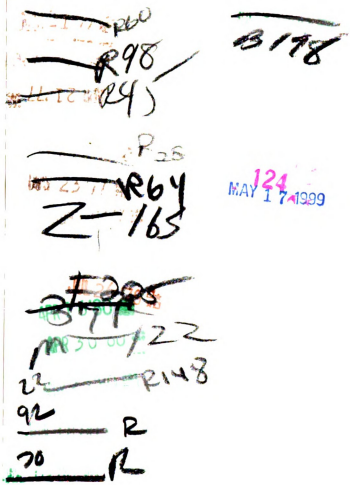
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ABSTRACT

THE AMERICAN INDIAN AND
ACADEMIC ACHIEVEMENT:
TOWARD A PROCESSUAL MODEL

By

Donna J Hess

The problem considered in this study is the level of academic achievement generally observed among American Indian children. While many researchers and educators have been concerned with this problem, several general short-comings are found in the research literature: (1) frequent absence of a theoretical basis to explain the problem in terms of suggested causes; (2) almost total neglect in assessing appropriateness of assumptions underlying the investigation and its conclusions; (3) confounding of empirical findings with conjecture; and (4) lack of coherence in conclusions resulting in many unanswered questions and isolated findings. Such factors as self-concept, sense of control, peer group norms, and teacher expectations have been related to differential achievement by minority children, but a definition of the process by which these and other factors operate and result in differential achievement is lacking in the literature.

This study suggests a tentative processual model to explain the level of academic achievement observed among American Indian children and provides a first test of that model. The model is based upon a

reading of the Indian education literature and employs a symbolic interactionist perspective. In particular, theoretical considerations from role theory, social psychological learning theory, and status expectation theory, all considered within the symbolic interactionist perspective, are employed. The model suggests that the dependent, minority status of the American Indian in the United States serves as a focus in a "hale" of academically relevant attributes, and this is ultimately related to differential academic performance via the perceived expectations and evaluations of others, academically relevant self-attitudes, and self-investment processes.

In this first test of the proposed model, attention is focused on several assumptions underlying the model and several central assertions made in the model. Assumptions examined include the following: that the self-orientations utilized in studies of non-Indian children are appropriate for the sample of American Indian children in this study; that the competitive-orientation implicit in the concept of achievement is not totally alien to these children; and that the student role is one which is valued and one from which these children derive self-esteem. Results of data-analysis as well as observation in classrooms suggest to us that these assumptions are appropriate for this sample of American Indian children.

The assertions examined in this study focus on the relationship of perceived expectations and evaluations of others with the child's self-concept of academic ability and the child's actual academic performance; and the relationship of self-investment in the student role, sense of control/sense of futility, perceived academic norms of peers, and perceived achievement orientations of teachers with actual academic

performance These relationships were examined primarily with data obtained from student questionnaires. Significant, positive correlations were found for perceived expectations and evaluations of others with self-concept of academic ability and academic achievement. However, self-concept of academic ability was not found to intervene between perceived expectations and evaluations of parents and of teachers as had been anticipated. Field observations suggest that the relationship of these perceived expectations and evaluations may be more direct as children attempt to comply with the perceived wishes of these others. Self-concept did function very well, however, as a threshold variable for academic achievement. This pattern was observed when academic achievement was measured by standardized tests and by grade point average.

While sense of control/sense of futility did relate to academic achievement in the expected manner (i.e., direct relationship between sense of control and academic achievement), self-investment in the student role did not relate to either sense of control/sense of futility or academic achievement as it had been expected to relate. A curvilinear relationship was observed, however, between self-investment in the student role and sense of control/sense of futility suggesting that those children who have made the greatest investments in the student role not only experience greatest control but also greatest futility. It is further suggested that the measure of self-investment employed here may be inadequate and that future studies need to consider the self-investment process in greater detail. In addition to self-esteem, other elements which are suspected to enter into the self-investment process are such pragmatic considerations as the

expectation that "a good job" will follow from investment in the student role and the child's assessment of his ability or inability to influence his life chances through his own efforts.

Although perceived peer orientations to achievement were generally observed to be positive, these did not relate in any significant way to academic achievement. Several possible reasons for this finding are suggested including the possibility that action opportunities are so limited that high achievement on standardized measures of achievement are not likely. Of the perceived teacher orientations examined, perceived teacher concern for achievement and teacher demand for achievement show some relationship to academic achievement. These observations add to the conviction that teachers' expectations and evaluations and the action opportunities made available as a result of these expectations and evaluations are important elements in the process under study here.

Finally, field observations suggest that there is reason to believe that "Indianness" does function as a diffuse status characteristic and that academically relevant attributes are associated with this characteristic. Perception of the status characteristic, Indian, seems to result in inference about the child's family and home life. Adjustments in expectations and action opportunities are seen as following from these inferences.

THE AMERICAN INDIAN AND ACADEMIC ACHIEVEMENT: TOWARD A PROCESSUAL MODEL

By

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For the children and their dreams --
may they live.

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CHAPTER I

INTRODUCTION

Statement of the Problem

The problem with which this study is ultimately concerned is the level of academic achievement observed among American Indian children. While it is recognized that there are individual exceptions to the general picture, the predominant pattern of American Indian academic performance is a rather dismal one. No matter what indicator of academic performance is used (e.g., achievement test scores, drop-out rates, level of education attained, etc.), the American Indian as a group is found to be far behind national norms.

The present study focuses in particular upon the academic achievement of American Indian children in the elementary grades and upon social psychological variables suspected of influencing that achievement Since the publication of the Meriam report in 1928, many researchers have been concerned with measuring the academic achievement of Indian children. In many of these studies (cf., Peterson, 1948; Coombs, 1958; Branchard, 1953; Peters, 1963; and Bryde, 1965), a pattern of achievement has emerged and has come to be referred to as the "cross-over phenomenon." The data gathered by these researchers and others show American Indian children achieving at or above national norms in the early elementary grades and then "crossing over" to achievement below national norms later in the elementary grades. Most researchers place

this cross-over period around grade four. Bryde, however, places it at grade seven or eight, a period which roughly corresponds to the onset of adolescence. Other researchers (cf., Wax, Wax, and Dumont, 1964; and Fuchs and Havighurst, 1972), however, dispute the findings on the cross-over phenomenon, suggesting that the evidence for the existence of such a phenomenon is inconclusive (Fuchs and Havighurst, 1972: 128) and that higher achievement scores in the lower grades might be an artifact of students retained in those grades and thus being exposed to primary grade work for a period of time longer than the normal number of years (Wax, Wax, and Dumont, 1964: 88). This controversy aside, however, all researchers seem to agree, at least for the later school years, that there are serious deficiencies in the academic achievement of most American Indian children.

Berry's review of the literature on Indian education (Berry, 1968) clearly indicates that many researchers have been interested in identifying the "causes" of the observed low level of achievement. Such factors as self-concept (Hobart, 1963; Bryde, 1965), sense of control (Coleman, 1966; Tefft, 1967), alienation (Bryde, 1965; Spilka, 1970), peer group norms (Wax, Wax, and Dumont, 1964; R. Wax, 1967; Wolcott, 1967), and teachers' attitudes (Wax, Wax, and Dumont, 1964; Miller and Caulkins, 1964; Parmee, 1968) have been suggested to relate to low academic achievement by Indian children. Similarly, Coleman (1966), Brookover (1969), Rosenberg (1971), and Rosenthal (1968) have found many of these same factors to be related to the academic achievement of other minority children. This suggests the possibility of a theory to explain more generally the differential academic achievement of minority children.

In spite of the many studies on Indian education, most intervention efforts have met with little success. Observing this situation, Berry comments: "Millions of dollars have been spent, and continue to be spent each year, on Indian education; the results are disappointing. ...there is widespread agreement that the Indian has not profited satisfactorily from this vast expenditure of money and effort" (Berry, 1968: 1). What appears to be lacking in the literature is a definition of the process which leads to low academic achievement. Such a definition of process would relate the identified factors to one another in a logical model showing how they ultimately affect achievement. It is the contention of this researcher that neither an understanding of poor academic achievement nor identification of appropriate points of intervention can be reached until such a processual model has been defined. If manipulable variables are identified in the model, such a definition of process could facilitate the identification of alternative points of intervention and could also assist in the assessment of the probable effectiveness of intervention at each point by tracing the consequences through the model.

Purpose of the Study

The purpose of the present study is to take the initial steps required in the development of a processual model to explain the poor academic achievement of American Indian children. Based on the Indian education literature and sociological theory, a tentative model is suggested and a first test of the model is undertaken. In this first test of the model, attention is directed to the child's perception of

himself as student, his own expectations for his academic performance, and his perceptions of others' expections and evaluations of him in the student role. It is deemed important to begin work on the model with these considerations because of their central importance to the model and because of the lack of clear evidence in the literature indicating how these factors relate to the achievement (or lack thereof) of American Indian children. Indeed, the sociological literature indicates that self-concept as student does not relate to academic achievement in the same way for all students (cf., Rosenberg and Simmons, 1971; Fuchs and Havighurst, 1972). One might question whether it is even a valid assumption that self-concept as student is an important concern of Indian students. That is, is there really self-investment in the student role? Beyond this, one might further question whether concepts such as self-concept which have been developed and used in one segment of the population can validly be applied to a culturally different segment of the population. For example, some items included in self-concept of academic ability ask the child to evaluate his academic capabilities in comparison to others. While such comparisons may be valid in those contexts wherein individual achievement and competitiveness are valued, there is some indication in the literature that such comparisons may be illegitimate for the traditional (Sioux) Indian child (cf., Macgregor, 1946: 132). These are some of the issues which need to be explored and resolved before further work can be done in developing the processual model.

The research task undertaken here, then, is the first phase of an effort to develop a processual model explaining the low academic

achievement generally observed among American Indian children. In this first phase, the focus is primarily directed to the child's self-concept as student, his own assessment of his ability and the likelihood of his success, his perceptions of others' evaluations and expectations of him and the relationship of these perceived evaulations and expectations to his self-assessment and achievement, his evaluation of his ability to influence and control his environment and hence the worthwhileness of investment in the student role, and the importance which he places on the favorable or unfavorable judgments which others (teachers, family members, and peers) make of him in the student role. While these factors are the primary foci of the study, other factors (e g., teachers' expectations, school climate, interaction patterns in the classroom, etc) have also been observed for purposes of placing the study in its situational context and also to provide direction for continued work on the development of the model.

Delimitations of the Study

While the ultimate objective of the research endeavor of which the present study is a first phase is to develop a processual model of American Indian academic achievement, the present study is limited to a subpopulation of American Indian children. Namely, data and observations for the present study have been drawn from American Indian children in grades three through eight who were in attendance in five elementary schools located on a large Plains reservation during the fall and winter of 1973. Consequently, it remains for further research to determine whether the findings and conclusions reported here are

also applicable to non-reservation Indian children as well as to Indian children who are members of other tribes which have different traditions.

The five schools from which the subjects for the present study were drawn represent three different types of schools attended by reservation Indian children -- mission schools (two schools), Bureau of Indian Affairs day schools (two schools), and public, in this case county, schools (one school). The five schools are a non-random sample of such schools and were selected on the basis of their type (i.e., mission, BIA, and public), location (nearness to or location in a small reservation town and ruralness), and accessability (access within time limits from the researcher's base of operation and along readily passable roads). Because the selection of the schools is non-random, it is possible that a broader sample of schools from the reservation may produce still further differences. Given the nature of the questions explored in the present study, however, this does not seem to be a grave concern. The sample of Indian children drawn from these schools is fairly large, 481, and it is expected that their responses will provide some fairly good indications as to the meaningfulness of the self-concept as student concept for Indian children, investment in the student role, and the significance of perceived expectations and evaluations of others for the Indian child's academic achievement.

Achievement data for the present study were derived from measures provided to the researcher from school records. These measures consist of scores, composite and reading, from standardized achievement tests and school grades. One of the five schools does not routinely administer achievement tests to its students However, the guidance counselor at

this particular school, had given achievement tests to fourth grade students in the school, and a reading teacher in the upper elementary grades had administered standardized reading achievement tests to students in grades six through eight Because this researcher had agreed, prior to arrival at the research site, to make use of whatever test scores were available and not administer additional "tests" to the children, the standardized achievement data for this one school is limited. Examination of the correlation between composite academic achievement (a summarizing score on achievement tests) and reading achievement reveals a high correlation (.934), suggesting that one might utilize the reading achievement measure to assess standardized academic achievement and thereby reduce the number of missing cases.

Data on students' perceptions, expectations, and attitudes were gathered by means of a questionnaire administered to all students in grades three through eight. The questionnaire utilized was essentially the same as an instrument developed by Wilbur B. Brookover and R. J. Gigliotti (1969) for use in their School Social Environment Study. Use of this instrument has several advantages: (1) it has been utilized extensively and has proven suitable for children in grades four through six (roughly the grade range of interest in this study); (2) it has been found to provide both valid and reliable measures of variables which are of interest to the present study; and (3) it allows for comparisons of students' responses on several centrally important factors (i.e., self-concept, self-investment, sense of control/sense of futility, etc.). This researcher administered all questionnaires and, to make

provisions for any reading difficulties among the younger children (grades three and four), the entire questionnaire was read to the respondents, allowing time for response selection.

CHAPTER II

LITERATURE AND THEORY

Introduction

The present study focuses upon American Indian children in the elementary grades. In particular, we are interested in their self-concepts of academic ability, their self-investment in the student role, their perceptions of the expectations and evaluations which "significant others" have of them as students, their sense of control/sense of futility with respect to their life chances and, particularly, with respect to their academic endeavors, their perceptions of the academic climate of the schools which they attend, and the relationship of these variables to academic achievement. The decision to focus on elementary school children follows from the fact that the elementary grades are viewed, by this researcher, as critical for the success or failure which children are likely to experience in their subsequent years of schooling. When a child has not acquired adequate reading skills, for example, in the early grades, the chances of mastering increasingly complex materials presented in written form in later years seem to be diminished. A further reason for electing to focus on elementary school children is that much of the previous research in this area focuses on high school or college students, a population quite unlike the present subjects in many ways. Hence the generalizability

of findings from those studies to elementary school children is called into question.

Before proceeding to review the theoretical foundations upon which the present research rests, I will briefly review: (1) that portion of the Indian education literature which attempts to "explain" the poor academic achievement record of American Indian children; and (2) the research literature dealing with the central concerns of the present study, namely self-concept of academic ability, self-investment, expectations and evaluations from significant others, sense of control/sense of futility, academic climate, and the relationship of these to academic achievement.

In discussing the theoretical foundations for the present research and the processual model advanced here, four theoretical areas are seen as most relevant These four are: (1) symbolic interactionism, which provides the broad general framework for the study; (2) role theory, which focuses our attention on children in their student roles; (3) social psychological learning theory, which draws upon both symbolic interactionism and role theory and which then applies basic concepts and propositions from these to the social context of the school; and (4) status expectation theory, which is seen as particularly useful in studying differential academic achievement by minority children. We will deal briefly with each of these areas, indicating its relevance to the problem under study.

Indian Education Literature

There is a vast literature on Indian education. This literature contains a wide variety of material, ranging from memoirs to empirical

studies of varying quality. Brewton Berry (1968) provides an excellent survey of this literature and serves as our guide in dealing with that portion of the Indian education literature most directly concerned with the "causes" of the poor academic performance observed among Indian students. He organizes and discusses the suggested causes in terms of eight categories -- two of which are internal to the Indian student, namely intelligence and self-concept; two of which are external to the Indian student and related to others who are generally assumed to be significant for children's academic performance, namely teachers and parents; three of which are related to the culture of the American Indian and differences with the dominant culture, namely cultural deprivation, cultural barriers, and language barriers; and one of which is concerned with the school itself, its facilities, curriculum, and social environment.

Berry gives little credence to the notion that the poor academic performance of Indian children is attributable to inferior inherent ability. He points out that as early as 1928 (cf., Jamieson and Sandiford, 1928; Klineberg, 1928), researchers began to question the validity of intelligence tests, particularly when it was observed that Indian children often performed well on some kinds (generally nonverbal types) of intelligence tests (cf., Rohrer, 1942; Telford, 1932; Fuchs and Havighurst, 1973). Berry contends that: "Since 1940 no responsible scholar has maintained that Indians are intellectually inferior" (Berry, 1968: 33). However, the debate concerning inherited intellectual ability seems far from over when one observes the controversy so recently stirred by the writings of Arthur Jensen (1969). Although the evidence

in support of the contention that intellectual ability is primarily inherited is judged to be inconclusive (see Silberman, 1970), Berry suggests, without indicating any empirical basis for his conjecture, that ".. many white people with whom Indians come into contact, including teachers, are not aware of what psychologists and social scientists have concluded regarding Indian intelligence. Or, if they are aware of it, they have refused to accept it" (Berry, 1968: 34). If this opinion were indeed true of the teachers of Indian children, it would be very important to the proposed model which suggests that (1) teachers provide action opportunities for learning which are consistent with their expectations concerning their students' capabilities and (2) children form self-concepts of ability which are consistent with those they perceive teachers, as "significant others," to hold for them and that they act in accordance with these expectations.

While Berry presents no evidence to convince us that teachers do hold opinions of this nature, recent empirical research by Fuchs and Havighurst (1973) suggests that the contrary may be the case. Although they do not specifically refer to teachers' evaluations of the inherent ability of Indian children, they describe teachers' overall attitudes toward both the teaching of Indian children and the Indian children themselves as "favorable" (Fuchs and Havighurst, 1973: 193-196, 309). In order to maintain cognitive consistency, one would expect that teachers would also evaluate their students' academic ability favorably. It is possible, however, that teachers may anticipate some upper limit to what Indian children can achieve and still maintain a generally favorable attitude toward the teaching of Indian children and toward

Indian children themselves. This, then, appears to be an unanswered empirical question in the literature.

Although teachers represent a potential group of "significant others" for children in their student roles, little research has been directed to teachers specifically. Wax and Wax provide a clue to this omission when they observe that "most investigators have managed to avoid looking at what actually occurs within schools" (Wax and Wax, 1971: 8). They argue that researchers often utilize students as subjects in administering batteries of tests and questionnaires, but they infrequently look at the school and the classroom as an on-going social system. If this is indeed the case, it is little wonder that this set of prominent actors in that social system is often overlooked. We should not take this to mean, however, that no researchers have concerned themselves with the teachers of Indian children. Berry points out: "Teachers, to be sure, are mentioned and discussed throughout the literature, usually with emphasis upon their shortcomings and inadequacies" (Berry, 1968: 36).

One of the concerns expressed in the literature is that the teachers of Indian children are often of limited background and have narrow horizons (cf., Miller and Caulkins, 1964; Wax, Wax, and Dumont, 1964). The reference of "limited backgrounds" here seems not to be so much educational preparation as social origins. For example, Wax, Wax, and Dumont provide the following description of teachers on the reservation where they conducted their study: "The teachers in the elementary grades are predominantly married women or widows, middle aged or older. Most of them are whites raised in the communities of the western plains" (Wax, Wax, and Dumont, 1964: 71). It is difficult, however, to say

how generally observations such as this apply to the population of teachers of Indian children and even more difficult to attribute poor academic achievement to this "cause" since it is unclear that these teachers really differ in their social backgrounds from teachers of dominant children who live in similar localities. Most studies, including that of Wax, Wax, and Dumont, have been carried out in a single locality, often rural, and have not examined a cross-section of teachers of Indian children. Recent population figures indicate that nearly one-half of the Indian population in the United States now lives in urban areas, and most of these are concentrated in a few large metropolitan centers (Wax, 1971). One would certainly expect teachers in such places to possess very different social background characteristics from those reported in the more limited studies. Findings from the recently completed National Study of American Indian Education (Fuchs and Havighurst, 1973) indicate that there is little difference in the general characteristics (e.g , sex, age, level of education, teaching experience, etc.) of a sample of Bureau of Indian Affairs teachers and a national sample of public school teachers. If teachers of Indian children possess background characteristics (such as level of education, teaching experience, etc.) similar to those possessed by teachers of dominant (white) children, then differences in achievement cannot be attributed to these characteristics. That is, there is no evidence that teachers of Indian children are less prepared for teaching than are teachers of non-Indian children.

Probably more attention in the literature has been directed to teacher attitudes than to any other attributes of teachers. Berry reports that "it is apparent that many of them do not hold their Indian

pupils in high regard" (Berry, 1968: 38). Negative attitudes of teachers toward Indian pupils reported in the literature most generally regard characteristics other than intelligence. One finds Indian students characterized as "hostile," "mean," "lazy," and "dumb" (Parmee, 1968) at one extreme, and by "lack of interest and incentive for education" (Kennedy, 1955) at the other, less severe, extreme. Wax, Wax, and Dumont summarize the prevalent attitude among teachers in their study with the following comment: "The most common attitude is condescension, sometimes kindly, often well-meant, but always critical" (Wax, Wax, and Dumont, 1964: 73). In contrast, to some extent, to these observations, Fuchs and Havighurst (1973) report that their results, from surveys and interviews with 979 teachers of Indian children, indicate that most teachers have generally favorable attitudes toward their students. However, they also indicate that "the typical teacher feels that Indian children are well behaved but that most are shy in class and not eager to learn" (Fuchs and Havighurst, 1973: 194). These attitudes, like teachers' opinions of their students' inherent ability, are viewed as important concerns in relation to the proposed model. As we shall discuss later, the expectations and evaluations which teachers have of their students are seen as significant not only to the self-concept which children develop through interaction with the teachers and others, but also to the action opportunities which teachers are likely to provide and subsequent evaluations which they are likely to make of the child's performance. Like teachers' opinions of Indian children's inherent ability, teachers' attitudes toward these children in the role of student appears to be an unresolved empirical question in the literature.

Other researchers look to the home environment and parents in their efforts to explain the poor academic performance of Indian students. Dean James E. Russell, quoted in the Meriam report (1928: 349), provides the rationale for this particular focus:

> However important may be the contribution of the school, the atmosphere and condition of the home are, especially in the early years of the child's life, the primary determinant in the development of the child, and, since it is the parents who determine these conditions and create that atmosphere, it is they who are of necessity the most important educational factors in the lives of their children.

In spite of this assertion, Berry finds little systematic research on the parents of Indian children and their role in their children's education. Furthermore, he adds that what research there is on this topic leaves one confused as to Indian parents' attitudes toward the education of their children.

"The word most commonly encountered is 'apathy' or some synonym therefor" (Berry, 1968: 41). It is argued that because of the apathetic attitude of parents toward education, Indian children receive little or no parental encouragement in their academic pursuits. It seems, though, that one should view this description of parents' attitudes toward education with caution for several reasons: (1) there is little empirical support for this assertion since most researchers have conducted, at best, only limited interviews with parents; and (2) what these researchers term "apathy" may, in fact, not be a lack of concern or interest on the parents' part at all, but rather, a reflection of some sort of interactional barrier between Indian parents and those in the school system.

In support of the latter thesis, Fuchs and Havighurst (1972: 194) report that "...about half of the teachers" (in their sample of teachers of Indian children) "had a rather negative picture of Indian parents." Many of the teachers in their survey perceived parents to be indifferent toward the school; some even perceived them to be hostile; and many saw the Indian parents' teachings to conflict with those of the school. Given this kind of attitude on the part of teachers, it would be little wonder if Indian parents were less than eager to become involved in their children's formal education. Wax, Wax, and Dumont (1964), who spent comparatively more time than most researchers interviewing Indian parents, also reject the "apathy" label, charging that "apathy is a convenient label to apply to people who don't happen to agree with the program that a government official or other reformer happens to be pushing." Still others (cf., Wax and Thomas, 1961; Bernardoni, 1963; Wolcott, 1967) suggest that what some researchers interpret as apathy may really be traceable to a traditional Indian norm of non-interference in the affairs of others. Whatever the case, we are again led to the conclusion that there is little empirical support for the varying assertions made about Indian parents' attitudes toward the education of their children. Inasmuch as Russell's reasoning regarding the role of parents in their children's learning appears to be sound, and in light of findings from empirical research on this question with non-Indian parents and children, indicating a strong relationship between various family background characteristics and achievement (cf., Coleman, 1966; Entwisle, 1970; Hyman, 1953; Rosen and D'Andrade, 1959), it appears that this, too, is an area in Indian education which is very much in need of further research.

As a final comment on Indian parents' attitudes toward education, Berry observes:

> Despite the apathy, hostility, and suspicion, which are undoubtedly present, the main impression one gains from a reading of the literature, however, is that Indians now place a high value upon schooling and desire it for their children. Almost every writer on Indian education testifies to this fact (Berry, 1968: 43).

Wax, Wax, and Dumont (1964) and others also suggest that this attitude most frequently is expressed from the pragmatic position that a good education will lead to a good remunerative job. Thus we are left with the question of whether or not Indian parents encourage academic achievement by their children. On the one hand, we are told that they generally do not actively involve themselves in their children's education, and, on the other hand, we are told that they highly value education and desire it for their children. How these seemingly conflicting positions are related to the children and their achievement is not clear.

