
| 20. I usually do the right thing.* | _____ | _____ |

* indicates that the item was included in the ten statement questionnaire.

APPENDIX B

NATIONAL STUDY OF AMERICAN INDIAN EDUCATION

STUDENT INVENTORY C

Name _____

Code Number _____

Age _____

Sex _____

School _____

We want to know how you feel about various people and things. Beneath the name of each person, idea, or thing you will find a series of scales of opposite words. Locate the person or idea or thing where you think it belongs on each scale.

For example, suppose you have the person, Cowboy, and beneath it the scale Good-Bad:

<u>Good</u>								<u>Bad</u>
	very	fairly	some-	some-	fairly	very		
			what	what				

If you think a Cowboy is very good, mark a cross (x) in the large circle on the left. Or, if you think a Cowboy is fairly good (but not very good) mark a cross in the middle-sized circle. But, if you think a Cowboy is only somewhat good or neither good nor bad, mark a cross in the small circle. If you think a Cowboy is somewhat bad, fairly or quite bad, or very bad, mark a cross in the proper circle on the other side of the scale. Mark only one circle.

Work as fast as possible; do not stop to review or think about your marks. We are interested in your first impressions and your real feelings.

MYSELF

GOOD BAD
 WORTHLESS VALUABLE
 WEAK STRONG
 HAPPY UNHAPPY
 LAZY ACTIVE
 SMART DUMB
 FRIENDLY UNFRIENDLY

INDIANS

GOOD BAD
 WORTHLESS VALUABLE
 WEAK STRONG
 HAPPY UNHAPPY
 LAZY ACTIVE
 SMART DUMB
 FRIENDLY UNFRIENDLY

THIS SCHOOL

GOOD BAD
 WORTHLESS VALUABLE
 WEAK STRONG
 HAPPY UNHAPPY
 LAZY ACTIVE
 SMART DUMB
 FRIENDLY UNFRIENDLY

TEACHERS

GOOD BAD
 WORTHLESS VALUABLE
 WEAK STRONG
 HAPPY UNHAPPY
 LAZY ACTIVE
 SMART DUMB
 FRIENDLY UNFRIENDLY

____ (TRIBE'S) WAY OF LIFE

GOOD BAD
 WORTHLESS VALUABLE
 WEAK STRONG
 HAPPY UNHAPPY
 LAZY ACTIVE
 SMART DUMB
 FRIENDLY UNFRIENDLY

WHITE PEOPLE'S WAY OF LIFE

GOOD BAD
 WORTHLESS VALUABLE
 WEAK STRONG
 HAPPY UNHAPPY
 LAZY ACTIVE
 SMART DUMB
 FRIENDLY UNFRIENDLY

In addition to the items shown here, the original questionnaire included "My Home" and "My Future" and five short completion sentences. These variables were not included in this thesis.

VITA

2

Mary Elizabeth Gilbert

Candidate for the Degree of

Master of Science

Thesis: THE ACADEMIC ACHIEVEMENT OF AMERICAN INDIANS

Major Field: Sociology

Biographical:

Personal Data: Born in Perry, Oklahoma, May 27, 1946, the daughter of Mr. and Mrs. Paul H. Rink.

Education: Graduated from Sumner High School, Sumner, Oklahoma, in May, 1964; received the Bachelor of Arts degree from Oklahoma State University in 1968, with a major in Social Science; completed requirements for the Master of Science degree at Oklahoma State University in May, 1971, as a Manpower Fellow.

Professional Experience: Research assistant, Department of Sociology, Oklahoma State University, 1968-1970; member, Alpha Kappa Delta and the Midwest Sociological Society.