Much of the literature dealing with "cultural deprivation," "cultural barriers," and "language barriers" as "causes" of poor academic performance, also looks to the family background of the Indian child. Berry observes (1968: 47): "Throughout the literature there runs the theme that the Indian child comes from a home environment which is anything but conducive to academic success." Much of this is not based on an empirically established relationship, but on "...the assumption that the Indian child has little or nothing in his background upon which the schools might build" (ibid). In fact, however, Bailey (1965) raises

some doubt about this assumption. In his comparison of good readers and poor readers in a sample of full-blood Utes, he found that "such variables as the number of books in the home, educational level of the parents, number of people in the home, number of square feet in the home, English speaking ability of the parents, age and condition of the home, the parents' attitudes toward school, are not related to reading ability."

Wax, Wax, and Dumont (1964: 67-71) blast the theory of cultural deprivation under the terminology of the "vacuum ideology." They write:

> By 'Vacuum Ideology' we mean the disposition of administrators and school officials to support policies and programs (such as the establishment of nursery schools) with the assertion that the Indian home and the mind of the Indian child are meager, empty or lacking in pattern (p. 67).
>
> However we wish to resolve this comparison between Sioux and 'usual American' homes, the important consideration is that the approach of these educators is negativistic and contrary to basic educational theory, which says it is the task of the school to inquire about where the child stands now in his development and to pitch its educational efforts accordingly Of what utility then is this Vacuum Ideology with its endless list of traits that Sioux children lack and its lack of interest in the traits that these children do have. So far as we can see, the ideology is a rationalization for the educators' defeat, as given their pathetic image of the Sioux child, then surely it must be a miracle if the school manages to teach him anything. Moreover, the Ideology also has the convenient quality that it serves to justify any activity within the school as somehow being 'educational' (p. 70).

Leacock (1960) relates the "cultural deprivation" theory to teacher expectations and self-expectations of students, both important concerns

in the present research. She observes that the cultural deprivation theory helps to justify a policy of "educational deprivation." Referring to teachers of lower-class Negro children, she observes that the teachers do not expect that they can be taught, and these low expectations are reflected in the children's low expectations for themselves.

While the theory of cultural deprivation does not appear to be a defensible thesis, there is little question that most researchers and educators perceive cultural differences between "the Indian way" and the dominant (white, middle-class) way. We use "the Indian way" cautiously here, recognizing the great variations in language and customs among the different tribes. This cultural difference is what Berry refers to when he writes of the cultural barrier. He says: "...the fact that he (the Indian child) begins his formal education with a cultural heritage which differs appreciably from that of the school's administrators, policymakers, and teachers cannot be doubted. This cultural barrier is a difficult one to surmount, and many fail to make it. It is often stated that this conflict of cultures which develops in the school situation is a major obstacle to the Indian child's academic success" (Berry, 1968: 50).

What is not at all clear in the literature, either Indian education literature or other writings and research reports on the American Indians, relates to the question of just what is the culture of the American Indians today, and, related to this, in what ways, significant to academic achievement, do "Indian ways" and values differ from those of the dominant society? Berry points out the two extremes, basically of opinion rather than empirically based conclusions, to these questions:

> There are some who maintain that the Indian today possesses a civilization of great antiquity, to which he is deeply attached, and which he is determined to perpetuate.
>
> At the other extreme there are those, including some Indians, who conclude that the old cultures have been shattered and can never be revived The culture which the Indian now possesses, they say, bears little resemblance to that of his ancestors, and is instead the product of centuries of isolation, poverty, exploitation, and paternalism (Berry, 1968: 50).

Surely one would have to admit that cultural contact, advanced so much in recent years with improved communication via the mass media, improved transportation (including networks of paved roads on reservations), and urban migration, could not but result in changes in the Indians' ways and values. Yet, the relative isolation of the reservations, the return of urban migrants to these enclaves, and the more recent emphasis on maintaining Indian ways by Pan-Indian movements, also suggest that some ways and values are persistently being passed on to new generations. It would appear, from these conflicting forces, that Indian culture today is probably not totally alien from that of antiquity, but, indeed, changed in some respects. Just what has changed, particularly in terms of values and norms viewed as important to academic achievement (e.g., competitiveness, individual vs. group achievement, individual vs. group identity, cooperativeness, particularly among kin, etc.) is not known Any assumption here would appear very hazardous, and it is suggested that this is an area in which research is urgently needed. If we are to attribute any part of poor academic performance to "cultural barriers" or value conflicts, it seems imperative that we

have some good idea of that culture and value content. At present, it does not appear that we have this knowledge.

The uncertainty is less, however, when we speak of "the language barrier." Berry summarizes the reports on English language usage by Indian students with the following statement: "Many Indian children begin their formal education with little or no skill in the use of the English language" (Berry, 1968: 55). Clearly when the child can neither understand nor be understood by the teacher in the classroom, the chances of learning through direction from or interaction with the teacher are severly limited. Just how severly limited Indian children are in their usage of the English language is uncertain. In many areas of the country, very few Indian people have any knowledge of their traditional language and English is their first and only language. While Deissler (1962) reported that Indian children from English-speaking homes outperformed those from non-English-speaking homes, Berry reports research which indicates that "even in those Indian communities where English, and English only, is the language, we still find the universal problems of low achievement, high dropout rates, absenteeism, over-agedness, etc. This strongly suggests that we should look for some more basic cause of these academic shortcomings" (Berry, 1968: 57).

A further point should be made, however, on the language barrier. Berry mentions in passing that "even though most Indian children the country over may speak English, and often English only, it is usually a 'substandard' variety of English" (ibid.). Bernstein (1961; 1964) discusses social class-related differences in language usage and consequent advantages and disadvantages in terms of "restricted" and "elaborated" codes.

> In the case of an elaborated code the speaker will select from a relatively extensive range of alternatives... If a speaker is using a restricted code then the range of these alternatives is severely limited (Bernstein, 1964: 259).

Further, Bernstein (1964: 252-253) says that an elaborated code (referred to as "formal language" in his earlier work) is characterized by accurate grammatical order, concern for logical, temporal and spatial relationships, impersonal terms, discriminative selection of terms, individual qualification, and expressive symbolism. Restricted code ("public language" in his earlier work) is characterized, generally, by the opposites of these. Thus, Bernstein suggests that the characteristics of restricted code are short, grammatically simple sentences with poor syntactical form, simple and repetitive use of conjunctions which show little concern for logical, temporal and spatial relationships, infrequent use of impersonal terms, rigid and limited use of adjectives and adverbs, frequent use of statements where the reason and conclusion are confounded, frequent use of statements and phrases calling for the previous speech sequence to be reinforced, and individual qualification implicit in the sentence organization. Bernstein sees childhood learning of elaborated code as facilitating (but not necessarily determining) a high level of achievement. The child who utilizes an elaborated code not only has a speech pattern more highly valued in the school community, but he is also seen as more able to relate to others (teachers, for example) who are not from his immediate social environment and, thus, who do not share the meanings implicit in his pattern of speech. The child who utilizes a restricted code, on the other

hand, not only exhibits a speech pattern which is less valued, but he is also seen as more restricted in his ability to relate to others who do not share his code.

In terms of Bernstein's conceptualization, the "substandard" variety of English attributed to Indian children would be viewed as a restricted code while the language pattern of dominant children who utilize an elaborated code an advantage in verbal exchange in the classroom. The Indian children who utilize a restricted code may be more limited in expressing themselves and may encounter difficulties in understanding the teacher who is assumed to utilize an elaborated code. Also the larger vocabulary characteristic of those who utilize an elaborated code as well as the more accurate grammatical structure characteristic of this code, theoretically give the dominant children an advantage over the Indian children who utilize a restricted code.

The causal relationship between academic achievement and linguistic code utilized is challenged by Morrison and McIntyre (1971) and by Schneider (1973). Morrison and McIntyre indicate that there is a lack of empirical support for such a causal relationship while Schneider points out that Bernstein developed his theory in Great Britain and that there is no certainty that his formulations are valid for the American class structure, and we might add, linguistic patterns. At any rate, inasmuch as language ability is an important skill in learning as well as in test-taking, a lack of facility with the English language would appear to work to the disadvantage of Indian children.

Employing a perspective much like that of Coleman (1966), there are many writers and researchers who look to the schools to explain

the poor academic performance of Indian children. They do not necessarily deny that teachers' attitudes leave much to be desired or that parents do not provide sufficient encouragement or that cultural and language barriers exist, but they do accuse the schools of failing to help the child overcome these initial handicaps. Stated in its most direct and clear form, Coleman offered the following as a major conclusion from the Equality of Opportunity study:

> That schools bring little influence to bear on a child's achievement that is independent of his background and general social context; and that this very lack of an independent effect means that the inequalities imposed on children by their home, neighborhood, and peer environment are carried along to become the inequalities with which they confront adult life at the end of school. For equality of educational opportunity through the schools must imply a strong effect of schools that is independent of the child's immediate social environment, and that strong independent effect is not present in American schools (Coleman, 1966: 325).

The search for school factors which may have some relationship to academic failure has led in several directions, including such factors as adequacy of the schools' physical facilities, curriculum, and social environment. Berry reports that:

> One does not get the impression from reading the recent literature that Indians generally are the victims of discrimination insofar as the physical, tangible accouterments of education are concerned. Even the most critical and observant students (of Indian education) fail to mention this as a factor in the Indian's poor academic achievement On the contrary, one reads of the adequate and modern physical facilities available (Berry, 1968: 61).

This lack of relationship between academic achievement and physical facilities concurs with Coleman's finding that variations in school facilities account for very little of the variation in achievement.

Berry reports that "discussions of the curriculum for Indian students do not loom large in the literature" (Berry, 1968: 64). Insofar as one does find such discussion, it appears to center on either of two questions: (1) whether the emphasis in the curriculum should be academic or vocational; and (2) what role Native American studies should play in the curriculum. The debate over an academic vs. a vocational curriculum has several important implications. First, the discussion and decision is generally by non-Indians indicating the continuing paternalistic attitude and unwillingness of the dominant society to allow the Indian self-determination with respect to his own life and future. Second, the debate also reflects indirectly a concern, at least on the part of some individuals, that Indians may not have the capacity for strictly academic endeavors. Third, the debate does, on the more positive side, indicate a recognition of both language difficulties encountered by Indian students in academic studies and the employment problems encountered by many Indians when they leave school. Even though recognition of these problems may be commendable, the solution to restrict education to vocational training is viewed as wanting. In terms of the present research and our tentative model, attitudes such as these and the expectations for academic performance which they connote are seen as having serious consequences for the student's self-concept of academic ability and ultimately for academic performance.

Similarly, the continuing discussion of the role of Native American studies in the curriculum has its implications. First, it suggests a

recognition of the fact that education has been, and still essentially is, oriented toward an assimilationist policy, attempting to ignore or suppress the Indians' cultural heritage and supplant it with the dominant society's orientations. Second, it indicates a desire, at least on the part of some, to change this thrust, granting some recognition to the Indians' culture and history. Third, it also suggests that some have come to the conclusion that it is important to cultivate pride in oneself as Indian for the sake of the mental health of Indian youth as well as to facilitate their academic development. Berry reports that "one searches the literature in vain, however, for reports of programs in public schools, where Indians are in attendance, designed to resolve their identity problems and to develop pride in their heritage" (ibid). This neglect of Native American studies may be an indication that there are still many, at least in decision-making positions, who are committed to the "Vacuum Ideology" with its consequent negative image and expectations of Indians.

Berry judges the social atmosphere of the school to be a more serious obstacle to the Indian child's academic achievement than any of the other school factors. This is also consistent with Coleman's finding that school environments relate more strongly to achievement than either facilities or curriculums (Coleman, 1966: 22-23). This conviction, however, does not seem to be shared by many researchers in Indian education since Berry reports that there are the few studies of the social environment of the school and the classroom. Wax, Wax, and Dumont (1964) are credited with having carried out one of the most complete studies in this area. Of all the elements in the social environment of the school, they describe the role of the peer group as very crucial.

Based largely on their observations of classrooms and their interpretations of those observations, they conclude.

> Performance of a child within the schoolroom is affected in two different ways by the attitudes of his peers. On the one hand, Indians tend to ridicule the person who performs clumsily: An individual should not attempt an action unless he knows how to do it; and if he does not know, then he should watch until he has understood. ...If a child may suffer then by performing inadequately before his audience of peers, he also has a problem if he is able to perform correctly or excellently, as this may be interpreted as collaboration with the 'enemy,' i.e. the teacher (Wax, Wax, and Dumont, 1964: 95).

There is little evidence, however, that Indian children either interpret academic achievement as "collaboration" or perceive the teacher as "the enemy." Nevertheless, the role of the peer group in controlling academic achievement among Indian youth has also been reported by others (cf., Wolcott, 1967; Miller and Caulkins, 1964; R. Wax, 1967) and seems to merit further attention.

Throughout the Indian education literature one finds the school described as an alien environment for both the Indian children and their parents (cf., Wax, Wax, and Dumont, 1964; Wolcott, 1967; Bennett, 1964; Meador, 1965). As noted earlier, many writers and researchers report that Indian parents are reluctant to become involved in this environment, and it is possible that some of this feeling of "strange-ness" is carried over by their children who are thus inhibited from performing adequately in that environment. Berry concludes from the meager literature on school environment that "...the classrooms in which Indian pupils find themselves are not conducive to their feeling of security

and acceptance nor to their scholastic achievement" (Berry, 1968: 65). Once again one must view these conclusions with caution since they have so little empirical support.

We have reserved discussion of the literature on the Indian student's self-concept until the last of this review of the Indian education literature because it is the factor which Berry considers most viable and because it is also most closely related to our own research concerns. Berry indicates that much research still needs to be done on this topic, "but there is evidence that the problem of identity is uppermost, and that he (the Indian youth) is plagued with feelings of alienation, anxiety, and inadequacy" (Berry, 1968: 66). Berry also finds that terms often used in the literature to describe the Indian's feelings about himself include "alienation, hopelessness, powerlessness, rejection, depression, anxiety, estrangement, and frustration" (ibid). Feelings such as these, evidencing a poor self-concept and a low sense of control over one's life, have been found by Coleman (1966: 319) to relate most strongly to academic achievement. Coleman reports: "Taken alone, these attitudinal variables account for more of the variation in achievement than any other set of variables. ...When added to any other set of variables, they increase the accounted for variation more than does any other set of variables" (ibid).

If Indian children do, indeed, have such negative self-attitudes (a question raised owing to the lack of evidence in the literature establishing the validity of this concept for Indian subjects), Berry inquires what the source of these attitudes might be. He finds little research in this area, but he suggests that: "In the last analysis ... his self-concept will reflect the attitudes and opinions of the dominant

non-Indian majority with which he interacts either directly or indirectly" (Berry, 1968: 67). The literature, however, does not give us any clear indications, as we have already seen with respect to teachers' attitudes, as to the dominant society's attitudes toward Indians or the degree and extent of prejudice and discrimination to which Indians are subjected. Neither do we have evidence supporting the assumed relationship between perceptions of significant others' attitudes and self-attitudes for Indian children. If Berry's suggestion is correct that the Indian's self-concept reflects the attitudes and opinions of the dominant non-Indian majority, the literature also provides us with few clues suggesting how these attitudes and opinions are transmitted to Indian children and transformed into their own self-attitudes. Thus we are forced to conclude this review of the Indian education literature with the impression that there is very little that we know with any degree of certainty about the factors contributing to the poor academic record of most American Indian students. Much needs to be done, particularly, it seems, in the area of examining carefully many blindly accepted assumptions and in the area of constructing a coherent picture of what is happening in the schools attended by Indian children.

Research Literature on Academic Achievement and Self-Concept as Student

A brief definition and discussion of "self-concept" seems warranted at the outset in this review of research literature. An individual's self'concept is seen as many-faceted. It has been defined as "that organization of qualities that the individual attributes to himself"

(Kinch, 1967: 233). It is a composite of the adjectives by which the individual describes himself and the roles in which he sees himself. The attributes most salient to the individuals' reflection on himself at any given time is seen as dependent, in part at least, upon the social situation in which the actor finds himself at a given time -- the scenario here understood to include other actors to whom the individual relates. Thus, not all attributes of an individual's self-concept are meaningful in all situations. This is an important point because not all research on academic achievement and self-concept take this into account, and such oversight is seen as leading to erroneous conclusion. The Indian education literature (see Berry, 1968: 66-70) provides many examples of this. Most studies of academic achievement and self-concept involving Indian students seem to equate "self-concept" with "self-concept as Indian" and assume that both of these can be equated with "self-concept as student." While "self-concept as Indian" may be related to a particular "self-concept as student" (a possibility explored later under Status Expectation Theory), there is no apparent basis, either logical or evidential, to assume that these concepts are equivalent.

Following Brookover's lead (Brookover, et.al., 1967: 7-8), we utilize self-concept of academic ability in this research, viewing attributes which a child assigns to himself in the student role as most relevant to his academic performance. Brookover defines self-concept as a behavioral process:

> Self-concept is defined as symbolic behavior in which the individual articulates a program of action for himself as an object in relation to others (Brookover, et.al., 1967: 8).

Deriving the specific self-concept of academic ability from this global concept, he goes on to define self-concept of academic ability:

> Self-concept of academic ability refers to behavior in which one indicates to himself (publicly or privately) his ability to achieve in academic tasks as compared with others engaged in the same task (ibid).

We must proceed with caution, however, in employing this concept with our sample of American Indian children for reasons noted earlier, namely: (1) the self-concept construct is of uncertain validity with a culturally different group such as the American Indians; (2) ethnographic reports indicate less emphasis on the individual (self) and greater emphasis on the group, generally kin, among many Indian groups (see Macgregor, 1946; Erikson, 1950; Bryde, 1965); and (3) competitiveness which seems to be suggested by "comparisons with others' has been reported to be unacceptable behavior in some Indian traditions (see sources cited above).

If self-concept of academic ability does prove to be a valid construct for American Indian students as it has for others, we must then inquire how it functions in relation to academic achievement. Brookover and Erickson (1969) suggest that self-concept of academic ability functions as a "threshold" variable which sets limits on achievement. They argue that if a child does not believe that he is able to learn an activity or successfully perform a task, he will not invest time and energy in the attempt to do so. On the other hand, even if the child does believe that he is capable of learning an activity or performing a task, he may still choose to direct his attention elsewhere and not attempt the activity or task. Thus, self-concept of academic ability is seen as a necessary, but not sufficient condition for academic achievement.

Perhaps Krathwohl, Bloom and Masia (1964) provide some clue to suggest why an individual who believes himself capable of a task may not actually engage in the task. They suggest that acceptance of a value, preference for a value, and commitment to a value are separate dimensions. Thus the child who accepts academic achievement as a positive value and one which he believes is possible for him, may prefer some other value more (peer acceptance, for example) or may not be committed to self-investment in the value Brookover (1967) suggests that such commitment may be absent because others important to the individual do not expect such commitment from him. It may also be suggested, following Coleman's observation of the relationship between academic achievement and sense of control, that commitment may be absent because the individual perceives that in the long run such self-investment is not worth his while.

Research by Brookover and Erickson (1969) and others (cf., Brookover, et al., 1967; Coleman, 1966; Johnson, 1970) show a strong relationship between academic achievement and self-concept of academic ability. "Self-concept accounts for a significant portion of achievement independent of measured intelligence, socio-economic status, education aspirations, and the expectations of family, friends, and teachers" (Brookover and Erickson, 1969: 105). In addition, Brookover and associates (1967) find support for their hypothesis that self-concept of academic ability is an intervening variable between academic achievement and perceived expectations and evaluations by others. Perceived evaluations and expectations of academic ability by others and self-concept of academic ability are more highly correlated than are self-concept of academic ability and achievement. Furthermore, first order correlations

between perceived evaluations and expectations of academic ability by others and achievement when controlling for self-concept of academic ability are smaller than the correlations between self-concept of academic ability and achievement when controlling for perceived evaluations and expectations (Brookover, et al., 1967: 118, 121).

Coleman, in an extensive study documenting "inequality of educational outcomes" (essentially achievement differentials) and correlates of these differentials, found that two factors -- self-concept as student and sense of control of the environment -- are most important in producing differential achievement.

> Of all the variables measured in the survey, including all measures of family background and all school variables, these attitudes (self-concept and sense of control) showed the strongest correlation to achievement, at all three grade levels (6, 9, and 12) (Coleman, 1966: 319).

Coleman's findings suggest that children develop attitudes toward themselves and their life chances which either inhibit or facilitate their academic performance. The observed correlations, however, do not reveal the process by which these attitudes develop and, in turn, function to produce the effect that they do on achievement. In fact, Coleman and others have indicated that it is not clear what the causal direction is in this relationship (i.e., from poor self-concept and low sense of control to low achievement or from low achievement to poor self-concept and low sense of control). Spilka and Bryde (1968: 1704) postulate a circular or interactive pattern.

Another dimension of "self-concept," examined by some researchers in relation to academic achievement, is "self-esteem." In general, self-esteem has been defined as:

> The evaluation which the individual makes and customarily maintains with regard to himself: it expresses an approval or disapproval and indicates the extent to which the individual believes himself to be capable, successful, and worthy (Coopersmith, 1967: 4-5).

Like "self-concept of academic ability" which focuses on those attributes relevant to the student role, it seems that self-esteem could also be viewed from the same perspective -- i.e., esteem for oneself as student; the evaluation which the individual makes of himself as student. Yet, like studies examining the relationship between academic achievement and self-concept, most studies concerned with self-esteem employ the concept as a global attitude toward the self rather than as a more specific aspect of the self (namely, the self as student). Brookover (1967) also criticizes those research efforts which attempt to examine the relationship between "self-liking" (one interpretation sometimes given to the self-esteem concept) and academic achievement, arguing that there is no logical reason to suppose that the extent to which an individual "likes" himself is predictive of academic achievement. On the other hand, it seems that Brookover's self-concept of academic ability construct does not exclude Coopersmith's self-esteem construct, if one considers self-esteem more narrowly as esteem for oneself in the student role. Certainly the self-concept of academic ability construct provides some assessment of how "capable" one judges himself to be of

academic endeavors and how "successful" one sees himself to be (or expects that he would be) in those endeavors.

Rosenberg and Simmons (1971) employ the global concept of self-esteem in their examination of the academic achievement of black and white students in Baltimore and the relationship of achievement to self-esteem for these students. They found that:

> (1) among elementary school children there is little difference in the average school performance (as measured by grades) of black and white children (p. 89);
>
> (2) although there is not much difference in self-esteem at the middle levels of performance, it is plain that highly successful secondary-school students score substantially higher in self-esteem (p. 92);
>
> (3) while grades make a difference for the self-esteem of children of both races, it seems to make less difference in the case of blacks (p. 92).

Summarizing their findings, Rosenberg and Simmons draw the following conclusions:

> There thus seems little question that the child's global feeling of self-worth is strongly related to his success or failure in school.
>
> In sum, it appears that one reason why secondary-school black children, despite their considerably poorer average performance do not score lower in self-esteem than whites is that performance in school makes less of a difference for their self-esteem (Rosenberg and Simmons, 1971: 92).

Here, then, are some apparently mixed findings which show a stronger and a more consistent relationship between academic achievement and global self-esteem for white children than for black children, and the

reason suggested for this difference is that school achievement is defined as less relevant to the black child's evaluation of himself than it is for the white child.

In a recent, extensive study of American Indian education, Fuchs and Havighurst (1972) -- reporting on the National Study of American Indian Education -- examined, among other things, the relationship between academic achievement and self-esteem. Since the Coleman study had only a small and unreliable sample of Indian students (see Smith, 1972: 232) and Rosenberg and Simmons (1971) were concerned only with black and white students, Fuchs and Havighurst raised the question of whether the relationship between scholastic achievement and self-esteem (observed primarily among white students) would also hold for American Indian students. Results of their study reveal "at most only a slight relation to achievement in school subjects" (Fuchs and Havighurst, 1972: 178). Examination of the instrumentation employed in the National Study of American Indian Education shows that it was the global concept of self-esteem that was measured (Fuchs and Havighurst, 1972: 138-139). They seem to confuse this with "self-concept as student" since they report that their findings contrast with those of Coleman (1966: 178). The comparison, however, does not seem to be a legitimate one since Coleman did not examine the relationship between achievement and a global self-attitude as had been done in the National Study of American Indian Education. On the contrary, Coleman examined that aspect of the self-concept which seems most relevant to education -- "self-concept, specifically with regard to learning, and success in school" (Coleman, 1966: 319). Thus while Fuchs and Havighurst's findings do not show a strong relationship between achievement and global self-esteem, the question of whether self-concept

as student relates to academic achievement in the same way as it does for other students (cf., Coleman, 1966; Brookover, et al., 1967) still remains an open question.

One additional self-construct which seems pertinent here, but which has thus far received little attention in the literature is that of "self-investment." This construct seems to be suggested by Krathwohl, Bloom, and Masia's work as well as by Rosenberg and Simmons' conclusions with respect to the self-esteem of black students. Faunce (1972) has been developing this construct with respect to occupational roles. In his work, "self investment is seen as a selective process in which the extent of investment of self in any role is dependent upon the amount of return on such investments in the past and the anticipated amount of return in the future" (Faunce, 1972: 2). In the exchange model employed with this conceptualization, Faunce hypothesizes:

> In social encounters in which self esteem is invested -- and consequently risked -- the anticipated return from the "commodity" exchange is an enhancement or reaffirmation of social status which, in turn, produces either an increment in self esteem or a confirmation of an already positive self-identity (ibid.).

This conceptualization seems to fit well with Krathwohl, Bloom, and Masia's contention that commitment to a value is a dimension which is separate from acceptance of a value. Employing Faunce's conceptualization of self-investment and Brookover's contention that self-concept of academic ability is a threshold variable, one might expect that a child with a positive self-concept of academic ability might choose not to invest (commit) himself to the pursuit of academic achievement either because he perceives the return on such an investment to not be worth

the investment or because he perceives the return from investment in other competing roles to be more rewarding. Similarly, Rosenberg and Simmons' conclusion that performance in school makes less of a difference for the self-esteem of black children may be a reflection of the fact that these children have not made an investment in the student role. This discussion of self-investment in the student role, however, is highly speculative since little research has been done in this area.

Theoretical Foundations

Symbolic Interactionism

The self-concept as well as the other self-constructs with which we have been dealing clearly have their roots in the social psychological tradition of symbolic interactionism. Blumer (1962) points out some of the basic premises of this tradition, indicating the place of several concepts of interest here in that tradition. Beginning on the most elementary level, Blumer says that symbolic interaction refers to the distinctive character of interaction as it takes place between human beings. The distinctive character of that interaction is "the fact that human beings interpret or 'define' each other's actions" (Blumer, 1962: 179). Moreover, in interpreting and defining the actions of others, the individual relates these to his own plan of action through another social object, "the self." Mead is credited with developing this concept in his analysis of what the process of "interpreting and defining" means to human action. Mead writes:

> The individual experiences himself as such, not directly, but only indirectly, from the particular standpoints of other individual members of the same social group or from the generalized

> standpoint of the social group as a whole to which he belongs. For he enters his own experience as a self or individual, not directly or immediately, not by becoming a subject to himself, but only insofar as he first becomes an object to himself just as other individuals are objects to him or are in his experience; and he becomes an object to himself only by taking the attitudes of other individuals toward himself within a social environment of context of experience and behavior in which both he and they are involved (Mead, 1934: 202-203).

This suggests that children come to perceive themselves as students and develop their self-concept of academic ability by taking the attitudes of others in that social context toward themselves. Who are these others involved in that social context? Clearly, three sets of others emerge in response to this question: other students (peers), teachers, and parents. Hence our focus on the expectations and evaluations (attitudes) of these others as they are <u>perceived</u> by the individual for, according to symbolic interactionism, it is not the actions of others as such that determine the individual's self-concept and behavior, but his <u>interpretation</u> and <u>definition</u> (hence perception) of the attitudes and actions of others.

Blumer points out that human action is <u>symbolic</u> interaction which means that man "makes indications to himself in his surroundings and thus guides his actions by what he notes" (Blumer, 1962: 180). Thus, Blumer continues:

> Instead of the individual being surrounded by an environment of pre-existing objects which play upon him and call forth his behavior, the proper picture is that he constructs his objects on the basis of his on-going activity. In any of his countless acts ... the individual is designating different objects to himself,

> giving them meaning, judging their suitability to his action, and making decisions on the basis of the judgement (Blumer, 1962: 182).

The environment of the Indian child is more than the school, and because he builds part of his social reality and plan of action in the environment outside of the school, we inquire what impact the indications from these other environments have on his self-concept in the school environment? Hence our concern with his sense of control and sense of futility with respect to his environment and life chances, for, according to these premises, the individual makes judgments about the suitability of a particular course of action based upon the indications he has made of object in his environment.

These, then, are some of the broad, basic premises from symbolic interactionism which enter into the present conceptualization and analysis of the problem under study. Other considerations from the tradition of symbolic interactionism will also become apparent as we continue our discussion of the theoretical foundations for this study.

Role Theory

Role, like self, is a concept coming out of symbolic interactionism. Mead's discussion of play and game activity as background factors in the genesis of the self seem to clearly indicate this:

> They (children) organize in this way the responses which they call out in other persons and call out also in themselves. ...A child plays at being a mother, at being a teacher, at being a policeman; that is, it is taking different roles, as we say (Mead, 1934: 214).

> When we contrast play with the situation in an organized game, we note the essential difference that the child who plays in a game must be ready to take the attitude of everyone else involved in that game and that these different roles must have a definite relationship to each other (Mead, 1934: 215).

What Mead is implying here is not only that the self arises in interaction with others, through taking the role of the other, but he also seems to imply that individuals learn social roles by giving meaning to the attitudes and actions of others, internalizing these so that they become part of one's own repertoire, and making these learned responses under appropriate circumstances.

There are two concepts which are of central importance in role theory, the concept of position and the concept of role. Theoretically, "a position is a category of persons occupying a place in a social relation" while "role is defined as the set of prescriptions defining the appropriate behavior of an occupant of a position toward other related positions" (Johnson, 1970: 44). As these terms are used in the literature, however, "role" seems to include both of these meanings. Applying this conceptualization to the school context, several positions can be identified, those of student, teacher, and administrator. Each of these positions, then, carries with it a set of prescriptions defining behavior in that position and toward the other positions. Thus there are behavioral expectations of students, teachers, and administrators. These behavioral prescriptions, roles, are learned, according to Mead, in the social interaction of individuals. This learning involves not only the learning of one's own role (e.g., student) from interpreting and giving meaning to the attitudes and behavior of others (students,

teachers, and administrators), but also the learning of the other roles in that social context (e.g., students developing expectations for other students, teachers, and administrators). A child, therefore, is seen as learning the role of student in interaction with other students, teachers, and school administrators. He learns what is expected of him through interpreting the attitudes and actions of these others. Our focus here is on the child in his student role. Therefore, we find it important to examine the expectations which children perceive others in the school have of them in their role of student.

Problems may arise for the individual, however, when he perceives others to have conflicting expectations of him as student. Suppose, for example, the child perceives teachers to expect high academic achievement while he perceived peers to expect "average" academic achievement (i.e., like that of most of his classmates). Examination of the perceived expectations of others may reveal such differences, and examination of whose opinion the child perceives as most important to him may help us understand his resolution of this problem. However, still another problem, that of role conflict, may develop. Recognizing that individuals occupy many different positions in the social structure of the community (e.g., classmate, cousin, boyfriend, etc.), it is possible that the individual will occupy positions which will have conflicting behavioral prescriptions (i.e., role conflict). Brookover and Gottlieb (1964) suggest that "a possible conflict between role expectations may exist unless the student is able to mediate the differential expectations and perform satisfactorily in both" (Brookover and Gottlieb, 1964: 455). It has been suggested earlier that a conflict in behavioral

prescriptions may arise with respect to a traditional Indian emphasis on cooperativeness (individual in the role of Indian) and the school's emphasis on competitiveness (individual in the role of student). Examination of the perceived normative climate of the school as generated by classmates and perceived expectations of teachers for competitiveness will help determine whether, in fact, such conflict is perceived. If it is found that children do perceive such conflict, this knowledge will provide some direction for future research on how the individual resolves this conflict.

Social Psychological Learning Theory

The social psychological perspective employed in this theory of learning is that of symbolic interactionism. It takes the basic concepts and premises of symbolic interactionism and applies them to learning behavior in the school. Thus, insofar as one considers this theory at all, it is of the "same family," but only a lower level of abstraction than symbolic interactionism. Johnson (1970) finds this perspective to provide many insights to the learning process. In particular he points out:

> It focuses on the individual and his interpersonal relations with members of his own and other social systems and seeks to understand and explain how an individual's thoughts, feelings, perceptions, and behavior are affected by actual or imagined interaction with other human beings (Johnson, 1970: 17).

The basic premise underlying these theoretical considerations is that learning occurs in a social milieu. Individuals, by and large, learn to behave as others with whom they interact behave. Furthermore,

it is observed that social groups develop norms which define appropriate and expected behavior within the group. Individuals learn these norms through participation in the group. Brookover and Erickson aptly summarize this perspective, deriving several propositions from these premises (Brookover and Erickson, 1969: 15-16):

> (1) Each person learns the definition of appropriate behavior through interaction with others who are important or significant to him;
>
> (2) ...through interaction with others the individual learns to behave in ways that he perceives as appropriate or proper for him;
>
> (3) ...the individual also acquires conceptions of his ability to learn various types of behavior through interaction with others whose evaluations are important to him.

Academic achievement, which may be seen as one measure of what has been learned, then occurs in a social context. Norms defining that achievement might be expected to be found in that context. Hence we inquire into the students' perceptions of the academic norms of their schools, as these norms are presented to them by peers and by teachers. Much of the research on school climates also looks into these norms, and normative differences between high and low achieving schools have been found (cf., McDill, Meyers, and Rigsby, 1967; Schneider, 1973; and Brookover, et al , 1973).

Within the social context of the school, social psychological theory directs attention to those others who are particularly important to the individual in establishing, transmitting, and enforcing norms of behavior. The theoretical literature refers to "significant others" who are

conceptualized as directly responsible for the internalization of norms and who are actually involved in the cultivation of abilities, values and outlook (Shibutani, 1967: 168) and reference groups which, from one research tradition, are conceptualized as those groups whom the individual accepts as standards of comparison for self-appraisal (Hyman and Singer, 1971: 69). From a theoretical point of view, these two seem much alike. Analytically, however, we can conceive of a set of others who serve as sources of expectations and evaluations and who, perhaps, are more actively involved in cultivating abilities, values, and outlook which conform to their expectations and evaluations ("significant others"). On the other hand, we can also conceive of another set of others who more passively serve as a standard of comparison against which the individual evaluates himself -- his abilities, values, etc. (reference group).

Consequently, it becomes important to inquire: Who are the child's significant others who influence performance in the classroom? Who is it that serves as a standard against which the child compares himself and evaluates his performance? Social psychological theory does not provide ready answers to these questions, and research on this subject has led to a variety of findings and conclusions, generally pointing to three sets of others: classmates (peers), teachers, and parents. McDill, Meyers, and Rigsby, for example, seem to suggest that teachers and classmates are the most significant others because it is they who place positive or negative valuations on intellectualism, achievement, and competition (school norms found to correlate with high achievement). Wax, Wax, and Dumont (1964), to provide a somewhat contrasting example,

clearly indicate that they see the peer group as most influential in the classroom. In their estimation, it is the peers who set the standards for the classroom and compel others to comply. The teacher, in many cases, is viewed as a "negative reference individual" -- i.e., one whose values and outlook are rejected (Wax, Wax, and Dumont, 1964: 98). In contrast to this, Rosenthal and Jacobson (1968) and Rist (1970) provide evidence to suggest that the teacher is a very significant other for children's academic performance so much so, in fact, that Rosenthal and Jacobson found that they could bring about improvements in children's performance by informing teachers that those children were about to "bloom" intellectually.

More recently, Rosenthal (1973) has proposed a four-factor "theory" to explain the earlier findings. He suggests:

> People who have been led to expect good things from their students, children, clients, or what-have-you appear to:
>
> -- create a warmer social-emotional mood around their special students;
>
> -- give more feedback to these students about their performance;
>
> -- teach more material and more difficult material to their special students; and
>
> -- give their special students more opportunities to respond and question.

Basically, what Rosenthal is suggesting is that teachers create a receptive climate in which they provide ample action opportunities to the pupils from whom they expect high achievement and give positive reinforcement for such behavior. From our interactionist perspective, we might suggest that the child observes the differential action

opportunities which the teacher provides as well as the teacher's response to his behavior and interprets these to mean that the teacher (1) believes he can perform the tasks given to him, (2) believes that he can perform better on these tasks than some, at least, of his classmates because the tasks are perceived to be more difficult, and (3) approves of his efforts in these tasks. Perhaps, the child also finds both the assignment of tasks more difficult than those assigned to "slower" classmates and the approval from the teacher to be rewarding -- sufficiently so that he invests still more of his efforts in performance of those tasks which he perceives will bring him still further rewards.

From still another research tradition, the role of the family, particularly the parents, is emphasized in determining children's achievement levels. This perspective has found considerable empirical support (cf., Sewell and Shah, 1967; Gordon, n.d.; Rosen and D'Andrade, 1959; Coleman, 1966). Since parents are important agents of socialization (hence, "significant others") for young children, it is argued that they shape the child's basic values, orientations, and definitions of self, including those related to education. Brookover and Erickson (1969), however, point out that while there is increasing literature for high school and college students, there is little literature on this subject for elementary school students. They go on to say:

> This may result from the assumption that parents are by and large the most significant others for the elementary age group and that teachers largely function as parent surrogates in the elementary classrooms. These may be accurate assumptions, but we are not in a position to verify them with very much sound research evidence (Brookover and Erickson, 1969: 68).

Because others are seen to be so important to the self-concept, the individual's plan of action, and, ultimately, academic performance, and because there is this gap in our knowledge, and even more so as it pertains to American Indian children who, according to ethnographic reports, may experience different patterns of socialization than dominant (white) children, we see identification of significant others for the child's academic endeavors to be an important concern in the present study.

Status Expectation Theory

Recent theoretical work by Berger and associates appears to hold great promise of providing a framework for many of the studies dealing with differential achievement by minority children, particularly for those studies concerned with teacher expectations. The status expectation theory essentially argues that status characteristics (e.g., age, sex, race, ethnicity, etc.) are differentially evaluated and carry with them differential performance expectations. In developing this theory, Berger and associates noted two commonalities in the small group literature focusing on the relationship between a group member's status and the distribution of participation, influence, and prestige in task-oriented, decision-making groups: "...status categories (1) always appear to imply different evaluations of individuals, and (2) always provide the basis for inferring differences in an individual's capacities or characteristics" (Berger, Cohen, and Zelditch, 1972: 242). The observation that status categories not only distinguish individuals in terms of that particular attribute (i.e., age, sex, etc.) but also in

terms of many other attributes (e.g., ability, moral character, etc.) led Berger and associates to identify these as "diffuse status characteristics" -- those status characteristics from which one infers general assumptions about individuals. One might view these diffuse status characteristics as creating a kind of "halo effect" (see Thorndike, 1920) in that they act as stimuli for other perceptions and judgments made of the individual. Jones and Gerard comment "that our impressions of others are organized around a focus, that component bits of information are not additive, that the characteristics of a person are defined in relation to one another" (Jones and Gerard, 1967: 272). Diffuse status characteristics, then, serve as the focus around which other perceived characteristics of the individual are organized. When a person encounters an individual who possesses a given state of such a diffuse status characteristic (i.e., individual of a particular age, sex, race, ethnic background, etc.), the perceiver operates in terms of his built-in map of inference and attributes other characteristics to the individual which he sees as intimately related to the initial characteristic. Often this occurs without reflection and thus unconsciously the perceiver structures the encounter.

Several research groups (cf., Cohen, Roper, and Lucero, 1971; Roper, 1971; Entwisle and Webster, 1972; Cohen, et al., 1970; and Lohman, 1970) have attempted to apply this theoretical framework to the problem of interracial interaction disability in student groups. They observed that in tasks wherein there was no basis for prior cultural belief that the status characteristic (in this case, race) was relevant to performance on the task, differential performance still resulted and related to the status characteristic. More concretely, in task-oriented, decision-making

groups, black students were more reticent and less aggressive than were white students. Experimenters have attempted to change the differential performance of the low status subjects by taking them aside and giving them positive evaluations for their efforts and by providing them with successful role models. Many of these attempts to raise the level of performance of the low status subjects have been successful. However, one might question whether in the real-life situation of the school, where the social context is often broader than that of a task-oriented, decision-making group, intervention at the level of individual student expectations is either the most effective or the most efficient approach. Again, there appears a need to focus on the broader process which leads to academic achievement.

There is reason to believe that "Indianness" functions as a diffuse status characteristic and that a whole set of academic expectations and evaluations are associated with this characteristic. Academically relevant assumptions inferred about Indian students are found in the literature. For example, Wax, Wax, and Dumont observed that "the educators believe the Sioux children are so lacking in culture that they cannot master scholastic materials ..." (Wax, Wax, and Dumont, 1964: 104). Moreover, they observed that many educators attribute this lack to the Indian home: "...the Sioux pupils are woefully lacking in knowledge, morals, and manners because of an inadequate home life" (ibid.). Berry summarizes status-derived assumptions concerning Indian children in his review of the Indian education literature: "...much of the literature on Indian education reveals the assumption that the child has little or nothing in his background upon which schools might build" (Berry, 1968: 47).

Perception of the attribute "Indianness" (whether by physical appearance, language, place of residence, or whatever) seems to serve as a stimulus evoking many other assumed attributes -- e.g., inadequate homelife, cultural deprivation, inability to master scholastic materials, non-productive members of society, etc. Coombs (1958) has even suggested that the "halo" about "Indianness" is relative to the "degree Indian" (i.e., "full-blood" vs. "mixed-blood"). He observed that the public schools, where the average achievement was highest, had the smallest proportion of "full-blood" students while mission schools, which generally showed the lowest average achievement, had the largest proportion of "full-blood" students (Coombs, 1958: 96-97). Coombs realized that "Indian blood" is not so much an indicator of socioeconomic status and of cultural and social differences. In general, "mixed-blood" students (who performed better on achievement tests than did "full-blood" students) are culturally and socially more assimilated than the "full-blood" students. Coombs argues that the "mixed-bloods" perform better on achievement tests than do the "full-bloods" precisely because of their behavioral and attitudinal patterns which more closely approximate those of the dominant society. However, there is still room for speculation as to how this "cultural and social difference" operates to the benefit of the "mixed-bloods" and the detriment of the "full-bloods."

From the perspective of the status expectation theory, it might be argued that "mixed-blood" and "full-blood" denote two states of the diffuse status characteristic, "Indianness." The state, "full-blood," then would be the extreme of "Indianness." In physical appearance, language, place of residence, etc., the "full-blood" students would more readily be identified with the diffuse status characteristic and

would elicit the other assumed attributes pointed out (from the literature) earlier. "Mixed-blood" students, on the other hand, would probably be less likely to be characterized by the same set of attributes because they would less likely be identified with the diffuse status characteristic -- they may not "look Indian;" they may not speak or understand the Indian language; and they would probably live in a less remote area and in a structurally better house. As Coombs points out, the "mixed-blood" students more closely resemble the white, culturally and socially. From a teacher's point of view, then, the "mixed-blood" student might more closely fit the teacher's "model of academic success" for this model has been observed (see Rist, 1970; Useem, 1947) to correspond to white middle-class values and norms.

Earlier it was suggested that the often studied "self-concept as Indian" might be considered in relation to "self-concept as student." If, in fact, self-concept as Indian is correlated with self-concept as student such that a high score on one means a low score on the other, it could mean that the children have learned and internalized the set of attributes associated with the diffuse status characteristic, "Indianness." To think of oneself as Indian, then, would also imply to think of oneself as "poor student." If these two concepts are so associated and they are learned ways of perceiving, then significant others in the child's social milieu must also see these as associated. The literature at present, however, gives no evidence that these two concepts (self-concept as student and self-concept as Indian) are associated for either the child or for others in his social milieu. This is a question which is explored in a limited way in the present study in that

we informally look at teachers' attitudes toward Indians generally and toward their Indian students more specifically. It remains for future research, however, to investigate the relationship between self-concept as student and self-concept as Indian.

Summary of the Literature and Theoretical Foundations

Many "explanations" have been offered for the American Indian's poor academic performance, and many of the suggested "causes" (e.g., language barriers, teachers' attitudes, alienation, etc.) may indeed contribute to this problem. However, most of the "explanations" fail to satisfy us because they (a) lack convincing empirical support, (b) operate under assumptions which may be false, or (c) both of these. In addition, the Indian education literature dealing with "causes" of academic failure prove unsatisfactory because it lacks any kind of unity. One finds many disparate findings, many no doubt with some grain of truth, but no effort to "put together the pieces of this puzzle" is evident in the literature.

Other research (i.e., with non-Indian subjects) on differential achievement has called our attention to the relationship of a student's self-concept of academic ability to academic achievement. There is empirical support for the contention that self-concept of academic ability derives from the individual's perceptions of the evaluations and expectations which others make of him in the student role as well as a theoretical basis for this relationship. The self-concept of academic ability is further seen as both an intervening variable (one intervening between expectations and evaluations of significant others and academic achievement) and a threshold variable which sets limits on achievement. Caution

is to be observed, however, in utilizing this concept with American Indian students because we have no certainty that it is a valid construct for this culturally-different population, particularly since items in the self-concept of academic ability measure ask the student to compre his abilities with that of his classmates, indicating an orientation to competitiveness. Ethnographic reports indicate, however, that such an orientation may be alien and even unacceptable in the tradition of some American Indians and that cooperativeness may be more highly valued. Assessment of the appropriateness of this construct with a sample of Indian students is, therefore, one of the concerns of the present study.

Utilizing theoretical insights from symbolic interactionism, role theory, social psychological learning theory, and status expectation theory, we propose to begin the task of weighing the evidence in support and against the many assertions on the problem of academic failure by American Indian students. We also attempt to take some initial steps in the direction of bringing together findings and conclusions in a processual model indicating how various factors operate and ultimately lead to academic failure.

Symbolic interactionism provides the broad general framework for this effort. It calls our attention to the fact that human interaction involves not simply organisms reacting to one another's behavior, but involves human beings interpreting and defining each other's actions. It points out that individuals derive their own self-concept and plan of action from their perceptions and interpretations of the attitudes and behavior of others.

Role theory focuses our attention on children in their student roles. It points out that individuals learn roles, which are prescriptions for

the behavior of individuals in particular social positions, in interaction with others The child, therefore, is seen as learning the role of student (i.e., behavior appropriate to students) through interaction with others in the social context of the school (e.g., other students, teachers, and administrators). Role theory also calls our attention to problems which may arise when individuals receive conflicting expectations of them from others and when they have two or more highly valued roles with conflicting behavioral expectations.

Social psychological learning theory, in this interpretation, draws on many of the general formulations from symbolic interactionism and role theory and applies them in the social context of the school. Thus learning is seen as occurring in a social context. Individuals learn the behavior of others in that context as well as the norms defining appropriate behavior for themselves in that context. Significant others and reference groups are seen as important in these processes. The normative climate of the school -- as created by classmates and teachers and as interpreted by the child -- is also seen as defining behavioral expectations for the individual.

Finally, status expectation theory is examined in an attempt to relate differential expectations and performance to the diffuse status characteristic of "Indianness." A diffuse status characteristic is seen as functioning as a focus for a "halo" of other attributes imputed to an individual perceived as possessing the diffuse status characteristic. Here we are particularly concerned with the possibility that "Indianness" serves as a stimulus for the attribution of negative, academically-relevant characteristics.

Tentatively Proposed Model

The model presented in Figure 1 below is only tentatively proposed and serves as a heuristic device for this study. Only one small part of the model is tested in this research, as a first step in assessing the viability of the explanation suggested by the model This first test, however, is seen as important because it examines some of the basic assumptions of the model as well as some of its central assertions.

The tentative model takes departure from the Status Expectation Theory developed by Berger and associates. The model suggests that an important process leading to the low academic achievement of American Indian children begins with the very fact that these children occupy a social status to which negative, academically-relevant attributes are assigned. As a consequence of these assigned attributes, certain behavioral expectations are evoked.

Following from the teacher's expectations for the academic achievement of pupils are two immediate consequences: (1) differential action opportunities (e.g., assignment to different classroom groups, assignment of different classroom tasks, etc.); and (2) evaluations of behavior (e.g., perception of the extent to which children conform to expectations, leading to such labels as "fast learners," "slow learners," "well-adjusted," etc.).

The tentative model suggests that differential evaluation reinforces teachers' expectations for their pupils and their assignment of pupils to differential action opportunities. Via both verbal and non-verbal cues, children perceive the differentials operating in the classroom. Perception of these differentials are interpreted and given meaning.

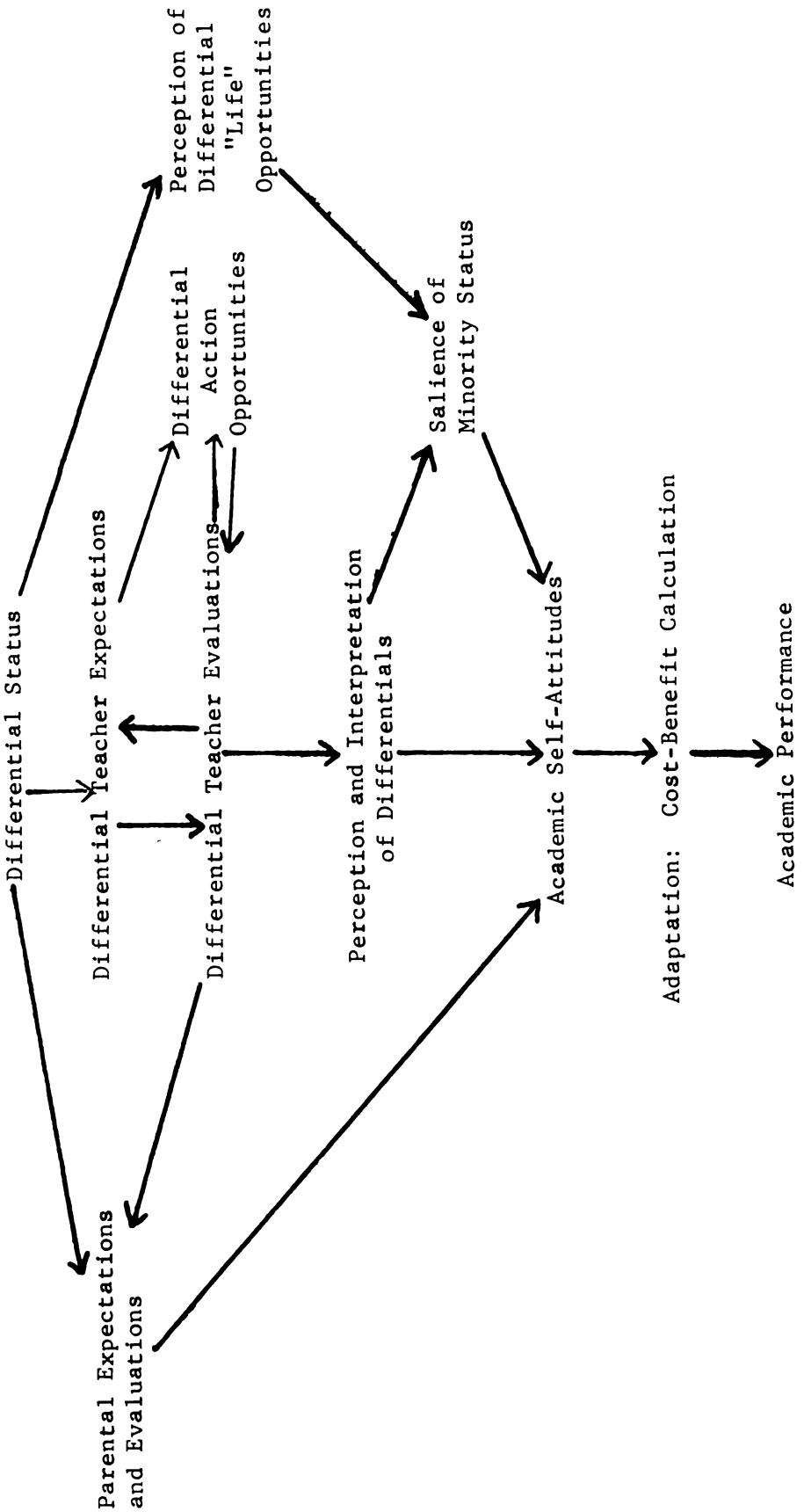

Figure 1. Tentatively Proposed Model: Status-Expectation-Performance.

From these interpretations and meanings, then, the child, according to symbolic interactionism, derives his self-concept of academic ability and other academically-relevant self-attitudes. Teachers' evaluations, through classroom responses to the child and reports sent home with the child, are also seen as influencing the expectations and evaluations which peers and parents have of the child's academic ability.

In addition to what teachers tell them about their children's academic ability and prospects, parents are also seen as influenced by expectations derived from their own status (i.e., the extent to which they have internalized the "halo" of attributes associated with the diffuse status characteristic, "Indianness"). The expectations and evaluations of parents and peers, insofar as the child regards them as significant others with respect to his academic endeavors, are also seen as interpreted by the child and incorporated into his self-attitudes with respect to education.

The model also indicates the influence of the child's perceptions of the social environment outside of the school on his academic self-attitudes and ultimately academic performance. Perception of differential "life" opportunities is seen as related to the salience of minority status for the child. These considerations then enter into his judgment concerning the worthwhileness and the appropriateness of investment in the student role for him.

Although not yet fully developed, it is finally suggested that some sort of adaptation to the school's demands (for attendance, for performance, etc.) occurs utilizing, perhaps, a cost-benefit calculation. This would follow from both the exchange model of self-investment suggested

earlier and the contention that self-concept of academic ability is a necessary, but not sufficient condition for academic achievement, meaning that the individual may choose not to achieve even though he believes he is able to do so.

CHAPTER III

PROCEDURES AND METHODOLOGY

Hypotheses and Questions Studies

In this first test of the tentatively proposed model, both an exploratory and an hypothesis-testing approach are deemed necessary. A prime concern is to ascertain whether self-concept as student is indeed a viable concern of American Indian students since much of the theory on which this research and model are based rests on this assumption. In order to assess self-investment in the student role, several questions are asked of students about their perception of the importance of being a good student, their perception of the importance of school more generally, and the significance for them of evaluations of them as students. The meaningfulness of the self-concept of academic ability construct for American Indian students is also examined in several ways: (1) by examining the inter-item correlation matrix of the items composing this construct and comparing it with that of previous studies with non-Indian subjects; (2) by examining, in particular, the items connoting "competitiveness" since this is one of the important questions about the appropriateness of this construct for American Indian subjects; and (3) by examining the correlations between self-concept of academic ability with perception of the expectations and evaluations of others as well as with academic achievement to see whether

this construct functions in the same way as it does for non-Indian subjects (from previous studies).

Also of concern to the present study is the identification of the child's significant others in relation to his self-concept of academic ability and academic performance and some assessment of the relative importance of each of several potential significant others, namely parents, teachers, and peers. Several sets of questions are directed to the students asking: (1) the significance, for them, of evaluations of them as students from these three sources; (2) perceived interest on the part of others in their school work; and (3) the significance, for them, of the opinions of these others more generally.

Since the tentatively proposed model takes as its point of departure, the status expectation theory developed by Berger and associates, a number of observations in the school environment have been viewed as important. First, we wanted to observe whether there was any indication that "Indianness" serves as a diffuse status characteristic for teachers and, if so, how this is reflected in their expectations for their students We also sought to inquire whether teachers have differential expectations of children with different states of the diffuse status characteristic (i.e., "mixed-blood" vs. "full-blood" children) and whether these resulted in assignment to differential action opportunities. Second, we wanted to observe whether and how these differential expectations, if they do exist, are communicated to children. If possible, we also wanted to inquire how teachers respond to children who do not conform to their expectations (i.e., who do not fit the perceptual map organized about the diffuse status characteristic). Third, we wanted to observe whether there were any indications that children have internalized

this same perceptual map which takes the diffuse status characteristic of "Indianness" as the focus for academically relevant attributes.

Apart from these questions, the first test of the tentatively proposed model calls for an examination of the viability of several central assertions, namely that: (1) the child's self-concept of academic ability (if it proves to be an acceptable construct) is derived from the child's perceptions of the expectations and evaluations which significant others make of him; (2) positive self-concept of academic ability is a necessary condition for high academic performance; and, by derivation from (1) and (2), (3) perceived evaluations of significant others are reflected in actual academic performance. These, then, yield several hypotheses for testing:

H_1: Self-concept of academic ability varies directly with perceived evaluations from significant others.

Self-concept of academic ability is an index determined by several questions asking the child to assess the kind of student he is. As indicated earlier, several questions are designed to identify academically relevant significant others. Several additional questions elicit the child's perceptions of the evaluations and expectations of him as student by these others.

H_2: Academic achievement varies directly with self-concept of academic ability.

Academic achievement is measured with achievement data from the school records. Two kinds of achievement data examined include scores from standardized achievement tests and school grades.

H_3: Academic achievement varies directly with perceived evaluations and expectations from significant others.

The more interesting test anticipated here is the relationship, if any, between achievement test scores and perceived teacher evaluations since school grades may be one source of the child's perception of teachers' evaluations.

Each of these hypotheses finds varying support in the literature. If self-concept of academic ability serves as an intervening variable, as Brookover and associates suggest, (with supporting data from their studies of non-Indian subjects) then we should also observe that: (1) the correlations between perceived expectations and evaluations of significant others and self-concept of academic ability are higher than the correlations between self-concept of academic ability and achievement; and (2) the correlations between perceived expectations and evaluations of significant others and achievement are reduced when controlling for self-concept of academic ability.

An important question here, as pointed out several times previously, concerns the relationship between these factors for the "culturally and socially different" Indian child. The literature seems to be less clear on the relationship between academic achievement and self-attitudes for minority children than it is for majority (white) children (cf., Coleman, 1966; Rosenberg and Simmons, 1971; Fuchs and Havighurst, 1972).

The social context of education (both in terms of the larger community and the school community) for Indian children as well as the theoretical perspectives discussed earlier can be used to generate several additional hypotheses:

H_4: Investment in the student role declines as the child's sense of control over his environment declines and sense of futility increases.

Sense of control/sense of futility is a factor found in the research work of Coleman (1966) and Brookover, et al. (1973) to be correlated with academic achievement. Coleman suggests that it may be an important factor for minority children. Factor analysis of the data will help determine if the same items compose a similar factor for Indian students. It might further be anticipated that the relationship between self-investment in the student role and sense of control/sence of futility is one which will be greater for the upper elementary grades when children might be expected to be more aware of the lack of employment opportunities in their immediate (reservation) community and the dependent minority status of the Indian in the larger (state or national) community.

H_5: Academic achievement declines as both investment in the student role and sense of control declines and sense of futility increases.

To the extent that the "cross-over phenomenon" exists, as it has been reported in a number of earlier studies, this hypothesis would suggest a possible reason for that phenomenon's observation, particularly if, as in H_4, it is more pronounced for upper elementary students. Perception that one cannot influence his life chances through his own actions and efforts is seen as leading to a redefining of the student role as one which is not relevant or worthwhile for the individual. Hence the decline in investment in the student role. Decline in investment, in turn, is

seen as meaning less time and effort directed to behavior expected of one in the student role, hence the decline in academic achievement.

> H_6: Academic achievement varies directly with school climate in which students value academic achievement, there is a moderate amount of competitiveness, and both teachers and students are perceived as caring about academic achievement.

This hypothesis follows from some of the very basic premises of social psychological learning theory, namely that individuals learn and respond to group norms and that individuals learn the behavior of others around them. In addition to observations, several questions are directed to students to obtain a measure of their perception of the school climate.

In summary, results of this study are expected to show that there is reason to believe that, in the perception of many educators who work in Indian schools, "Indianness" does represent a diffuse status characteristic which serves as a focus for attributes relevant to academic achievement. Children who are more readily identified with this diffuse status characteristic, i.e. those identified as "full-blood" physically, linguistically, or by place of residence, will be expected (by teachers) to conform to the model of students derived from the image of "Indian" and its related "halo." Children develop this perceptual map and learn corresponding expectations from significant others in their school environment (e.g., from teachers, peers, and parents). Consequently, children who perceive that significant others perceive them as poor students will have low self-concepts of academic ability and these will relate to the academic achievement. As children grow older, i.e., reach the upper elementary grades, they will perceive more acutely the differential

status occupied by the American Indian in this society. As a result, their self-investment in the student role and their sense of control of the environment will decline while their sense of futility will grow. These will have predictable consequences for their academic achievement, i.e., poorer achievement. School climates in which academic achievement is at a low level will also be characterized by a lack of emphasis on academic achievement and by a sense of futility, reflecting the children's perception of their situation.

Research Design

As we have already indicated, both an exploratory and an hypothesis-testing approach were deemed appropriate for this study. Our research strategy combines a field study with survey research. Kerlinger points out that exploratory field studies generally have three purposes: "to discover significant variables in the field situation, to discover relations among variables, and to lay a groundwork for later, more systematic and rigorous testing of hypotheses" (Kerlinger, 1964: 388). It appears that our objectives in this study are, in part at least, consistent with these purposes. We entered the field with a number of variables in mind, but wanted to ascertain whether they were really appropriate to the situation of the American Indian. Thus the first purpose of exploratory field studies is particularly consistent with our concern for "self-concept of academic ability" and the potential diffuse status characteristic, "Indianness." We also sought to discover the relations among variables -- particularly among observations that would indicate that "Indianness" serves as a focus for academically-relevant attributes. Finally, our entry to the field clearly indicated the objective of laying

a groundwork for later, more systematic and rigorous testing of hypotheses As we have stated previously, the present study represents only the first step of what is to be a continuing effort to develop a processual model explaining the academic failure of so many American Indian students.

A survey approach was combined with field methods because we wanted to collect data on a fairly large number of variables from a sizable sample of American Indian children. Observation in the field would only permit access to a limited number of variables and children and would not allow the kinds of comparisons desired (between an Indian sample and non-Indian samples in other studies). A survey utilizing a questionnaire was judged to be the best strategy for obtaining this amount of data as well as for obtaining quantifiable data to test the specific hypotheses posed in this study.

Sample

The sample for this study includes 481 American Indian children enrolled in grades three through eight of five elementary schools located on a large reservation in the Plains of the United States. Because we wanted to examine our theoretical constructs and hypotheses with respect to American Indian children with some diversity of environment, we chose five schools representing the three types of schools attended by reservation Indian children. Thus, our subjects are drawn from two mission schools, two day schools operated by the Bureau of Indian Affairs, and one public (county) school. Our sample of third through eighth grade students includes the total enrollment of those grades in the five schools. As a result of the survey of all students in those six grades, we also have data on twenty-nine non-Indian (white) children also attending those five

schools. (These twenty-nine students are not included in the N of 481 reported above.) Although this number (of non-Indian students) is small and hence not very reliable, it does allow for some interesting additional comparisons.

Instrumentation

The questionnaire employed in this study (see Appendix A) is essentially an adaptation of a research instrument developed in 1969 by W. B. Brookover and Richard Gigliotti for use in their study of school social environments. The adaptation of this instrument essentially consisted of deleting items not of particular concern to the present study and rephrasing of several items to take into account the speech patterns of the children with whom this instrument was to be used. This researcher undertook that task after some months in the field when she had acquired some familiarity with the speech patterns of the area. In addition, several items from the original survey were not included or were altered because they did not appear to be applicable to the situation. For example, one question in the original survey asked: "How many students in this school try hard to get a good grade on their weekly tests?" After a period of observation, this researcher found that "weekly tests" were not commonly given in the schools in this study. Hence, reference to "weekly tests" was deleted from the questions. There were also a few additions of items from an instrument developed by F. B. Waisanen in collaboration with Donald A. LaPointe and Patricia Flood for use in a study of minority status and self-esteem. Like Brookover and Gigliotti's questionnaire, the instrument developed by Waisanen, et al, is designed for use with elementary school children. The latter

survey instrument, however, is particularly designed for use with American Indian children in the Upper Peninsula of Michigan. Hence our utilization of items from these instruments will yield a body of data which may be used for purposes of comparison.

Definition and Operationalization of Variables

Although data were gathered on approximately ninety items (see Inventory of Variables in Appendix B) and refinement of these items led to the construction of fourteen indices (see Indices in Appendix C), seven variables constitute the primary focus of this study. With the exception of academic achievement, these variables represent major social psychological constructs derived from our theoretical considerations and employed in our tentative model These seven major variables are: (1) Academic Achievement; (2) Self-concept of Academic Ability; (3) Self-investment in the Student Role; (4) Perceived Expectations and Evaluations of Others; (5) Perceived Academic Norms of the School; (6) Sense of Control/Sense of Futility; and (7) Perceived Future Relevance of School.

Academic Achievement

Academic achievement is the major dependent variable in this study, and it is defined as the level of performance which a child has demonstrated in academic subjects. Three measures of academic achievement (discussed briefly in Chapter I) were obtained for this study. They are: Reading Achievement, Composite Achievement, and Grade Point Average. The two former measures are from standardized achievement tests while

the latter, of course, is a reflection of the teacher's evaluation of the child's performance. Certainly grades may not be accurate measures of what students have learned and are subject to teacher-bias. However, Rosenberg and Simmons point out that grades may have important implications for self-esteem and self-concept of academic ability. "How other children see the child, how his parents see him, and, most important, how he sees himself are likely to be affected by the grades appearing on his report card" (Rosenberg and Simmons, 1971: 89).

Self-Concept of Academic Ability

Self-concept of academic ability serves primarily as an independent variable in this study although the antecedents of this self-attitude (hypothesized to be most importantly the perceived expectations and evaluations of others) are also considered. The definition of this concept is taken from the work of Brookover, et al. (1967): "Self-concept of academic ability refers to behavior in which one indicates to himself (publicly or privately) his ability to achieve in academic tasks as compared with others engaged in the same task" (p. 8). This self-attitude is measured by an index which draws together the various indications which an individual makes to himself about his ability to achieve in academic tasks. (See Appendix B for the intercorrelation matrix of the items forming this index as well as for the intercorrelation matrices of the other indices.) The following items compose the index for Self-Concept of Academic Ability:

> (Question #28) Think of your friends. Do you think you can do school work better, the same, or poorer than your friends?

(Question #29) Think of the students in your class. Do you think you can do school work better, the same, or poorer than the students in your class?

(Question #30) Do you think you could finish college?

(Question #31) If you went to college, do you think you would be one of the best students, about the same as most of the students, or not as good as most of the students?

(Question #32) Forget how your teachers mark your work. How good do you think your own work is?

(Question #33) What marks do you think you really can get if you try?

As indicated earlier, there is some question about the validity of this construct for American Indian children. Thus this is one of the questions addressed in this study.

Self-Investment in the Student Role

Self-investment, like self-concept, serves primarily as an independent variable with respect to academic achievement in this study. However, we do inquire what effect sense of control/sense of futility has on the child's self-investment in the student role. This construct is very similar to Gigliotti's "Importance of Self-Identity (Role) Student" (Gigliotti, 1972), utilizing the same items from the student questionnaire to measure it. However, our conceptualization of this construct, based on the theoretical discussion of self-investment in terms of exchange, varies somewhat from that of Gigliotti. Self-investment in the student role, in this study, may be defined as the extent to which an individual perceives it to be important for him to invest his efforts

and self-esteem in the performance of the student role. Items measuring this construct are the following:

> (Question #17) If your teacher told you that you were a poor student, how would you feel?
>
> (Question #18) How important is it to you to be a good student?
>
> (Question #19) If your parents told you that you were a poor student, how would you feel?
>
> (Question #20) If your best friend told you that you were a poor student, how would you feel?

Perceived Expectations and Evaluations of Others

Consistent with the theoretical development of self-expectations, perceived expectations and evaluations of others is utilized as an independent variable in this study. This construct has been utilized and defined by Gigliotti (1972: 30) as: "The level of academic performance which a student perceives 'others' believe to be normal and probable for him." The "others" whose expectations and evaluations are in question here are parents, teachers, and best friend. The decision to look specifically at the perception of the attitudes of these others follows from both a reading of the literature indicating that these others seem to have the most influence on the child's self-attitudes and academic performance as well as on our perception that the child is most involved with these others in the social context of learning. Additionally, symbolic interactionism suggests that it is those with whom the child is most intimately involved in a particular social context who have the greatest influence on his emerging self-concept in that context.

Since we are also interested in the relative importance of each of these three sources of evaluation, the decision was made to examine this construct in terms of three separate measures:

(1) Perceived Best Friend's Expectations and Evaluations

(Question #37) How good of a student does your best friend expect you to be in school?

(Question #38) Think of your best friend. Would your best friend say you can do school work better, the same, or poorer than other children your age?

(Question #39) What grades does your best friend think you can get?

(2) Perceived Teacher Expectations and Evaluations

(Question #43) How good of a student does the teacher you like the best expect you to be in school?

(Question #44) Think of your teachers now. Would they say you can do school work better, the same, or poorer than other children your age?

(Question #45) Do your teachers think you could finish college?

(Question #46) What grades do your teachers think you can get?

(3) Perceived Parents' Expectations and Evaluations

(Question #47) How far do you think your parents believe you will go in school?

(Question #48) How good of a student do your parents expect you to be in school?

(Question #49) Think of your mother and father. Do your mother and father say you can do school work better, the same, or poorer than your friends?

(Question #50) Do your mother and father think you could finish college?

(Question #51) What grades do your mother and father think you can get?

Perceived Academic Norms of the School

The academic norms of the school are conceived to be generated primarily by students and teachers. These norms are seen as functioning as independent variables when perceived by an individual student, indicating to him what is considered to be acceptable behavior in the social context of the school. Perceived academic norms of the school may thus be defined as the perceived level of academic performance which is believed to be normal and acceptable for the students in a school. This definition is very similar to Gigliotti's definition of "Climate of Academic Expectations" (1972: 30). The following items compose the measure of this variable:

> (Question #13) How many students in your class try hard to get good grades on their school work?
>
> (Question #14) How many students in your class will work hard to do better work than their friends do?
>
> (Question #21) How do you think most of the students in your class feel when one of you does a bad job on school work?
>
> (Question #23) How important do most of the students in your class feel it is to do well in school work?

Analysis of responses to Questions #14 and #21 also provides some indication of the relative importance of competitiveness and cooperativeness to this sample of American Indian children.

Sense of Control/Sense of Futility

Interest in this construct derives from Coleman's findings that sense of control is one of the important predictors of academic achievement

for the subjects in the Equality of Opportunity study and from his further finding that this variable is most significant for minority subjects. The work of Brookover, et al. (1973) also indicates that "student reported sense of futility" is an important correlate of mean school achievement and one of the key factors which significantly differentiates between white and black schools. Sense of control and sense of futility are conceptualized as the opposite ends of one attitudinal dimension: the extent to which an individual feels that the environment will respond to his efforts (Coleman, 1966: 321); or how much the individual perceives that he can control the circumstances that affect him (Gigliotti, 1972: 31). This construct, then, is measured by the following items:

> (Question #24) People like me will not have much of a chance to do what we want to in life.
>
> (Question #25) People like me will never do well in school even though we try hard.
>
> (Question #26) I can do well in school if I work hard.
>
> (Question #27) In this school, students like me don't have any luck.

Perceived Future Relevance of School

Two observations from the literature aroused our curiosity about the effect of perceived future relevance of school on the academic performance of American Indian children. One is the observation of Wax, Wax, and Dumont (1964) and others (see Berry, 1968) that the orientation of American Indians toward education is a pragmatic one which sees a good education as related to a good job. The second observation,

found in the work of Brookover, et al. (1973), is that "perceived future evaluations and expectations" (on the part of teachers, however) are related to school achievement. Perceived Future Relevance of School, then, is employed in this study as an independent variable which is expected to influence both academic achievement and self-investment in the student role. Perceived Future Relevance of School may be defined as the child's perception of the relationship between academic performance and other activities (e.g., work) which he may desire to engage in at some future time. It is measured by the following items:

> (Question #55) If I do will in school, it will be easier for me to get the kind of job I want when I finish school.
>
> (Question #57) How important do you think it is for you to finish high school?
>
> (Question #58) How important do you think it is for you to finish college?

Data Collection

Basically two data-gathering techniques have been employed in this study: observational and survey techniques. Observational techniques allows the researcher to place the study in its situational context and allows the researcher to gather data on topics which cannot readily be approached by survey techniques. For example, the relevance of "Indianness" for academic expectations was seen as one such topic. Direct questions on this subject via a survey technique were judged likely to be resisted and to elicit invalid responses owing to subjects' attempt to provide socially-approved responses. Hence the decision was made to employ observational and informal interview techniques with this

and similarly "sensitive" topics. The researcher was able to establish an acceptable role in the community as a part-time teacher in a high school on the reservation. It is suspected that this role resulted in less resistance and suspicion than might have been accorded "a researcher" or "a social scientist." The period of residence at the research site was six months, with approximately ten days to two weeks allotted to "visiting" each of four of the schools involved in the study. Considerably more time was spent at a fifth school owing to its location on the same campus where the researcher served as a part-time high school teacher. In the context of this school, the research technique employed may best be described as participant-observation. It was at this school that the researcher became best acquainted with students and teachers, occasionally served as substitute teacher, and made necessary modifications in the survey instrument employed with students. The researcher maintained a journal of field notes during this six-month period.

Attitudinal questions may effectively be directed to students using a survey approach, particularly when it is the desire of the researcher to gather such data from a fairly large number of subjects. Hence, a questionnaire (see Instrumentation) was employed in the survey of children enrolled in grades three through eight of five elementary schools. Use of this survey instrument allowed the researcher to obtain quantifiable data from 510 students. The survey was administered by the researcher who read through the entire survey with the younger (generally third and fourth grade) subjects.

Data on academic achievement is available in school records. Four of the five schools in the study administer achievement tests at regular

intervals, and results of these are generally placed in students' files. Because school administrators are sensitive to "over-testing" their pupils, an agreement was reached with the schools to do no further "testing," but rather to make use of the achievement data which already existed in the school records. In addition to achievement tests scores, school grades were also gathered to provide still another measure of academic achievement.

Analysis of Data

One of the first procedures employed in analysis of the data was a factor analysis. It was anticipated that such analysis would serve as an indication of whether the same items form similar factors for American Indian children as they do for other children who have responded to the student survey (comparison here is particularly with the work of Brookover and associates, 1973). Factors of particular interest and concern are: self-concept of academic ability; student perceived future evaluations and expectations; sense of control/sense of futility; and student perception of school academic norms.

In testing the hypotheses proposed in this study, most attention has been given to survey data and data from school records (achievement test data and school grades) since these are most readily quantified. Fourteen indices have been constructed (see the discussion of variables earlier in this chapter and Appendix C) to facilitate analysis. These indices include: self-concept of academic ability; student-perceived academic climate; perceived expectations and evaluations of others; and sense of control/sense of futility.

Since most of the variables in this study are measured by ordinal scales, and nominal scales in a few cases, statistics such as chi square (to test for significance of differences) and Kendall's Tau Beta (to assess degree of association) have been employed. However, it should be pointed out that Kendall's Tau Beta is a test of linear association and is not meaningful when the relationship between variables is curvilinear. In such cases, it will be particularly important to pay attention to the patterning of the data in the contingency tables. However, the nature of the data, the stage of model development, and the objectives of the present study do not warrant use of statistics which would permit conclusions about process at this time. Hence the title of the study indicates that it is only an initial step toward a processual model.

As an initial step toward the development of a processual model, it has been deemed important to examine some of the basic assumptions underlying the tentatively proposed model. Hence, in analyzing our data we take particular care to look at items comprising such constructs as self-concept of academic ability, self-investment in the student role, and perceived academic norms of the school.

Both a narrative and a tabular display of findings are used in the report of this study. The narrative is seen as very important in that it: permits presentation of materials on which no statistical analysis is possible (e.g., observational data); places the study in its situational context; permits some assessment of assumptions and speculations contained in the tentatively proposed model and previous research; and provides guidance for continued work in this area. Data reported in

tabular displays is largely drawn from student surveys and school records. The tabular displays are accompanied by discussion of findings related to the hypotheses and questions posed in this study.

CHAPTER IV

ANALYSIS OF RESULTS

Introduction

The analysis of results of this study begins with some preliminary considerations concerning: the observed nature of academic achievement by children in the schools studied; variations in achievement by sex, grade (paying particular attention here to evidence indicating operation of "the cross-over phenomenon"), ethnicity (utilizing data from the small sample of white children attending these five schools), and school; and observations concerning the schools and communities involved in the study. Attention is next focused on questions directed to the underlying assumptions in this study. This includes an examination of the integrity of constructs, comparing results of this study with other studies employing the same or similar constructs. Following the consideration of underlying assumptions, important assertions made in this study are examined with primary focus on the assertions made in the hypotheses posed for testing in this first assessment of the tentatively proposed model of Indian academic achievement/academic failure. Finally, the results of the study are summarized not only in terms of the questions and hypotheses posed in this study, but also in terms of the tentatively proposed model. Further discussion of these findings in relation to the model are found in Chapter V.

Before proceeding, however, several words of caution are in order in interpreting the findings of this study. First, the results of this study should not be interpreted as applicable to all American Indian students wherever they may be found. The sample in this study is limited to a reservation population of elementary school children residing in the Plains of the United States. Nearly one-half of the American Indian population is now reported to live in urban areas (Wax, 1971) with social environments very different from that of the reservation. Consequences of differences in social environment may be very considerable both in terms of the tentatively proposed model and in terms of the validity of the underlying assumptions of this study. For example, the diffuse status characteristic may be more readily activated in social contexts where there are large numbers of individuals who do not possess this characteristic and where persons who do possess the characteristic are in the minority. Similarly, value orientations, such as the orientation to competitiveness which may be alien to the tradition of a tribal group may not be so alien and may even be acceptable and valued among Indians living in large urban places where such orientations are the norm. Also not to be overlooked is the fact that there was and is great diversity in culture among the American Indians. Hence what is unacceptable behavior among some tribal groups may be acceptable among other tribal groups. This is not to say that the potential value of this study is very limited. On the contrary, if an assumption proves viable in a context where it should have difficulty, then one can feel fairly confident in making the same assumption elsewhere.

Still another caution to be observed in interpreting the results of this study is that care be taken in inferring "explanations" of

academic failure from results of this study. The problem being studied here is very complex, and, in this study, the focus is only on what is perceived to be some important social psychological dimensions of this problem. Other dimensions, such as nutritional deficiencies and their consequences for learning, are not dealt with in this study. It is very possible that these are contributory factors. However, the social psychological dimensions selected for study are seen as very important, particularly when it is observed that studies such as that by Brookover, et al. (1973: 117) have found that such variables as Student Reported Sense of Futility accounted for 44.9% of the variance in achievement in their sample of schools. If findings such as these persist in the study of the achievement problems of American Indian children, progress will indeed have been made in explaining the problem of academic failure and in indentifying potential points of intervention in this process.

Academic Achievement

The Indian education literature has been consistent in reporting that Indian students show poor academic achievement regardless of what instruments or criteria are used to assess academic achievement. The point where less consistency is found, however, is in the report of a pattern of achievement, frequently referred to as "the cross-over phenomenon," indicating that American Indian children achieve at or above national norms early in their school careers (most say until grades three or four) and then "cross over" to achievement below national norms. Once this cross-over has been observed, it is contended that academic performance continues to decline as the children move through the school (see Berry, 1968: 22). Other researchers, as it was pointed out in Chapter II,

deny the existence of such a phenomenon (cf., Fuchs and Havighurst, 1972; Wax, Wax, and Dumont, 1964).

As a consequence of this situation in the literature, the inquiry here begins by examining the achievement data on the 481 American Indian children in this study. Attention will be largely confined to the achievement data from standardized tests and will be reported in terms of achievement indicating whether the child is: (1) advanced beyond the grade in which he was enrolled at the time when he took the test (advanced 1.0-1.9 grades; advanced 2.0 or more grades); (2) within one grade of the appropriate grade placement; or (3) behind the grade in which he was enrolled at the time when he took the test (behind 1.0-1.9 grades; behind 2.0 or more grades). Table 1 displays the data on composite achievement for all subjects for whom this data was available (302 Indian subjects and 22 non-Indian subjects) and the data on reading achievement for all subjects for whom this data was available (357 Indian subjects and 25 non-Indian subjects -- an increase in N owing to a testing program in one school focusing primarily on reading achievement).

These figures indicate an achievement picture like that found by other researchers, namely, most Indian children achieving one or more grades behind the norm. Indeed, 62.3% of the Indian children are one or more grades behind national levels in composite (over-all) achievement, and a similar proportion, 65.2%, are one or more grades behind in reading achievement.

Controlling for ethnicity, it is found that the non-Indian students attending the same schools as the Indian subjects in this study achieve better than their Indian classmates. The superior achievement of the non-Indian students is particularly evident in reading achievement,

Table 1. Academic Achievement by Ethnicity.

	Composite Achievement					
	Grade Advanced		Within Appro-	Grade Behind		
Ethnicity	2.0+	1.0-1.9	priate	1.0-1.9	2.0+	Total
Indian	3(1.1)	12(4.0)	99(32.8)	93(30.8)	95(31.5)	302
Non-Indian	2(9.1)	2(9.1)	9(40.9)	6(27.3)	3(13.6)	22
Total	5(1.7)	15(5.0)	107(35.7)	75(25.0)	98(32.7)	324

	Reading Achievement					
	Grade Advanced		Within	Grade Behind		
Ethnicity	2.0+	1 0-1.9	Approp.	1.0-1.9	2.0+	Total
Indian	9(2.5)	20(5.6)	95(26.6)	94(26.3)	139(38.9)	357
Non-Indian	7(28.0)	2(8.0)	7(28.0)	5(20.0)	4(16.0)	25
Total	16(4.2)	22(5.7)	102(26.6)	99(25.9)	143(37.4)	382

reflecting, perhaps, greater facility with the English language on the part of the non-Indian students. The non-Indian children here are predominantly children of teachers working in these schools and white ranchers. The education literature tells us that it is often the case that the children of public school teachers perform very well in school. Just why this is the case, however, it not clear.

Out of curiosity, differences in grade point average were also examined by ethnicity to see whether the non-Indian students would also achieve better than their Indian classmates in terms of school grades. Because there were variations in the grading systems of the five schools, some recoding was necessary. Hence a three-point scale was developed with a score of 2.0 representing the middle grade given in any of the other systems (e.g., "C" or "Satisfactory"). 3.0 represents the highest grade awarded and 1.0 represents the lowest grade. Table 2, which displays

Table 2. Grade Point Average by Ethnicity.

Ethnicity	Grade Point Average 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
Indian	43(9.2)	155(33.3)	241(51.7)	27(5.8)	466
Non-Indian	7(25.9)	13(48.1)	7(25.9)	0(0.0)	27
Total	50(10.1)	168(34.1)	248(50.3)	27(5.5)	493
d.f.= 3	X^2= 13.877	p < .01			

the data on achievement as measured by grade point average controlling for ethnicity, indicates that the non-Indian students do receive higher grades in school than their Indian classmates. At this point, no suggestion is made as to why this is the case -- this question being part of the larger inquiry. However, it might be suggested that difference should not be attributed to language barriers alone. Surely, difficulty with the medium of instruction does pose serious problems for a child's learning, and although the traditional Indian language of this tribe is widely spoken on the particular reservation where this study was conducted, this researcher found that the children could function quite well in English, at least in informal communication they could readily understand and be understood. It is suggested that, to the extent that lack of facility with English is a contributory factor to poor academic achievement, one might also inquire why better skill in English usage is not acquired in school? In other words, what is being suggested here (as Berry and others have suggested -- see Berry, 1968: 57) is that language difficulties may be a "symptom" rather than a cause of poor academic achievement. Differences in grade point average by ethnicity seem to suggest that teachers' evaluations and expectations may be an important factor here.

The sex of the child appears to make little difference when achievement is examined utilizing the standardized measures of academic achievement (see Tables 1 and 2 in Appendix E). However, when one examines grade point average (Table 3 in Appendix E), American Indian girls show themselves to be achieving better than American Indian boys. Apparently, these girls are doing something in the classroom which the teacher evaluates more highly than what the boys are doing. Whatever it is, however, it seems to have little consequence for their achievement when assessed by a standardized measure of achievement.

In order to investigate the existence of a "cross-over phenomenon" among the students in this study, achievement is examined by grade in school. According to the literature, a "cross-over" from good to poor achievement should be witnessed around grade four. Tables 3 and 4 display the data in question here.

Table 3. Composite Achievement by Grade in School.

	Composite Achievement					
	Grade Advanced		Within Ap-	Grade Behind		
Grade	2.0+	1.0-1.9	propriate	1.0-1.9	2.0+	Total
3	0(0.0)	2(3.8)	25(48.1)	22(42.3)	3(5.8)	52
4	0(0.0)	4(6.0)	22(32.8)	31(46.3)	10(14.9)	67
5	0(0.0)	0(0.0)	14(26.9)	12(23.1)	26(50.0)	52
6	1(1.6)	2(3.3)	24(39.3)	16(14.0)	18(29.5)	61
7	1(2.3)	4(9.3)	13(30.2)	6(14.0)	19(44.2)	43
8	1(3.7)	0(0.0)	1(3.7)	6(22.2)	19(70.4)	27
Total	3(1.0)	12(4.0)	99(32.8)	93(30.8)	95(31.5)	302

Table 4. Reading Achievement by Grade in School

	Reading Acehivement					
	Grade Advanced		Within Ap-	Grade Behind		
Grade	2.0+	1.0-1.9	propriate	1.0-1.9	2.0+	Total
3	0(0.0)	2(3.8)	27(51.9)	20(38.5)	3(5.8)	52
4	0(0.0)	8(11.3)	18(25.4)	14(19.7)	31(43.7)	71
5	1(2.0)	1(2.0)	12(24.0)	10(20.0)	26(52.0)	50
6	4(4.9)	4(4.9)	19(23.5)	26(32.1)	28(34.6)	81
7	2(3.3)	5(8.3)	11(18.3)	14(23.3)	28(46.7)	60
8	2(4.7)	0(0.0)	8(18.6)	10(23.3)	23(53.5)	43
Total	9(2.5)	20(5.6)	95(26.6)	94(26.3)	139(38.9)	357

The data in this study is in agreement with Fuchs and Havighurst (1972: 126-128), indicating that rather than showing a "cross-over" from good to poor achievement, there is a fairly consistent pattern of poor achievement at each grade level. Achievement in either grade three or four could hardly be termed "at or above national levels" although third grade students here do show achievement closer to national norms than do children in the other five grades studied. Indeed, about one-half of the third grade students are within one grade of their appropriate grade level in both composite and reading achievement. However, a comparable number in the same grade are also one or more grades behind their appropriate grade placement in both composite and reading achievement. Students in the fifth and eighth grades seem to fare less well in both composite and reading achievement. Fifty percent of the fifth grade students are two or more grades behind in overall achievement and 52% are two or more grades behind in reading achievement while 70.4% of the eighth grade students are two or more grades behind in overall achievement

and 53.5% of them are two or more grades behind in reading achievement. However, these observations need to be considered with caution because of the small number of students involved at each grade level. If, however, further research shows the findings for grades five and eight to be reliable, it might be suggested that some school climate factors be considered in searching for an explanation for this situation. In four of the five schools involved in this study, grade five seemed to represent a transition grade bringing these students into new networks of interaction -- generally increased interaction with older students and decreased interaction with younger students in the elementary school. This transition (in the four schools where it was observed) involved a physical removal from the lower grades. In two cases, the move was to a separate building on the school's campus; and, in the two remaining cases, the move was to the opposite end of the building from where the lower elementary classes met. Grade eight, on the other hand, involved no such move or change in interaction patterns. However, one might suggest that preparations through counseling, etc. were being made in grade eight <u>in anticipation</u> of an even greater move to a new school. In most cases, the children in grade eight in this study will be attending high school in a different community since there are few high schools on the reservation. For many of the students, this will also mean living away from home while attending high school. Hence new patterns of interaction and new "others" may be anticipated by these eighth grade students.

Thus, in light of these data, it is concluded that if there is a "cross-over" from achievement at or above national levels of achievement to achievement below those levels, there is little indication of it here.

There does, however, appear to be an ever-increasing proportion of students at each successive grade level who are behind national levels of achievement. This is understandable if one considers that the child who gains, perhaps, one-half grade per school year will become further behind his grade each year of school. Thus, at the end of first grade, for example, he would be one-half grade behind; at the end of the second grade, he would be one full grade behind; etc. In order to really answer the question if and when a "cross-over" phenomenon occurs, however, a longitudinal study is seen as required.

Finally, in this preliminary assessment of the academic achievement of the subjects of this study, attention is directed to the five schools from which the subjects were drawn. Although the unit of analysis in this study is the individual student rather than the school, as it has been in many other studies, some attention is directed to the schools in an exploration of the variations of school climates and their possible consequences for achievement. In order to ensure the anonymity of the schools involved in this study, the schools are only identified by letters. Thus, Schools A and B are day schools operated by the Bureau of Indian Affairs (BIA); School C is a public school operated by the county; and Schools D and E are mission schools. In examining composite achievement by school, School E is excluded from consideration owing to the fact that this school does not regularly administer achievement tests to its students. Only the fourth grade students in this school were given achievement tests during the past year. School E is included in the consideration of reading achievement, however, since standardized reading tests were administered in all grades except grades three and five of this school.

Tables 4 and 5 in Appendix E and Figure 2 presented here display the data on academic achievement by school. The data on academic achievement by school include data on all students surveyed in the schools, Indian and non-Indian, since school climate, including climate of achievement (or failure), is seen as the product of all participants in the given social unit.

School	Composite Achievement	Reading Achievement
A	33.7	32.7
B	45.9	50.0
C	48.6	54 1
D	47.1	41.2
E	----	13.3
All	42.3	36.6

Figure 2. Percentage of Students Within One Grade of Appropriate Level or Advanced by School.

Table 4 (Appendix E) reveals little variation in achievement patterns among four of the schools in this study in composite academic achievement of their students. The data from these four schools indicate that more than 50% of their students are achieving at a level one or more grades behind the norm. School D has a somewhat larger proportion of students within one grade of their appropriate grade level, but it also has 31.4% of its students at a level two grades or more behind the norm. Reading achievement, Table 5 in Appendix E, shows essentially the same patterns with one exception -- School E is shown as faring far worse than the other schools with 86.7% of its students one or more grades behind the norm! One must be wary, however, in accepting this startling

piece of data at face value since the 83 students on whom reading achievement data were available represents only 57.6% of the subjects drawn from that school. In addition to students absent on the day of the test and transfer students, no reading achievement data were available for third and fifth grade students of this school. It might be anticipated that if more data were available, achievement in this school would be much like that observed in the other four schools.

Figure 2 provides a more manageable breakdown of achievement data by school. Looking on the positive side, it reports the percentage of students who are achieving satisfactorily (within one grade level of their appropriate placement or better) within each of the schools in the sample. Aside from the problematic case of School E, it shows that two schools, Schools B and C, have 50% or more of their students achieving satisfactorily in reading. One school, School A, appears to do less well than the others in both composite and reading measures of achievement.

These data seem to indicate that "type" of school (i.e., BIA, public, or mission) makes little difference insofar as one can tell from the small sample of such schools examined in this study. This contrasts with Coombs' finding (1958) that achievement by type of school arrayed itself in a hierarchy with public schools at the top, followed by BIA schools, and mission schools at the bottom. Coombs also pointed out that this hierarchy by type of school was paralleled by the proportions of "mixed blood" and "full-blood" students in each type of school. Although statistics here are not available, our best guess is that Schools A, B, D, and E have comparable proportions of "full-blood" and "mixed-blood" students while School C differs from these in that it has a large proportion of white and "mixed-blood" students. School C

is located near the edge of the reservation and has many white and "mixed-blood" ranchers surrounding it. In spite of this, however, the achievement data from School C do not show it to be noticeably superior to the other four schools -- as might be expected from Coombs' thesis.

Teaching methods and organization of the learning environment also seem to make little difference in the achievement observed in these five schools. A range from open and little-structured to closed and rigidly structured methods and organization was observed. School E represented the open and little-structured side of the range with "individualized instruction" via learning packets which the children utilized largely at their own pace and without formal group instruction. School A, on the other hand, seemed to represent the closed and rigidly-structured side of the range with the traditional self-contained classroom, confinement of students to assigned desks, and a large amount of formal instruction. The three remaining schools fell somewhere between these two schools. Ranging from open and little structured to closed and rigidly-structured, the three remaining schools would be arranged in the following order: School D, School C, and School B. In spite of these methodological and structural differences, however, results, in terms of measured achievement at least, show little difference.

Returning briefly to the observation from Figure 2 that School A seems to do less well than the other schools in both composite and reading measures of achievement, it might also be observed that this same school seems to have a "holding" problem, i.e., it appears to lose (either through drop-out or transfer) students before they reach the seventh and eighth grades. Figure 3 displays the distribution of students in these

five schools by grade (for grades three through eight). School A, which is one of the largest schools in this study, has the smallest proportion of students in grades seven and eight. When queried about the small number of students in these two grades, a teacher in School A readily admitted that the school does indeed lose students, often, it was reported, to a nearby mission school (School D). The teacher could give no explanation for this loss of students. This researcher suspects that there is something operating in the social climate of this school that results in both the poor showing in achievement and in the loss of students. It might be further observed that this school seems to have a poor reputation in the area. It is criticized for its rigidity, behavior problems, and its inability to "get results."

	Grade						
School	3	4	5	6	7	8	Total
A	25(22.7)	16(14.5)	27(24.5)	24(21.8)	11(10.0)	7(6.4)	110
B	23(16.8)	17(12.4)	26(19.0)	23(16.8)	25(18.2)	23(16.8)	137
C	8(17.4)	5(10.9)	6(13 0)	9(19.6)	11(23.9)	7(15.2)	46
D	13(17.8)	9(12.3)	14(19.2)	9(12.3)	17(23.3)	11(15.1)	73
E	20(13.9)	29(20.1)	26(18.1)	24(16.7)	23(16.0)	22(15.3)	144
All	89(17.4)	76(14.9)	99(19.4)	89(17.4)	87(17.1)	70(13.7)	510

Figure 3. Distribution of Respondents by Grade and by School.

In summarizing the findings and observations thus far on achievement, several points can be made: (1) the Indian children in this study present a picture of poor academic achievement much like that observed in earlier studies with most children achieving one or more grades behind national norms; (2) the small number of non-Indian respondents included in this

study show significantly better achievement than their Indian classmates, both in terms of standardized measures of academic achievement and grade point average; (3) Indian boys and girls show the same patterns of achievement on standardized achievement tests, but girls do better when achievement is measured by grade point average; (4) rather than evidence to indicate existence of a "cross-over phenomenon," data from this study reveal poor achievement at all grade levels, third through eighth; (5) there does seem to be a somewhat greater achievement problem in grades five and eight, and it has been suggested that, should this pattern prevail with a larger body of data, factors in the social environment of these grades within the school may have some bearing on the problem; and (6) little variation in achievement by school is apparent in this sample of five schools -- hence such school factors as type of school and teaching methods and organization of the learning environment seem to have little bearing on achievement.

Assumptions Questioned

The assumptions which have been called into question in this research revolve about the Indian student's self-concept as student. First, the question is raised whether "self" constructs developed among and found to be appropriate for middle-class subjects are also appropriate for a sample whose cultural traditions and social conditions are quite different from that population. Second, the question is raised whether the orientation to "competitiveness" which constitutes part of the construct, "self-concept of academic ability," is appropriate to the present sample of subjects. Macgregor (1946: 132) tells us the following about children from this tribal group:

> Shaming is applied not only to misbehaving youngsters but also to the selfish and competitive child, who seeks to gain to the disadvantage of others, an act which brings strong criticism from both parents and other children.

This leads one to suspect that the orientation to competitiveness in academic achievement, i.e. to do better than ones friends or classmates, may be unacceptable to these children. A third question asks whether there is any indication that the student role is valued by Indian students, i.e., whether there is "self-investment" in the student role. Finally, a fourth question asks whether the constructs employed in other research and suggested in the tentative model guiding this study hold up for American Indian subjects. Each of these questions shall be considered in turn in this section.

Self-Attitudes

We are concerned with assessing the appropriateness of self constructs for the sample of American Indian subjects in this study because these constructs have largely been developed and utilized in the context of a white, middle-class value system. Bryde (Indian Education Hearings, 1968: 1445-1456) and MacGregor (1946) point out what appear to be conflicting orientations among the Dakota, and these conflicting orientations seem to have some implications for the self constructs in question here. MacGregor, as indicated earlier (1946: 122), points to the "leveling" effect of the peer group as a means of social control which teaches children "not to disrupt the co-operative aspects of Dakota life" (ibid). "Shaming" is directed at individuals who are perceived to be selfish and competitive, suggesting that the individual is not to rise too much above

the group nor to seek gain to his own advantage and to the disadvantage of others. Yet, both Bryde (1968) and MacGregor (1946) report that "individual autonomy" is highly valued by the Dakota. Individual autonomy generally implies some "independence" from the group in decision-making and in behavior. Such independence of action may be seen as conflicting with group pressure to conform. For the Dakota child, however, Bryde says that individual autonomy means that the child makes his own decisions without coercion. Parents and other adults may advise the child, but they do not force him to comply with their wishes. Yet, Wax, Wax, and Dumont (1964) report that the peer group does indeed compel the individual to comply with their norms for academic performance. They particularly report that children in the middle elementary grades physically punish those who do not conform to group standards (Wax, Wax, and Dumont, 1964: 90-97). Thus, it appears that individual autonomy is tempered by the development of peer group loyalties and pressures to conform. Consequently, it appears that the child may not be so autonomous in decisions and behavior related to academic performance.

In order to assess the appropriateness of the self constructs employed in the proposed model and in this study, responses to items asking the child to evaluate and compare himself as a student with others are examined. If, in fact, the self constructs employed here suggest comparisons and aspirations which are not appropriate to this sample of Indian children, it would be expected that there would be many "no responses" to those items indicating, perhaps, an "unthinkable" question. It would also be anticipated that there would be very few responses revealing the perception that the child sees himself as "better than" his peers.

Questions 28-33 of the student survey compose an index of self-concept of academic ability. Figure 1 in Appendix E displays responses of the Indian students to each of these questions. It reveals that there are very few no responses to these items. No responses were consistently at a rate of about 2% for all items in this index. Although there is some tendency to select middle responses (indicating, in general, that one perceives himself to be "the same as" others), responses do show some dispersion. For example, when asked to compare their school ability with that of their friends (Question 28), more than one-third of the subjects reported that they could "do school work better than their friends." According to reports on the leveling effect of the peer group (cf , Macgregor, 1946; Erickson, 1950; Wax, Wax, and Dumont, 1964), such an attitude would be considered unacceptable. In another question when children are asked to indicate what marks they think they can get if they really try (Question 33), a surprisingly large proportion (75.1%) indicate the top grade awarded in their school. In other words, most of these students believe that if they really wanted to and really tried, they could achieve <u>at the top</u> of their class. Again, such an attitude (and this being shown by the vast majority of students) would almost be unthinkable in terms of the orientations previously discussed. Thus, it seems that these items give very little indication that these Indian children reject a frame of reference which asks them to compare themselves with their peers, even when such comparisons result in expressions indicating that they conceive of themselves as rising about the group.

When results of responses to these self-concept items are compared, utilizing the index of self-concept of academic ability, for the Indian

and non-Indian students in this sample, it is found that no significant differences are apparent. (See Table 6, Appendix E.) Although the number of non-Indian respondents is small, this finding does suggest similar self-attitudes for Indian and non-Indian students in the given social environment. This would be expected from the premise in social psychological learning theory that individuals learn the behavior and norms of those with whom they are associated.

In addition to these "statistical" observations, field observations of this researcher suggest that much has changed in the traditional orientations of the Indian people (at least for the tribal group in the place studied), and this is to be expected given the disruption which has occurred, particularly in the economic sphere. There were times when this researcher even wondered in anything of the "old ways" existed at all. Then, however, something would happen -- a student would say something in class or write something in a paper or an interaction pattern would be observed between an Indian teacher and Indian students -- and one would realize that there was something "of the Indian way" there. Children did not appear eager to demonstrate their ability as greater than that of their classmates in the context of the classroom. Yet pride in oneself was evident in a quiet way (generally a shy, pleased smile) when an award was received for outstanding academic performance (e.g., for good grades on a report card, good attendance, etc.) or when a task was successfully accomplished (as was observed when a boy, after several days of trying, accomplished a mathematical puzzle which he had been working on on his own). Young children unashamedly took great pride in their school work. Much to the surprise of this researcher, because the literature says that Indian children are very shy, young

children (especially in grades one through three) frequently approached the researcher during periods of observation to show a paper which had been completed, a piece of artwork which they had done themselves, or "how I can read." The researcher came to view this as "approval-seeking" behavior by these children -- seeking out a positive response to their efforts. This researcher responded with enthusiasm to these approaches with the result that the same child generally approached again and other children came too. Positive responses to such approval-seeking behavior seemed to increase the children's self-esteem as student for their pleasure was evident. Thus, on the basis of statistical data and observational data, this researcher is inclined to believe that self constructs which ask subjects to compare their academic ability and performance with that of their peers and which solicit expressions indicating aspirations for performance greater than that of their peers are appropriate to this sample of Indian children.

Competitiveness

Like "self-attitudes," it has been suggested that a competitive orientation in which one seeks gain to his own advantage is alien to some American Indian traditions, including that of the subjects in this study. In order to assess the status of this contention, attention is directed to six items in the student questionnaire which suggest "competitiveness" or, at least, potentially imply invidious comparisons with peers. Three of these items appear in Figure 1, Appendix E, in relation to self-attitudes. Questions 28 and 29 clearly ask the student to compare his own perceived ability with that of his friends and classmates. Although most students (58.2% and 63.4% respectively) reported

that their ability is "the same" as that of these others, there were some (34.7% and 28.1% respectively) who did see themselves as "better" -- a distinction not likely to be made by someone operating with the traditional orientation. Moreover, the fact that only 2% of the respondents failed to answer these questions suggest that the comparisons called for are not totally inappropriate.

Responses to the question, "What marks do you think you really can get if you try?", (Question 33) indicate that the Indian children in this study are not adverse to thinking of themselves as potentially achieving at the top of their class. What is not known, however, is whether these children conceive of achieving high grades in competition with others or in competition with themselves and some standard of excellence. When learning is individualized, as it largely is in three of the five schools in this study, the latter interpretation may be more likely. In that case, grades in school connote less of a competitive orientation.

There are, however, three additional items which can be examined in relation to the question of competitiveness. Figure 2 in Appendix E displays responses to these three items -- Questions 13, 14, and 21. As a first observation, it may be noted that there are no "No Responses" to any of these questions, and, as suggested earlier, this may imply that the ideas connoted here, at least, are not "unthinkable" for these children. Questions 13 and 14 ask the child about the competitiveness which he perceives among his classmates. Question 13, which asks how many of his classmates the child perceives to be trying hard to get good grades in school, is somewhat like Question 33 in that it is uncertain whether the competition implied here is perceived to be with classmates

or with some other standard. As it has already been suggested, there is reason to suppose that the latter interpretation is more accurate Hence many (78.9%) report that "half" or more of their classmates are competitive in this way.

Question 14, however, clearly asks the child how many of his classmates he perceives to be oriented toward out-performing their friends. Responses to this question are fairly evenly distributed across the range of given answers from "almost all of them" engage in such behavior to "some of them" will do this. Only 5.4%, however, report that this is true of "almost none" of their classmates. This seems to suggest that the children perceive some, at least, competition among their peers, and this orientation, according to 20.8% of the respondents, characterizes "almost all" of their classmates. From this one might conclude that competitiveness, as it is perceived by the Indian child, is not totally absent from the behavior of their peers. Just how much of this orientation is present, however, is not clear.

Finally, Question 21 is interesting because the response choices give the respondents the option of characterizing their peers as competitively-oriented or cooperatively-oriented. The question asks: How do you think most of the other students in your class feel when one of you does a bad job on school work? Response categories are: (1) They feel badly and want to help. (2) They feel sorry, but don't say anything. (3) They really don't care. (4) They are secretly happy that it happened. Response #1 is seen as a "concerned and cooperative" response in that it expresses concern about the event and a desire to work with the other in resolving the difficulty. Response #2 is seen

as a "concerned and helpless" response in that it again expresses concern about the event, but, it seems, a perception that they cannot do anything about it. Alternatively, one might argue that the failure to actively respond to the individual with the problem is a reflection of the traditional (to this tribal group) norm of "noninterference" in the affairs of others. Response #3 is seen as an "indifferent" response which may either imply a lack of concern about the event or the attitude that it is unimportant. Response #4 (which frequently brought laughter or a smile to the children) indicates an "extreme competitive" oriented response in that the failure of another somehow increments ones own stature. Predictably few (7.3%) of the children chose the fourth response. However, the distribution of the remaining responses does not indicate a clear "cooperative" orientation either. Most children (66.5%) do report that they perceive others to be concerned about such an event, but they do not agree on whether their classmates would come to the aid of the individual who is experiencing difficulty.

What these varied findings seem to indicate to this researcher is that traditional values and orientations exist along side and mixed with formerly alien values and orientations to which these people have been exposed for a long time now. In some cases, especially team sports, individuals will behave in a very competitive fashion, and in other cases, particularly it seems with respect to family affairs and problems, individuals will behave in a very cooperative fashion. It has already been noted that competition among peers was not observed to be prominent in classrooms. This may be due to either a lack of such orientation on the part of these children (although the statistical

data in this study do not show a total absence of this) or a lack of such demands for competition in the classroom. Teachers seemed to be fairly well aware of the traditional prohibition of competitiveness for individual gain and may consequently, as some reported, not invite such behavior in their classrooms. Yet some children (responses to Question 14 especially) report perceiving competitiveness among their peers. Later (in relation to Hypothesis 6) it will be inquired whether varying degrees of perceived competitiveness have any effect on academic achievement.

Self-Investment

Earlier the question of meaningfulness of the student role to Indian students was raised, and again (in the preceding discussion of Competitiveness) the suggestion was made that academic events may be perceived to be of little consequence to Indian students (see especially response #3 to Question 21). The concern here focuses on the assumption of self-investment in the student role. It is the assumption of this, and many other studies, that students value the student role and invest self-esteem in it such that he seeks to benefit from this investment ("enhancement or reaffirmation of his social status" -- Faunce, 1972: 2) and failure to benefit from this investment results in adjustive responses on the part of the individual.

In order to assess self-investment in the student role, the four items comprising the self-investment index are examined. Figure 3, Appendix E, displays student responses to these four items. Question 18 asks the student very directly, "How important is it to you to be a good student?" To this, nearly one-half (47.8%) of the children reply, "It's

the most important thing I can do." 15.6% of the children, on the other hand, reported: "it's not very important." In looking at the responses to this question, however, one would have to admit that in outright declaration, the majority of these children (70.3%, combining #1 and #2) report that the student role is perceived to be of great importance to them.

Questions 17, 19, and 20 approach this concern from a somewhat different angle. The children are asked to suppose the others judged their performance in the student role to be poor. They are, then, asked how they would feel about this. The "others" considered here are those who are viewed as potential significant others for the child's academic performance (i.e., best friend, teachers, and parents). Most children report that they "would feel very bad" if such judgments were made of them, particularly so if such evaluations came from teachers (47.8%) and parents (46.8%). Even when such judgments come from the child's best friend, the majority (60.3%), at least, report some concern and "bad" feelings. These responses are interpreted as reflecting some investment of self-esteem in the student role. The student role is thus seen as an important one, perhaps not the only important one but important nonetheless, for these children.

Comparing the reported self-investment of the Indian subjects with the small group of non-Indian classmates, no significant differences are found. Table 7 in Appendix E displays this data. This suggests that the Indian subjects invest as much self-esteem in their student roles as do their non-Indian classmates in these five schools. The student-role, thus, appears to be one which is meaningful to Indian students as well as to white students.

Field observations indicate that the children take their student roles rather seriously. School attendance, for example, was observed to be high in all five schools -- a fact of which school officials are rather proud owing to reported attendance problems in the past. Even when bad weather could be expected to keep many from school, attendance was good, and teachers wonderingly spoke of students who walked some distance over unpaved roads, braving foul weather, to meet the school buses. In most classes visited, children appeared to be taking earnestly to their studies. Most amazing to this observer, however, were two study halls observed in two different schools in which sixth, seventh, and eighth grade students were actually studying without a teacher being present! This is amazing because much of the literature on Indian education speaks of the disorder and chaos in classrooms in Indian schools. These observations seem to further add to the belief that some investment in the student role has been made by these Indian students.

Comparison of Major Constructs

The concern in this fourth, and last, question is the major constructs employed in this study. The question posed is whether these constructs hold up for American Indian subjects as they do for the non-Indian subjects in other studies. Several strategies are employed in responding to this question.

First a factor analysis has been applied to fifty-one attitudinal items from the student questionnaire. In order to compare results of this factor analysis with that of Schneider (1973) a varimax rotation was employed. Also consistent with Schneider's study, students who had missing

data were dropped from the factor analysis, leaving data from 452 subjects. Contrary to Schneider's finding of four distinct student factors, no such factors emerged from the factor analysis of the data in this study. Possible explanations for this difference include the following: (1) Schneider's data included twelve attitudinal items not included in this study. Some or all of these items may have been important to the four factors which emerged from Schneider's factor analysis. (2) Altering the items in this study may have changed them such that they do not relate to one another as they had in the earlier study. This researcher does not believe this to be the case, however, since no major changes were made in the items. (3) The factors may simply not hold up for Indian subjects. It is possible that the Indian students interpret some of the questions differently than do the students in Schneider's study. Consequently, responses on the items may not relate to one another as they did in that study.

To explore this question further, the correlation matrices (see Appendix D) of important constructs in this study are compared with several from Henderson's study (1972: 123-124). The Henderson study, which is related to the Schneider study in that both are parts of the continuing research program of Brookover and associates, employs the same research instrument as that which was used by Schneider and, with some modifications, by this researcher. The following eight constructs are compared (the name of the construct in Henderson's work is given in parentheses): Perceived Competitiveness among Students (Reported Student Press Competition or Individual Performance); Self-Investment in Student Role (Importance of Self-Identity Student or Role); Perceived Academic

Norms of School (Academic Norms of School); Sense of control/Sense of Futility (Sense of Control); Self-Concept of Academic Ability (same); Perceived Best Friend's Expectations and Evaluations (same); Perceived Teacher Expectations and Evaluations (same); and Perceived Parents' Expectations and Evaluations (same). Comparisons include only items employed in constructs in both studies.

Results of this comparison show that the constructs hold up fairly well. There are almost no correlations which are in the opposite direction (i.e., positive in one study and negative in the other). In general items which related to one another moderately well in one study also related to one another moderately well in the other study. Similarly, items which showed a weak correlation in one study generally showed a weak correlation in the other study as well. For example, in the self-investment construct (see Figure 4), the child's response to his teacher's evaluation of his performance in the student role (Item 17) correlated very well in both studies (.566 in Hess and .552 in Henderson) with the child's response to parents' evaluation of his performance in the student role (Item 19). On the other hand, the child's response to the question, "How important is it to you to be a good student?" (Item 18), did not correlate very well in either study (.156 in Hess and .138 in Henderson) with the child's response to his best friend's evaluation of his performance in the student role (Item 20).

It might be pointed out that two of the constructs which compared very well (i.e., showed similar patterns of relationships between items) are Self-Investment in the Student Role and Self-Concept of Academic Ability (see Figure 4 below).

Construct: Self-Investment in the Student Role

Item No.	Hess			Henderson		
17	1.000			1.000		
18	.273	1.000		.244	1.000	
19	.566	.199	1.000	.552	.305	1.000
20	.531	.156	.500	.424	.138	.405

Construct: Self-Concept of Academic Ability

28	1.000					1.000				
29	.313	1.000				.434	1.000			
30	.063	.148	1.000			.149	.164	1.000		
31	.226	.222	.293	1.000		.212	.236	.231	1.000	
32	.259	.265	.216	.285	1.000	.257	.293	.208	.307	1.000
33	.066	.133	.148	.161	.212	.159	.194	.211	.243	.342

Figure 4. Comparison of Intercorrelation Matrices for Self-Investment in the Student Role and Self-Concept of Academic Ability, Hess and Henderson Studies.

These observations suggest that these constructs are measuring similar variables for the subjects in the two studies. Like the American Indian subjects in the present study, the subjects in Henderson's study were also members of a minority group (i.e., black students) who are enrolled in an institution, the school, which is largely based on white, middle-class values and orientations. That they should regard themselves similarly in that situation is to be expected from their status in these institutions. These observations are also in agreement with Coleman's findings that minority students (except Orientals) were similar in their self-concepts and sense of control (Coleman, 1966: 319-325).

On the other hand, two constructs which did not compare as well for the Indian subjects are (1) Perceived Best Friend's Expectations and Evaluations and (2) Perceived Teacher Expectations and Evaluations. Two of the observed correlations for Best Friend items are in the opposite direction, and all of the observed correlations for Teacher

items are weaker in this study. A similar construct, Perceived Parents' expectations and Evaluations, however, did compare well. Not only are all correlations in the same direction in the two studies, but all except three (of ten observed correlations) are of comparable magnitude. Upon closer examination, it was observed that although the intercorrelation matrices for the former two constructs (Best Friend and Teacher Expectations and Evaluations) do not compare well, the items for each of the two constructs in this study do relate to one another fairly well. This suggests that these two constructs may be measuring different variables in the two studies or that the observed differences may be an indication that teachers and peers play different roles in the academic performance of American Indian children and of black children.

Still a third strategy employed in responding to the question of whether or not constructs employed in other studies also hold up in this study is an analysis of the functioning of these constructs to see if they operate in the same way for the Indian subjects. Since self-concept of academic ability is of great concern in this study, it was decided to pay particular attention to the functioning of this construct. Brookover, et al. (1967), proposed and tested the thesis that self-concept is an intervening variable in academic achievement -- intervening between perceived expectations and evaluations of others and academic achievement. In order to test for this relationship, the correlations between Academic Achievement, Self-Concept of Academic Ability, and Perceived Expectations and Evaluations of Others were examined. As hypothesized, they found that: (1) the correlations between Perceived Expectations and Evaluations of Others and Self-Concept of Academic Ability (.71, .50, and .59) are generally greater than the correlation between Self-Concept

of Academic Ability and Academic Achievement (.55); and (2) the correlations between Perceived Expectations and Evaluations and Academic Achievement when controlling for Self-Concept of Academic Ability (for eighth grade students, .14, .06, .12) are smaller than the correlations between Self-Concept of Academic Ability and Academic Achievement when controlling for Perceived Expectations and Evaluations of others (.32, .48, and .42). These same relationships are examined in this study in order to determine whether the construct, Self-Concept of Academic Ability, functions in the same way for the sample of American Indian children. These data are displayed in Figures 5 and 6.

The data from Figure 5 indicate that the zero-order correlations of Perceived Expectations and Evaluations of Others, Self-Concept of Academic Ability, and Academic Achievement in this study are like those obtained by Brookover and associates (1967) in that the correlations between Perceived Expectations and Evaluations of Others and Self-Concept of Academic Ability (.41, .31, and .41) are greater than the correlations between Self-Concept of Academic Ability and Academic Achievement (.19, .26, and .21). The correlations of perceived expectations and evaluations of others for <u>each</u> of the <u>three</u> others (best friend, teacher, and parents) examined here with self-concept of academic ability <u>are greater than</u> the correlations of self-concept of academic ability and academic achievement for each of the three measures of achievement employed in this study.

The data from Figure 5, however, present some mixed findings concerning the intervening role of self-concept of academic ability. It does seem to be the case, although the differences are not great, that

Variable Pair	Correlation
Best Friend's Expectations and Evaluations with Self-concept of Academic Ability	.4102
Teacher Expectations and Evaluations with Self-concept of Academic Ability	.3129
Parents' Expectations and Evaluations with Self-concept of Academic Ability	.4060
Self-concept of Academic Ability with Reading Achievement	.1857
Self-concept of Academic Ability with Composite Achievement	.2621
Self-concept of Academic Ability with Grade Point Average	.2126

Figure 5. Zero-Order Correlations of Perceived Expectations and Evaluations of Others with Self-Concept of Academic Ability and of Self-Concept of Academic Ability with Academic Achievement.

the correlations of Perceived Best Friend's Expectations and Evaluations with Academic Achievement when controlling for Self-Concept of Academic Ability are smaller than the correlations of Self-Concept of Academic Ability with Academic Achievement when controlling for Best Friend's Expectations and Evaluations in those cases where Academic Achievement is measured by a standardized measure (reading and composite achievement).

Variable Pair	Control	Correlation	Variable Pair	Control	Correlation
Best Friend's Expectations and Evaluations with Reading Achievement	Self-Concept	.1137	Self-Concept with Reading Achievement	Best Friend's Expectations and Evaluations	.1255
Best Friend's Expectations and Evaluations with Composite Achievement	Self-Concept	.1641	Self-Concept with Composite Achievement	Best Friend's Expectations and Evaluations	.1799
Best Friend's Expectations and Evaluations with Grade Point Average	Self-Concept	.1504	Self-Concept with Grade Point Average	Best Friend's Expectations and Evaluations	.1370
Teacher Expectations and Evaluations with Reading Achievement	Self-Concept	.1740	Self-Concept with Reading Achievement	Teacher Expectations and Evaluations	.1259
Teacher Expectations and Evaluations with Composite Achievement	Self-Concept	.2100	Self-Concept with Composite Achievement	Teacher Expectations and Evaluations	.1930
Teacher Expectations and Evaluations with Grade Point Average	Self-Concept	.1475	Self-Concept with Grade Point Average	Teacher Expectations and Evaluations	.1602

Variable Pair	Control	Correlation	Variable Pair	Control	Correlation
Parents' Expectations and Evaluations with Reading Achievement	Self-Concept	.1914	Self-Concept with Reading Achievement	Parents' Expectations and Evaluations	.0963
Parents' Expectations and Evaluations with Composite Achievement	Self-Concept	.2884	Self-Concept with Composite Achievement	Parents' Expectations and Evaluations	.1357
Parents' Expectations and Evaluations with Grade Point Average	Self-Concept	.1792	Self-Concept with Grade Point Average	Parents' Expectations and Evaluations	.1271

Figure 6. Correlations of Perceived Expectations and Evaluations of Others with Academic Achievement Controlling for Self-Concept of Academic Ability and of Self-Concept of Academic Ability with Academic Achievement controlling for Perceived Expectations and Evaluations of Others.

This is not the case, however, with the more subjective measure of Academic Achievement, grade point average. This finding, then, gives partial support to the assertion that self-concept plays an intervening role between expectations and evaluations of others and academic achievement. The data on Perceived Teacher Expectations and Evaluations and Academic Achievement present the reverse of this. That is, self-concept of academic ability seems to intervene only between perceived teacher expectations and evaluations and academic achievement as measured by grade point average, but not as measured by either of the two standardized measures. Finally, Perceived Parents' Expectations and Evaluations provides the most contrary case of all. Here Self-concept of Academic Ability is not found to intervene between Perceived Parents' Expectations and Evaluations and any measure of Academic Achievement! This suggests that, although correlations between Perceived Parents' Expectations and Evaluations and Self-Concept of Academic Ability are relatively good, Perceived Parents' Expectations and Evaluations may have a more direct relationship with Academic Achievement for the Indian children in this study than it did for the non-Indian children in the Brookover and associates' study (1967). Thus, in further work in this area, the possibility must be entertained that self-concept of academic ability may function in a different way for American Indian children and their academic achievement.

Hypotheses Tested

Examination of the data in terms of the hypotheses posed for testing in this study not only provide an initial test of the tentatively proposed model, but also provides for the further testing of major constructs

via the strategy employed in the preceding section of this chapter, i.e., comparison of the functioning of constructs in this study with previous studies. It might also be pointed out at the outset of this section that several of the questions raised in discussion of the hypotheses to be tested (see Chapter III) have already been considered in previous sections of this chapter and are not discussed extensively here. At the conclusion of this discussion of the hypotheses in terms of our data, one further question is taken up. That question has to do with the identification of significant others for academic achievement. It is taken up last because it is seen as partially dependent upon the outcome of the tests of the hypotheses.

The first hypothesis posed for testing in this study asserts that there is a positive relationship between self-concept of academic ability and perceived expectations and evaluations of others. This assertion follows directly from Mead's perspective on the genesis of the self in social interaction with others. Mead asserts that the self is a concept which arises as the individual perceives and assumes the attitudes of others in his social environment toward himself. In testing this hypothesis, the perceived expectations and evaluations of three sets of others have been examined under the assumption that some or all of these are "significant others" for the child in the social context of the school. Tables 5 - 7 display these data.

The data indicate that the hypothesis is supported. Perceived expectations and evaluations of each of the three others examined here are found to be positively related to the child's self-concept of academic ability. Correlations between perceived parents' expectations and evaluations and self-concept of academic ability and between perceived

Table 5. Self-Concept of Academic Ability by Perceived Best Friend's Expectations and Evaluations.

	Self-Concept of Academic Ability				
Best Friend's Expectations	High	Moderately High	Moderate	Moderately Low to Low	Total
High	35(14.2)	136(55.1)	72(29.1)	4(1.6)	247
Moderate	8(4.1)	56(29.0)	115(59.6)	14(7.3)	193
Low	0(0.0)	5(17.9)	14(50.0)	9(32.1)	28
Total	43(9.2)	197(42.1)	201(42.9)	27(5.8)	468

N.R.= 13 d.f.= 6 X^2= 101.783 $p < .001$ Kendall's Tau B= .384

Table 6. Self-Concept of Academic Ability by Perceived Teacher Expectations and Evaluations.

	Self-Concept of Academic Ability				
Teacher Expectations	High	Moderately High	Moderate	Moderately Low to Low	Total
High	30(13.4)	116(51.8)	75(33.5)	3(1.3)	224
Moderate	12(5.3)	79(34.6)	119(52.2)	18(7.9)	228
Low	1(7.1)	1(7.1)	7(50.0)	5(35.7)	14
Total	43(9.2)	196(42.1)	201(43.1)	26(5.6)	466

N.R.= 15 d.f.= 6 X^2= 61.758 $p < .001$ Kendall's Tau B= .288

best friend's expectations and evaluations and self-concept of academic ability are somewhat higher than the correlation between perceived teacher expectations and evaluations. This suggests that these two sources of expectations and evaluations may be more significant for the child's self-concept. On the other hand, because we are unable to determine causal direction from these data, it is possible that the positive correlations of the perceived expectations and evaluations of others with self-concept of academic ability is a consequence of an attribution

Table 7. Self-Concept of Academic Ability by Perceived Parents' Expectations and Evaluations.

Parents' Expectations	Self-Concept of Academic Ability: High	Moderately High	Moderate	Moderately Low to Low	Total
High	31(17.8)	94(54.0)	48(27.6)	1(0.6)	174
Moderately High	9(5.5)	67(41.1)	84(51.5)	3(1.8)	163
Moderate	3(2.5)	33(28.0)	63(53.4)	19(16.1)	118
Moderately Low to Low	0(0.0)	2(20.0)	5(50.0)	3(30.0)	10
Total	43(9.2)	196(42.2)	200(43.0)	26(5.6)	465

N.R.= 16 d.f.= 9 X^2= 96.930 $p < .001$ Kendall's Tau B= .359

process. That is, the individual attributes positive attitudes toward himself to individuals for whom he has positive feelings. Further work is needed in this area to determine causal order.

The second hypothesis calls for a test of another basic assertion. Hypothesis 2 asserts that academic achievement varies directly with self-concept of academic ability. Consistent with Brookover and Erickson's contention (1969) that self-concept functions as a threshold variable, it would also be expected that data will reveal some cases of students with a high self-concept of academic ability who do not perform at a high level of achievement. According to Brookover and Erickson, these students may have chosen not to perform at a high level even though they believe that they are capable of doing so. On the other hand, if self-concept of academic ability is a necessary condition for high achievement, the data should reveal no cases of students with a low self-concept of academic ability who are performing at a high level. Tables 8 - 10 display the data of interest here.

Table 8. Academic Achievement (Composite) by Self-Concept of Academic Ability.

Self-Concept	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Approp.	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	0(0.0)	1(3.3)	18(60.0)	8(26.7)	3(10.0)	30
Moderately High	2(1.4)	10(6.9)	51(35.4)	41(28.5)	40(27.8)	144
Moderate	1(0.9)	1(0.9)	28(25.5)	34(30.9)	46(41.8)	110
Moderately Low to Low	0(0.0)	0(0.0)	1(7.7)	6(46.2)	6(46.2)	13
Total	3(1.0)	12(4.0)	98(33.0)	89(30.0)	95(32.0)	297

N.R.= 184 (owing largely to one school which does not routinely administer achievement tests).

d.f.= 12 X^2= 29.049 $p < .004$ Kendall's Tau B= .237

Table 9. Academic Achievement (Reading) by Self-Concept of Academic Ability.

Self-Concept	Reading Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Approp.	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	0(0.0)	3(10.0)	12(40.0)	10(33.3)	5(16.7)	30
Moderately High	7(4.4)	13(8.2)	45(28.3)	36(22.6)	58(36.5)	159
Moderate	2(1.4)	4(2.8)	33(22.8)	42(29.0)	64(44.1)	145
Moderately Low to Low	0(0.0)	0(0.0)	4(23.5)	5(29.4)	8(47.1)	17
Total	9(2.6)	20(5.7)	94(26.8)	93(26.5)	135(38.5)	351

N.R.= 130 (again owing largely to one school which did not routinely administer achievement tests).

d.f.= 12 X^2= 20.206 $p < .063$ Kendall's Tau B= .161

Table 10. Academic Achievement (Grade Point Average) by Self-Concept of Academic Ability

Self-Concept	Grade Point Average*				Total
	3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	
High	6(14.3)	17(40.5)	17(40.5)	2(4.8)	42
Moderately High	27(13.9)	71(36.6)	90(46.4)	6(3.1)	194
Moderate	9(4.6)	59(30.3)	112(57.4)	15(7.7)	195
Moderately Low to Low	1(4.0)	4(16.0)	17(68.0)	3(12.0)	25
Total	43(9.4)	151(33.1)	236(51.8)	26(5.7)	456

*GPA based on a 3-point scale with 3= high, 1= low.

N.R.= 25 d.f.= 9 X^2= 24.936 $p < .003$ Kendall's Tau B= .195

The data show support for Hypothesis 2. The statistical differences in the children's achievement by their self-concept of academic ability are greater than would be expected at the .05 level of significance in two instances (composite achievement and grade point average) and approach that level of significance in the third instance (reading achievement). Although the correlations are positive, as predicted, they are not very impressive in magnitude. More impressive, however, is the evidence that self-concept of academic ability functions as a threshold variable for academic achievement. As anticipated, there are some students with a high or moderately high self-concept of academic ability who achieve at relatively low levels, and this is particularly shown with respect to the standardized measures of achievement. However, also as anticipated, no student with a low or moderately low self-concept of academic ability achieved at a high level (one or more grades advanced) of achievement, again looking at the standardized measures of achievement, and very few

(one student and four students respectively) of these students with moderately low to low self-concepts even achieved within one grade of the appropriate level on the standardized measures of achievement. Much the same pattern holds for achievement as measured by grade point average -- only one student with a moderately low to low self-concept of academic ability achieved a high grade point average (2.6-3.0 on a 3-point scale).

Although these findings are based on a small number of students with a moderately low to low self-concept of academic ability (the latter case discussed above), they are seen as suggesting that Brookover and Erickson's assertion that self-concept of academic ability functions as a threshold variable may also obtain for American Indian children. If this is the case, then subsequent research should probably be focused on learning why some children with a high self-concept of academic ability do not (choose not to?) perform at high levels of achievement. Some suggestions in relation to this concern have already been made in the discussion of self-investment in the student role (see Chapter III).

The third hypothesis is derived from considerations of the first two hypotheses. It suggests that academic achievement is positively related to the academic expectations and evaluations which others have of the individual. Since there are nine tables which display these data, they are presented in Appendix E, Tables 8 - 16. The data support this hypothesis for each of the three sets of others and for each of three measures of academic achievement. In every case a satistically significant difference in achievement is found by perceived expectations and evaluations The correlations, as predicted, are positive and

several are of fairly good magnitude. The highest correlation found in these data is between perceived parents' expectations and evaluations and composite achievement. This seems to suggest two things: (1) parents are significant others in the context of their children's learning; and (2) since it was observed earlier that self-concept of academic ability does not seem to intervene between perceived parents' expectations and evaluations and academic achievement, the academic performance of children may be seen as direct compliance with what they perceive their parents to expect of them.

Several other interesting observations may be made in relation to these data. The correlations between perceived expectations and evaluations of others (for each of the three sets) and academic achievement seem to be best when composite achievement is the measure of academic achievement. The smaller correlations with reading achievement may suggest that language problems interfere with achievement in reading, but not necessarily with achievement in other areas. It is also interesting to observe that the correlation of perceived teacher expectations and evaluations with achievement as measured by grade point average is not particularly high. This suggests that grades are not the only sources of student's perceived teacher expectations and evaluations. It seems likely that the teacher's day-to-day expression of attitudes and responses to the child are important sources of these perceptions.

The fourth hypothesis, which directs attention more toward the social context of the school, may help interpret why it is that some students who apparently believe that they can achieve (those with high self-concept of academic ability) and who perceive that some others,

at least, hold positive expectations and evaluations for them do not achieve at high levels. The fourth hypothesis asserts that there may not be self-investment in the student role because other cues indicate to the child that he really has no control over his environment or his life chances. Hence, it is hypothesized that investment in the student role declines as the child's sense of control over his environment declines and his sense of futility increases. The data relevant to this assertion are displayed in Table 11.

Table 11. Self-Investment in the Student Role by Sense of Control/Sense of Futility.

Sense of Control/ Futility	Self-Investment				
	High	Moderately High	Moderate	Moderately Low to Low	Total
High Control	10(43.5)	8(34.8)	4(17.4)	1(4.3)	23
Moderate Control	57(34.1)	51(30.5)	41(24.6)	18(10.8)	167
Intermediate	59(26.6)	57(25.7)	69(31.1)	37(16.7)	222
Moderate to High Futility	26(41.3)	13(20.6)	11(17.5)	13(20.6)	63
Total	152(32.0)	129(27.2)	125(26.3)	69(14.5)	475

N.R.= 6 d.f.= 9 X^2= 17.539 $p < .041$ Kendall's Tau B= .076

First, two points need to be made with respect to the data on self-investment and sense of control/sense of futility. In the case of both of these measures, the data are highly skewed to the positive end of the scale. This make it necessary to group together for analytic purposes: (1) responses which indicated low or moderately low self-investment; and (2) responses which indicated high or moderate sense of futility.

Although statistically significant differences appear, particularly when one looks at the negative end of the self-investment scale, between those with high sense of control and those with moderate to high sense of futility, the correlations between these two variables is very low. The low correlation, however, appears to be the consequence of a curvilinear relationship between these two variables. Curvilinearity is indicated by the data on "High" self-investment and "Moderate" self-investment. Children who report high self-investment in the student role are more likely to report not only a high sense of control (as anticipated), but also moderate to high sense of futility. It is not immediately apparent why the latter should be the case. One possibility is that sense of control/sense of futility follows from self-investment rather than self-investing following from sense of control/sense of futility. If this is the case, it might be suggested that those who have made high investments of self-esteem and effort in the student role experience a sense of control when they see their investment rewarded and experience frustration (sense of futility) when they see their investment fail to bring the anticipated rewards.

Another possibility considered was that items measuring sense of control/sense of futility are too vague or general and recalling that other researchers and writers had commented on the pragmatic orientation of Indian people toward education, it was decided to look at self-investment in relation to Perceived Future Relevance of School. In a sense, this construct may be seen as a more concrete dimension of sense of control/sense of futility. For example, in responding to an item such as "If I do well in school, it will be easier for me to get the kind of job I want when I finish school," the individual is declaring whether

he perceives that through his efforts in school he can affect a subsequent outcome in his life. Table 12 displays the data for self-investment in the student role by perceived future relevance of school.

Table 12. Self-Investment in the Student Role by Perceived Future Relevance of School

Perceived Future Relevance	Self-Investment				
	High	Moderately High	Moderate	Moderately Low to Low	Total
High	131(37.8)	103(29.7)	79(22.8)	34(9.8)	347
Moderate	16(17.8)	20(22.2)	34(37.8)	20(22.2)	90
Low	2(7.7)	4(15.4)	8(30.8)	12(46.2)	26
Total	149(32.2)	127(27.4)	121(26.1)	66(14.3)	463

N.R.= 18 d.f.= 6 X^2= 50.691 $p < .001$ Kendall's Tau B= .270

The data here not only show statistically significant differences in self-investment by perceived future relevance of school, but also a modest correlation. Although the number of subjects reporting a low perception of future relevance is small (indicating that this is an important orientation for these children), examination of the data displayed in this table reveals that even those with only a moderate perception of future relevance, and this represents a larger number of respondents, show less investment in the student role than do those who perceive high future relevance of school. These data, thus, seem to indicate that when measured concretely, self-investment does relate to the child's perception that he can control his life's chances. Future research on this question should thus pay particular attention to concrete vs. abstract measures of this construct.

Hypothesis 5 carries the argument a step further by suggesting that academic achievement bears a direct relationship to self-investment in the student role and sense of control and an inverse relationship to sense of futility. Since perceived future relevance of school was also found to relate to self-investment in the student role, the relationship of this construct to academic achievement is also examined. Tables 17 - 23 in Appendix E and Tables 13 and 14 in this chapter display these data and some very curious results emerge.

First, the data reveal almost no relationship between academic achievement (no matter how it is measured) and self-investment in the student role at all! Thus, while children report that being a good student is very important to them and that it means much to them when someone negatively evaluates their student role performance, their measured academic performance does not correspond to this attitude. The question of why this might be the case certainly requires further exploration. However, two suggestions may be made here: (1) observing that the average level of performance in these schools is very low, it might be the case that the level of performance which the child perceives to be good within this context may actually be low when compared to some standard outside of that school context (national norms, for example); and (2) other factors not associated with self-investment may be more powerful determinants of academic achievement and academic failure. The proposed model suggests that the action opportunities which the teachers provide may be one such factor. If a child is not given the opportunity to learn grade level materials, chances are good that when measured on a standardized test, he will perform below grade level.

Table 13. Academic Achievement (Composite) by Sense of Control/ Sense of Futility.

Sense of Control/ Futility	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High Control	2(12.5)	3(18.8)	9(56.3)	1(6.3)	1(6.3)	16
Moderate Control	0(0.0)	6(6.4)	39(41.5)	30(31.9)	19(20.2)	94
Intermediate	1(0.7)	3(2.1)	40(27.6)	47(32.4)	54(37.2)	145
Moderate to High Futility	0(0.0)	0(0.0)	10(23.3)	12(27.9)	21(48.8)	43
Total	3(1.0)	12(4.0)	98(32.9)	90(30.2)	95(31.9)	298

N.R.= 183 (one school missing achievement data)

d.f.= 12 X^2= 58.699 $p < .001$ Kendall's Tau B= .277

Table 14. Academic Achievement (Reading) by Sense of Control/ Sense of Futility.

Sense of Control/ Futility	Reading Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High Control	5(29.4)	4(23.5)	5(29.4)	2(11.8)	1(5.9)	17
Moderate Control	2(1.7)	11(9.2)	34(28.3)	33(27.5)	40(33.3)	120
Intermediate	2(1.2)	5(3.0)	43(25.6)	45(26.8)	73(43.5)	168
Moderate to High Futility	0(0.0)	0(0.0)	12(25.5)	13(27.7)	22(46.8)	47
Total	9(2.6)	20(5.7)	94(26.7)	93(26.4)	136(38.6)	352

N.R.= 129 (one school missing considerable reading data)

d.f.= 12 X^2= 76.835 $p < .001$ Kendall's Tau B= .197

Teacher expectations which lead to such a restriction of action opportunities are discussed later.

With respect to sense of control/sense of futility, the data reveal that this construct relates quite well to academic achievement when the latter is measured by composite achievement and fairly well when it is measured by reading achievement. Fifty-three and six tenths percent of those with a moderate to high sense of control achieve at or above appropriate grade level in composite achievement while this is true of only 23.3% of those with a moderate to high sense of futility. In fact, nearly one-half (48.8%) of those with a moderate to high sense of futility achieve two or more grades behind their appropriate grade level (compared to only 18.2% of those with moderate to high sense of control)! These findings on sense of control/sense of futility with academic achievement corresponds to the findings of Coleman (1966) and Brookover, et al. (1973) which indicate that sense of control and sense of futility are important correlates of academic achievement for minority children.

Finally, perceived future relevance of school, which related well to self-investment in the student role, shows little relationship to academic achievement. However, it does appear to be the case that those who perceive high future relevance of school are more likely to achieve at or above grade level in composite achievement than are those with a moderate or low perception of future relevance -- 42.7% with high perception of future relevance, 31.6% with moderate perception of future relevance, and 20.0% of those with low perception of future relevance achieve at or above grade level in composite achievement. A similar pattern appears when academic achievement is measured by grade point

average. Those with high perceived future relevance of school more often achieve in the highest grade category.

The data, then, lend some support to Hypothesis 5, with the strongest support coming from the data on sense of control/sense of futility. However, the hypothesis is not supported by the data on self-investment in the student role, and it is suspected that there may be certain inadequacies in the measure of this construct.

Since evidence was not found in the achievement data to indicate the presence of a "cross-over phenomenon," the relationship of these variables (academic achievement with self-investment, sense of control/ sense of futility, and perceived future relevance of school) by grade in school was not seen as meaningful as had been suggested in the earlier discussion of this hypothesis.

Hypothesis 6, finally, calls attention to the immediate social environment of the school. It suggests that academic achievement, which may be viewed as a behavioral norm, is related to other norms of the school, namely the value which students place on academic achievement, the amount of competitiveness for achievement in the school, and the concern which others in that social environment express for achievement. Tables 24 -28, Appendix E, and Table 15 in this chapter display the data relevant to this hypothesis.

The construct, Perceived Academic Norms of the School, measures such attitudes perceived among others (basically peers, here) in the social environment of the school, as the value accorded academic achievement and concern for good performance in school. These perceived norms seem to have little to do with actual academic achievement, regardless of which measure of that achievement is examined. Most students, looking

at the distribution on Perceived Academic Norms, seem to perceive modest (i.e., moderate to moderately high) norms favoring academic achievement in their school. This is consistent with most students' reports that they (themselves) look rather favorably upon academic achievement -- as indicated in their responses to the self-investment items. Yet, actual behavior does not seem to follow these attitudes and the perceived attitudes of others. It has been suggested that this incongruity may be related to the context of achievement within these schools whereby what is perceived as high, or even acceptable, achievement within the school is not so evaluated with applying a standard from outside the school (as when performance is measured and compared on a national basis with standardized achievement tests). Alternatively, students in these schools may be seen to have attitudes favoring academic achievement, but such achievement may be blocked by some other factor or factors.

Competitiveness, implied by the concept of achievement, may be such an inhibiting factor. If aggressive, competition-oriented behavior is perceived to be required for academic achievement, and if such behavior is not acceptable in the individual's value system, then the individual may still value achievement with its desirable consequences (perceived by the individual) of a "good job," etc., but choose not to engage in the disapproved behavior. In other words, the child may assign a positive value to the end (good performance in school), but a negative value to the means (aggressive, competitive behavior). Earlier it was asked whether competitiveness is an orientation still alien (as it has been reported to have been traditionally) to the Indian children involved in this study. Data on questionnaire items related to "competitiveness" and observations of classrooms indicate that there may be some

reluctance to engage in competitive behavior -- more so, it seems, when the competition is between individuals rather than of an individual with some standard of excellence or even between groups (noting the popularity of team sports). Tables 15 (in this chapter) and 27 - 28 (in Appendix E) display data on perceived competitiveness of peers and academic achievement Although no statistically significant differences are found in achievement by perceived competitiveness of peers, the data on the composite measure of academic achievement and perceived competitiveness are interesting. Perception of a moderate amount of competitiveness appears to be more beneficial in terms of the composite measure of academic achievement than either high or low perceived competitiveness. 50.5% of those who perceive a moderate amount of competitiveness among their peers achieve at or about grade level while this is true of only 30.6% of those who perceive moderately high to high levels of competitiveness and 40% of those who perceive moderately low to low levels of competitiveness. This would seem to suggest some

Table 15. Academic Achievement (Composite) by Perceived Competitiveness of Peers.

Perceived Competitiveness	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	0(0.0)	1(2.4)	9(22.0)	11(26.8)	20(48.8)	41
Moderately High	2(1.4)	6(4.3)	37(26.6)	50(36.0)	44(31.7)	139
Moderate	1(1.0)	4(4.1)	44(45.4)	23(23.7)	25(25.8)	97
Moderately Low to Low	0(0.0)	1(4.9)	9(36.0)	9(36.0)	6(24.0)	25
Total	3(1.0)	12(4.0)	99(32.8)	93(30.8)	95(31.5)	302

N.R.= 179 d.f.= 12 X^2= 17.63364 p=<.127 Kendall's Tau B= -.152

viability for the argument advanced here that the means to the valued end, academic achievement, may be rejected by many of the Indian students. This observation also lends partial support to the hypothesis that perception of a moderate amount of competitiveness is related to academic achievement.

Since teachers, as important actors in the school social system, are seen as playing an important part in creating the normative climate of the school, several items on the child's perception of teacher attitudes toward achievement have also been examined in relation to the child's academic performance. The items examined are:

(1) Perceived Academic Push from Teachers

(Question 40) How many teachers in this school tell students to try and get better grades than their classmates?

(2) Perceived Teacher Indifference

(Question 41) Of the teachers that you know in this school, how many don't care if the students get bad grades and do bad work?

(3) Perceived Teacher Demand for Achievement

(Question 42) Of the teachers that you know in this school, how many make the students work too hard?

Tables 29 - 35, Appendix E, and Tables 16 and 17 in this chapter display this data.

Of all these teacher attitude items, only perceived teacher indifference shows any relationship with academic achievement, and only when achievement is measured by composite achievement and grade point average.

Table 16. Academic Achievement (Composite) by Perceived Teacher Indifference.

Perceived Indifference	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
Low	2(1.6)	7(5.6)	53(42.7)	35(28.2)	27(21.8)	124
Moderately Low	1(1.8)	3(5.4)	18(32.1)	16(28.6)	18(32.1)	56
Moderate	0(0.0)	0(0.0)	6(17.6)	10(29.4)	18(52.9)	34
Moderately High	0(0.0)	0(0.0)	8(22.9)	10(28.6)	17(48.6)	35
High	0(0.0)	2(4.5)	13(29.5)	14(31.8)	15(34.1)	44
Total	3(1.0)	12(4.1)	98(33.4)	85(29.0)	95(32.4)	293

N.R.= 188 d.f.= 16 X^2= 24.589 p=<.077 Kendall's Tau B= .185

Table 17. Academic Achievement (Grade Point Average) by Perceived Teacher Indifference

Perceived Indifference	Grade Point Average: 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
Low	33(15.7)	68(32.4)	105(50.0)	4(1.9)	210
Moderately Low	6(6.8)	27(30.7)	45(51.1)	10(11.4)	88
Moderate	1(2.2)	15(32.6)	26(56.5)	4(8.7)	46
Moderately High	1(2.2)	15(33.3)	27(60.0)	2(4.4)	45
High	2(3.2)	23(37.1)	31(50.0)	6(9.7)	62
Total	43(9.5)	148(32.8)	234(51.9)	26(5.8)	451

N. R.= 30 d.f.= 12 X^2= 30.940 p=<.002 Kendall's Tau B= .133

In terms of composite achievement, differences in the perception of teacher attitudes toward achievement approach statistical significance while the observed correlations are fairly low. However, in examining the data in Table 16, several important observations may be made: (1) children who perceive a great deal of concern among their teachers for academic achievement (i.e., low perceived indifference) are more likely to achieve at or above grade level (49.9%) than are those who perceive high indifference (i.e., lack of concern) among teachers toward academic achievement (34.0%); (2) children who perceive that "half of the teachers' (moderate indifference) are indifferent to academic achievement seem to be least likely (17.6%) to achieve at or above grade level -- indicating, perhaps, perception of inconsistency in achievement values and norms in the social environment of the school; and (3) children who perceive moderately low or low indifference among teachers are more likely to achieve at or above grade level (46.7%) than are children who perceive high or moderately high indifference (29.1%). These findings, then, seem to add partial support to Hypothesis 6 which asserts that observed teacher concern (conceptualized as the inverse of indifference) is positively related to academic achievement.

It is not very surprising that perceived academic push from teachers does not relate well to academic performance. Academic push is seen as connoting aggressive, competitive behavior with respect to one's classmates, and it has already been observed that such behavior does not seem to find much favor among these children.

Teacher demands for academic achievement neither reached statistically significant levels of difference nor showed much of a correlation with academic achievement. In part, this may be due to difficulties

in interpreting the question -- teachers who "make their students work too hard" may either be seen as demanding a high level of performance or as simply "oppressive" in loading the students down with many tasks. An interesting observation can, however, be made in the data in Table 34 (Appendix E). If composite achievement is viewed in terms of two categories, achievement at or above grade level and achievement below grade level, teachers who are perceived as very demanding seem to get the best results with 55.6% of these children achieving at or above grade level. This level of achievement varies within a small range in the other categories of perceived teacher demands (31.8% - 36.3%).

In conclusion, then, the varied data examined in relation to Hypothesis 6 show some support for this hypothesis. A moderate level of competitiveness and perceived teacher concern for academic achievement were found to relate to academic achievement. Perceived academic norms of peers (e.g., value accorded academic achievement, concern for good performance in school, etc.), however, seem to have little bearing on academic achievement. It was noted that, in general, peers are perceived to be favorably disposed toward achievement, and it was thus suggested that either what is judged to be "good achievement" within the context of these schools is judged "inferior" by an external standard or other factors are preventing students from reaching the apparently valued end of good academic performance. Finally, it was observed that students who perceive their teachers to make very high demands for achievement generally achieve at higher levels than students who perceive their teachers to be less demanding. Taken together, these findings do suggest that there are important school climate factors in the schools attended by these children which relate to their academic achievement (or lack of achievement).

Before proceeding to the summary of the results of this data analysis, one question, the response to which is seen as partially dependent upon the data analysis just completed, remains to be considered. Throughout this study there has been a good deal of concern with "others" in the social environment of the individual. Others have been seen as providing the initial attitudes from which the individual develops his own self-attitudes. Others have been seen as establishing norms, the learning of which leads the individual, theoretically at least, to define what is appropriate behavior for him. Others have been seen as important in evaluating and judging the behavior of the individual, granting him esteem for acceptable behavior and censure for unacceptable behavior. The question remains, however -- who are these others who are so important to the individual? There seems to be little question that not all of the "others" encountered by the individual are important for him in these ways. In particular, the concern here is with identifying the child's significant others for his academic self-concept and his academic performance.

The literature (see Chapter II) has suggested three sets of others and these correspond to those who are seen as most intimately involved in the child's learning -- parents, teachers, and peers. Which, if not all, of these others is significant for the child's academic endeavors is a question examined through the results of our data analysis (particularly with attention to those findings on perceived expectations and evaluations of others) and through several other questions asked of students in the student survey. Two questions ask the child rather directly about others whom he sees as important to his work in school. Question 34 asks the child:

> When you do good work in school, who do you most want to know about it?

This question may be seen as asking the child who is significant as "an evaluator" of his school work and, perhaps, as a "granter of esteem." Question 35 asks the child:

> Who is the most interested in your work in school?

This question may be seen as asking the child who he perceives as showing the greatest concern for his academic achievement. A previous finding indicated that concern (from teachers) for achievement is a school climate factor which is related to achievement.

In response to these two questions (see Figure 4, Appendix E), nearly one-half of the children identified their mothers (48.3% for Question 34 and 42.8% for Question 35) as significant others for their school work. Several times, when the survey was being administered, children (usually older -- seventh and eighth grade -- children) indicated that it was very difficult for them to choose between their mother and their father in responding to these two questions. The difference in the proportion choosing "mother" rather than "father" (48.3% vs. 18.1% for Question 34 and 42.8% vs. 16.8% for Question 35) seems to be a good indication that the Indian mothers are perceived as most important evaluators and as most concerned about their children's learning. This may, in part, be a reflection of the fact that fathers are often absent from the homes of these children -- through death, divorce, separation, or off-reservation employment. The children also see teachers as important evaluators/ esteem providers and as concerned about their school

work. In fact, after mothers, teachers are identified most frequently in these two questions (19.5% and 18.8% respectively -- slightly more often than fathers). What all this seems to be leading up to is the observation that the children seem to perceive adults (i.e., parents and teachers) as significant others in relation to their academic endeavors. Brothers, sisters (who, in some cases, may be adults), and best friends are identified much less frequently. Looking at the responses to several other questions on the perceived importance of others' evaluations and opinions of the, the children are very consistent in rating the perceived attitudes and opinions from their parents and teachers toward them as more important than the perceived attitudes and opinions of peers (see Figure 5, Appendix E).

In relation to self-concept of academic ability, the expectations and evaluations of each of the three sets of others examined (parents, teachers, and best friend) are found to be important, with best friend's and parents' perceived expectations and evaluations somewhat more highly correlated with self-concept than teacher expectations and evaluations. In terms of actual performance (measured academic achievement), however, perceived parents' expectations and evaluations show the highest correlations with academic achievement. Thus, not only do these children identify their parents (particularly, their mothers) as significant others for their student roles, but they also show academic performance which seems to reflect best their perception of their parents' assessment and aspirations for them.

In responding to the question, then, who are the child's significant others for his student role and academic achievement, the data presented here would incline one to say that parents, teachers, and peers all seem

to be of some importance; however, both from the standpoint of the children's own declarations and from the analysis of the children's self-concept as student and academic achievement in relation to their perceptions of the expectations and evaluations of others, parents, and particularly mothers, seem most significant for these Indian children.

Summary of Results

This chapter has been concerned with findings in relation to three main areas of interest: (1) the current patterns of academic achievement obtaining among American Indian children in the elementary school (the investigation here, of course, is limited to a reservation in the Plains); (2) important assumptions underlying this study and their appropriateness to the sample of children in this study; and (3) several basic assertions which are seen as centrally important to the tentatively proposed model. In addition, some attention has been given to identifying the significant others for the student role and academic achievement of these children.

Academic Achievement

The analysis of achievement data revealed no "cross-over phenomenon" as several previous studies had indicated. Instead, and in agreement with Fuchs and Havighurst's assessment of this situation (1972), academic achievement was observed to be poor from third through eighth grade. The fifth and eighth grades seemed to be particularly poor. However, no grade was observed to be characterized by achievement "at or above" national norms -- hence there was no initial state of high achievement from which children could be observed to "cross-over."

In addition to analysis of academic achievement by grade in school, achievement was examined in terms of ethnicity (making use of the data on the small number of non-Indian children in the five schools in this study) and in terms of sex. The non-Indian classmates of the Indian subjects in this study were found to achieve at significantly higher levels on each of the three measures of achievement utilized in this study (composite, reading, and grade point average). When the standardized measures of achievement were examined by sex, no significant differences were observed. The Indian girls in this study, however, were found to have higher grade point averages than the Indian boys. This is consistent with many other reports of sex differences in grades received in elementary school. One suggested reason offered for this difference by sex is that female elementary school students are viewed as more cooperative and responsible by teachers than are the more rambunctious elementary school male students.

School-to-school differences in achievement were briefly examined for the five schools in this study. Contrary to some previous reports (see especially Coombs, 1958) and criticisms often heard on the reservation about BIA schools, no important differences in achievement were observed among schools by type (i.e., BIA, public, and mission). All presented the same dismal picture of predominantly poor achievement. Variations in the teaching methods and organization of the learning environment employed by the five schools also resulted in no clear differences in achievement. Two observations, one comparing the schools by proportion of students in the school (in grades three through eight) who are within one grade of their appropriate grade level or advanced and the other examining enrollment by grade to provide some assessment of holding

power, revealed one school to do even more poorly than the others. It is suspected that school climate factors not examined in this study have something to do with this poor showing.

Assumptions

One of the important areas of concern with respect to the assumptions underlying this study had to do with the self-constructs employed in the proposed model. Previous studies which employed such constructs as "self-concepts" and "self-esteem" had assumed that these constructs were appropriate to American Indian subjects. However, the fact that these constructs were developed in terms of white, middle-class values and orientations raise real questions about their appropriateness for a sample of American Indian children. There are also indications of conflicting (Dakota) value orientations in the literature (i.e., individual autonomy vs. the "leveling" effect of the peer group) which lead one to question whether, according to the orientations of these Indian children, it is appropriate for an individual student to rise above and outperform his peer group. Related to this concern was the concern for the competition-orientation implicit in the (white, middle-class) concept of achievement. Again, the writings on the "leveling" effect of the peer group and peer pressure to conform seem to suggest that such an orientation may be inappropriate to these children. In addition to these concerns, attention in this section was focused on major constructs employed in this study and their appropriateness for this sample of American Indian children.

Factor analysis employing a varimax rotation failed to produce distinct factors from fifty-one attitudinal items from the student questionnaire

as had been the case with Schneider's (1973) varimax rotation factor analysis of sixty-three attitudinal items from the student survey employed in his study. Although essentially the same questionnaire was employed in the two studies, several items were deleted from the questionnaire employed in the present study and a few items of interest were added. It is suspected that these alterations may have affected the outcome of the factor analysis. Alternatively, the possibility that the factors do not hold together in the same way for the Indian students was entertained.

In order to further assess the constructs employed in this study, a comparison was made of the intercorrelation matrices of eight constructs employed in this study and eight very similar constructs employed by Henderson (1972), also using essentially the same student questionnaire. These comparisons proved to be favorable, particularly with respect to two constructs over which concern has already been expressed, namely self-concept of academic ability and self-investment in the student role. This observation gives greater confidence in the self-constructs as appropriate and meaningful for the Indian subjects in this study. Inexplicably, however, two constructs compared less favorably -- perceived best friend's expectations and evaluations and perceived teacher expectations and evaluations. This is particularly puzzling since a similar construct, perceived parents' expectations and evaluations, did compare rather well. At this point, it appears that, since the items in each of the two constructs interrelate fairly well for the study in which they are employed, the items composing each of these constructs simply relate to one another in a different way for the two samples. In general, however, the constructs compared reasonably well between the two studies.

In further assessing the appropriateness of self-constructs for the sample of American Indian children, two additional strategies were employed. First, items designed to bring out self-attitudes were carefully examined, and second, the functioning of self-concept of academic ability was analyzed to see if it operated in the same way (in relation to academic achievement) as Brookover, et al. (1967) had found it to operate in their study. Supplementing this were observations from the field relevant to self-attitudes.

Results of the analysis of self-construct items reveal little or no rejection on the part of the Indian subjects in this study to responding in such terms. In addition, a comparison of Indian and non-Indian respondents (again recalling that the latter group is numerically small) in terms of the index of self-concept of academic ability reveals no significant differences. This suggests that, consistent with social psychological learning theory and Mead's notions of the "self," these children operating in the same social environment (of the school) hold similar beliefs and expectations about themselves. Field observations also support the assumption that self-constructs are viable with (these, at least) American Indian subjects.

Analysis of the data in terms of Brookover, et al.'s contention that self-concept of academic ability functions as an intervening variable between perceived expectations and evaluations of others and academic achievement yielded mixed results. First, consistent with Brookover's argument and findings, the correlations of perceived expectations and evaluations of others with self-concept of academic ability are greater than the correlations of self-concept of academic ability with academic achievement. Second, however, inconsistent with Brookover's argument

and findings, most correlations of perceived expectations and evaluations of others with academic achievement, controlling for self-concept of academic ability, are not smaller than the correlations of self-concept of academic ability with academic achievement, controlling for perceived expectations and evaluations of others. The latter situation obtains only when the perceived expectations and evaluations examined are those perceived of best friend, and this only in relation to standardized measures of achievement (not grade point average). Thus it appears that self-concept of academic ability does not function as an intervening variable between perceived expectations and evaluations of teachers and parents with academic achievement. It has been suggested that a more direct relationship between the latter obtains with academic achievement for these children as they attempt to comply with the perceived wishes of these others.

Unlike self-constructs, there appears to be more reason to believe that "competitiveness" is an alien orientation for Indian subjects. This seems to be particularly true when the implied competition is with peers rather than with a standard of excellence. Responses to several items in the student survey did not reveal a total absence of such an orientation. On the contrary, it appears that a measure of each orientation -- competitiveness and cooperativeness -- exists for these students. In examining the data for Hypothesis 6, it was further observed that a perception of a moderate amount of competitiveness among classmates was related to better academic achievement.

In general, then, the data and observations suggest that much has changed from the traditional values and orientations of these American

Indian subjects. This is not to say that these have changed to correspond to the values and orientations of the dominant society. On the contrary, what now exists may be viewed as "a new culture" which is something of a blend of the traditional and the dominant society's cultures. Consequently, the constructs employed in other studies and assumed to be applicable here have shown themselves to be generally appropriate.

Hypotheses

The first three hypotheses, testing the most basic assertions found in the proposed model, receive a good deal of support from the data. Hypotheses four through six, however, receive mixed support indicating that more thinking and study are needed to determine how the various factors examined relate to one another and to the academic performance of the child. The first three hypotheses make the following assertions: (1) that the child's self-concept of academic ability is derived from the child's perceptions of the expectations and evaluations which significant others make of him; (2) that positive self-concept of academic ability is a necessary condition for academic performance at a high level; and (3) that perceived expectations and evaluations of others are reflected in actual academic performance. The data support each of these assertions. In the case of the first assertion, significant positive correlations were found for perceived expectations and evaluations of best friend, teachers, and parents with self-concept of academic ability The correlations of perceived best friend's and parents' expectations and evaluations with self-concept of academic ability were somewhat greater than that of perceived teacher expectations and evaluations

with self-concept indicating, perhaps, that these two sets of "others" are more significant for the child's self-attitudes than teachers

The second assertion also receives support from the data which shows significant differences in three measures of academic achievement by self-concept of academic ability. The correlations, however, are modest with composite achievement correlating best with self-concept of academic ability. The data also reveal that while some students who have high self-concept of academic ability achieve at low levels, no students with low (or even moderately low) self-concept of academic ability achieved above grade level and very few even achieved at grade level. This is seen as providing support for the assertion that high self-concept of academic ability is a necessary, but not sufficient condition for achievement. Even grade point average shows a similar pattern by self-concept of academic ability.

The third assertion similarly finds support in the data for each of the three sets of others and each of the three measures of academic ability. That is, there are significant differences in academic achievement as measured by the two standardized measures and by grade point average by perceived expectations and evaluations of best friend, teachers and parents. The correlations, while positive, are modest, and the perceived expectations and evaluations of parents are consistently best correlated with academic achievement. This suggests that parents serve as significant others for their children's academic performance -- an interesting finding since the parents are, apparently, so little involved with the school and teachers, as observed in many discussions with them, grant parents so little positive part in their children's learning.

Hypotheses 4 - 6, although still concerned with social interaction in the school setting, turn from these basic assertions about the interaction of self and others and the relationship with academic achievement to assertions attempting to relate social environment factors with academic achievement. Thus the following assertions are made: (1) that the investment which a child makes in the student role is directly related to his perception that he is able to control his environment and life chances by his own efforts and that it is inversely related to the perception that his attempts to influence his environment are futile or likely to be futile; (2) that children who have made an investment of self in the student role and who perceive that they can influence their environment will achieve at higher levels than children who have not made such an investment and who do not perceive that they can influence their environment; and (3) that academic achievement is best when the school climate is characterized by perceived norms among students valuing achievement, a moderate amount of competitiveness, and perceived teacher and student concern for academic achievement.

Hypothesis 4 (which makes the first of these assertions) receives mixed support from the data when self-investment in the student role is examined with sense of control/sense of futility. Rather than finding a direct relationship between self-investment and sense of control and an inverse relationship between self-investment and sense of futility, as expected, a curvilinear relationship was observed. This showed high self-investment to be directly related to both high sense of control and moderate to high sense of futility. No immediate explanation for this finding was apparent. However, it was suggested that, if sense of control/sense of futility follows from self-investment (rather than

vice versa), then the relationship of high self-investment with sense of futility may indicate that the individual has experienced frustration in not receiving anticipated rewards from his investment.

If one conceptualizes perceived ability to influence the environment in terms of the perceived future relevance of school, not only do statistically significant differences appear in the data, but a modest correlation also is found. This suggests that there is some relationship between self-investment in the student role and perceived ability to influence one's life chances, particularly when the latter are related in more pragmatic and concrete terms.

In testing the assertion (Hypothesis 5) that children who have made an investment of self in the student role and who perceive that they can influence their environment will achieve at higher levels than children who have not made such an investment of self and who do not perceive that they can influence their environment, the relationship of self-investment with academic achievement was considered first. The data revealed almost no relationship between these variables suggesting that even if a child does believe that it is important for him to be a good student and does "feel bad" when the evaluations of others suggest that he is not a good student, these attitudes are not enough to lead to academic achievement. When sense of control/sense of futility was examined with academic achievement, however, statistically significant differences and modest correlations were found. This coincides with the findings of Coleman (1966), Brookover, et al. (1973), and others which indicate important relationships between sense of control and sense of futility with academic achievement for minority students. This finding in light of the findings (1) that self-investment in the student

role and sense of control/sense of futility do not relate to one another and (2) that self-investment in the student role does not relate to academic achievement, seems to suggest that sense of control/sense of futility relates in a direct way to academic achievement and not through self-investment (at least the measure of self-investment utilized here) as had been supposed.

Although perceived future relevance of school did not result in statistically significant differences or in meaningful correlations with academic achievement (a finding which may have been anticipated in light of the earlier findings with self-investment), examination of the data suggests that those who perceive high future relevance of school are more likely to achieve at or above grade level on the composite measure of academic achievement than are those who perceive moderate or low future relevance of school. A similar situation was observed in academic achievement as measured by grade point average -- those who perceive high future relevance more often achieve in the highest grade category.

Thus, Hypothesis 5 receives partial support -- that children who perceive that they can influence their environment will achieve at higher levels than children who do not perceive that they can influence their environment. The assertion that children who have made an investment of self in the student role will achieve at a higher level than children who have not made such an investment (or who have made less of such an investment) was not supported. It was considered possible that the measure of self-investment here was not adequate to the task at hand. Alternatively, it is possible that the children do not perceive that they are achieving at very low levels, having no outside (of the school) standard by which they can assess their achievement.

Finally, the sixth hypothesis, and last assertion formally tested in this study, calls attention to school climate factors. The data reveal that the perceived academic norms of the school (measuring primarily perceived attitudes of peers) have little relationship with academic achievement in this study. The data pattern here is somewhat similar to that of the self-investment data with peers perceived as viewing academic achievement as moderately to highly important, but this shows no apparent relationship with achievement. This is a situation requiring further study, and it has been suggested that the puzzle may be resolved within the achievement context of the school -- i.e., what is evaluated as high, or at least acceptable, achievement in one system may be downgraded in another system of evaluation. At this point, however, the data do not support the part of the hypothesis asserting that a climate of perceived academic norms favoring academic achievement is positively related to academic achievement.

Although the data on perceived competitiveness and academic achievement reveal neither statistically significant differences nor encouraging correlations, examination of the data does indicate that there may be a curvilinear relationship here. Competitiveness perceived by the student to be at a moderate level does seem to be more favorable to academic achievement than either perceived high competitiveness or low competitiveness. This observation is consistent with the assertion in Hypothesis 6 that academic achievement is favored by a school climate characterized by moderate levels of competition.

Finally, looking at perceptions of teachers' attitudes toward achievement, the data reveal that perceptions of teacher concern for achievement (rather than indifference) are more favorable for academic

achievement. An interesting observation from the data also indicates that in school climates where inconsistency is perceived in teachers' attitudes toward achievement (i.e., where "half of the teachers" are perceived to be indifferent toward achievement), academic achievement is at its lowest.

Two other perceived teacher attitudes were found to have less bearing on academic achievement, namely perceived academic push from teachers and teacher demand for achievement. In the former case, it is suspected that the implied competitive-orientation has much to do with the failure of perceived academic push to distinguish between higher and lower achievement. Although teacher demand for achievement did not result in statistically significant differences, it was observed that teachers who are perceived to be very demanding seem to get the best results in terms of composite achievement with the highest proportion of children achieving at or above grade level reporting such a perception. Clearly the results of data analysis in terms of Hypothesis 6 reveal that much work needs to be done in the area of school climate and academic achievement. Perception of competitiveness among classmates and teacher concern for academic achievement appear to be two important factors in this climate.

Tentative Model

The findings of this study suggest several things in relation to the tentative model proposed in the discussion of this study. First, many of the basic constructs employed in the model seem to be both viable and appropriate to American Indian subjects. Second, very basic assertions made in the model, i.e., those relating to perceived

expectations and evaluations of others, self-attitudes, and achievement, were supported fairly well in this study, suggesting that at least in the basic outlines the model corresponds to the actual situation. Third, certain ambiguities were found in those assertions relating social environment factors to academic achievement. It was supposed that perceptions of one's control or lack of control over the environment related to academic achievement through self-investment in the student role. The data, however, did not support this. Several possibilities might be entertained: (1) that sense of control/sense of futility relates more directly to academic achievement; (2) that some other factor(s), such as the perception that aggressive, competitive behavior which is unacceptable to the child is required for achievement, intervenes in this process; or (3) that the present measure of self-investment is inadequate. One emission from the present model model which seems to be called for in light of this study is the place of peers in this process. Although perceived academic norms of the school, conceptualized largely in terms of peer orientations to achievement, did not relate to academic achievement as expected, the findings that perceived best friend's expectations and evaluations are important both to self-concept of academic ability and academic achievement strongly suggest that this group of others clearly be shown in the model.

Although discussion of observations relevant to parts of this model not specifically "tested" in this study is not taken up in this chapter (see Chapter V for this discussion), it seems appropriate to conclude this chapter with a reexamination of the tentative model in light of the findings of this study. The initial assertions of the model are that American Indian children occupy a social status to which

negative, academically-relevant attributes are assigned and that these assigned attributes evoke certain behavioral expectations. Teacher's expectations for the academic achievement of pupils were suggested to have two immediate consequences: (1) differential action opportunities; and (2) evaluations of behavior. Observations discussed in Chapter V suggest that there is indeed reason to believe that "Indianness" functions as a diffuse status characteristic and is thus the focus of a hale of attributes relevant to academic performance. However, the discussion suggests that the negative attributes associated with this characteristic are not so much directed to the child as they are to his parents and home environment and through these to his academic performance. In other words, it is suggested that the child has a poor social environment and because of this, the expectations for his performance are lowered. It is also suspected that differential action opportunities follow from this lowered performance expectation. In discussing the negative finding for self-investment and academic achievement, it was suggested that one possible explanation of the lack of association between self-investment and academic achievement is that some other factor or factors intervene in this process. The action opportunities which teachers provide to the children were suggested to be such an intervening factor. Thus, even if children perceive academic performance to be a desirable end and invest their efforts and risk self-esteem toward that end, their investment may be thwarted by the failure of teachers to provide those opportunities which would result in high measured academic performance.

The model further asserts that via both verbal and non-verbal cues, children perceive the differentials operating in the classroom. That

teacher expectations and evaluations do make a difference for the child's self-concept of academic ability and academic achievement is supported by the data in this study. Observations in classrooms provide some clues to the process by which such expectations and evaluations are transmitted. Older students, in particular, seem to have a fairly good idea of what their classmates are assigned in the class, even when individualized packets are used. An upper elementary girl was heard to remark, for example, that the math material in her packet was not "seventh grade stuff." She went on to comment, "We had this last year in sixth grade!" Response to the "approval-seeking" behavior observed primarily among younger students (see Chapter V) also seems to be an avenue by which teacher evaluations are transmitted to students. One teacher, known for her success in teaching first and second grade students to read and print, impressed this observer with her ready response to such behavior from her young students. In watching her class, it seemed that she seldom missed an opportunity to positively and warmly respond to such approval-seeking. Furthermore, the clear expectations in her class that "all will print" their names, the letters of the alphabet, and "all will write" the numbers from 1 to 100 (or whatever the assignment) seemed to bring the desired response from her students. This was very unlike other classes where such expectations were directed to some students while others (who were judged "not ready yet") colored pictures or looked at pictures in a book.

In addition to teacher expectations and evaluations, the model suggests that parents' expectations and evaluations as well as those of peers (not shown in the model, but suggested in discussion of the model)

are perceived by the child, interpreted, and incorporated into his self-concept of academic ability. The data presented in this study supports these assertions. Both parents' expectations and evaluations and best friend's expectations and evaluations show significant positive relationships with self-concept of academic ability. Thus, both of these are seen as regarded as significant others by the child with respect to his academic endeavors, and both also show significant positive correlations with his academic performance. However, it was also suggested that self-concept of academic ability intervenes between the perceived expectations and evaluations of others and academic achievement. The data support such a relationship only for Best Friend's Expectations and Evaluations. In Chapter V, the possibility that perceived expectations and evaluations of others relate to academic achievement directly (rather than through self-concept of academic ability) as the child's attempt to "comply" with the perceived wishes of others (parents and teachers) is discussed.

In addition to perceived expectations and evaluations of others, the model suggests that the child's perceptions of his social environment, both inside the school and outside it, influence his academic self-attitudes and ultimately his academic performance. The academic self-attitude of interest here is the child's self-investment in the student role. Such investment may be seen as a process in which the child weighs the costs and benefits to be derived from investment of time and effort and risk of self-esteem in the student role. One variable supposed to enter into this calculation is the child's perception that he can or cannot influence his environment and his life chances through his own efforts. Although sense of control/sense of futility did not

relate to self-investment in the student role as it was expected to, sense of control/sense of futility did show significant, positive correlations with academic achievement. That is, the child who perceived that he is able to influence his environment through his own efforts achieved, in general, at a higher level than the child who did not perceive that he is able to influence his environment. Several possible reasons for the lack of relationship between self-investment in the student role and academic achievement have been suggested. Among them are the suggestion that the measure of self-investment utilized here was inadequate and the suggestion that other factors (such as lack of real opportunities for achievement) interfere with efforts to achieve.

The source of the child's sense of control/sense of futility was not revealed in this study. It was observed, however, that teachers and some school administrators express a "sense of futility" with education efforts on the reservation. This point is discussed further in Chapter V. It remains for further research, however, to determine whether there is a relationship between such expressions of futility and children's sense of control/sense of futility.

Finally, in the discussion of the proposed model, it was suggested that some sort of "adaptation" occurs in response to the school's demands for achievement. This, of course, presupposes that such demands are present and leads into a consideration of the school's normative climate. The data reveal, first, that the perceived academic norms of peers are favorable to achievement, but that these do not relate to academic performance. Again, it was suggested that some sort of inhibiting factor (such as lack of achievement opportunities or perception of unacceptable behavior, e.g., aggressive, competitive behavior) may be at

work here. At any rate, more work is seen as needed to define just what the role of peers is in the achievement process. Several teacher factors do seem to make a difference in the child's achievement. The data reveal that the children achieve best when they perceived their teachers to be concerned about academic achievement rather than indifferent to it. The data also reveal that children perform poorest when they perceived "inconsistency" in teachers' attitudes -- i.e., half of the teachers concerned about achievement and half of them indifferent to it. Such a situation may be interpreted as leaving the child without any clear guides as to what is expected of him. The data also seem to indicate that those children achieve best who perceive that the teachers in their school demand a lot of effort from them. This, again, seems to relate to the finding that children achieve at levels that they perceive to be expected of them. In sum, this study suggests to us that several factors ought to be considered in continued work on that part of the model presently labeled "Adaptation: Cost-Benefit Calculation." Among those factors are the child's perception of demands and concern for achievement by others in his social environment, indicating the extent to which academic achievement is considered to be a desirable end in that social system; his perception of the means to that end and the evaluation which he makes of those means (e.g., competitive behavior); his perception of the worthwhileness of his efforts to that end (sense of control/sense of futility); and some future assessment of the relevance of investment in the pursuit of achievement (e.g., perceived future relevance of school).

In conclusion, it might be said that findings in this study have succeeded in generating some confidence in constructs employed in the

tentatively proposed model, establishing some confidence in basic assertions made in the model, and raising questions and providing guidelines for continued work on this problem.

CHAPTER V

SUMMARY AND CONCLUSIONS

In this fifth, and last chapter, findings of this study are briefly summarized and discussed at somewhat greater length with particular attention paid to the viability of the tentatively proposed model and implications for continued work in this area. Limitations of this study are also indicated together with some suggestions on how such limitations might be overcome in future studies. Since this study and model development were undertaken with a particular concern for the planning of intervention action in the process of academic failure, discussion of the potential implications and contributions of this study (and the broader model development work) conclude this chapter. Specific recommendations for study serve as a kind of summary of this discussion.

Summary of Findings

The results of data analysis have provided some support for the tentatively proposed model. The assumptions underlying the model were examined and appear to be sound. Namely, self-orientations and some amount of competitive-orientation do not appear to be totally alien to this sample of American Indian children. The student role also appears to be an important and meaningful one for these children, as the measure of self-investment has indicated. Similarly, the most basic premises,

hypotheses one through three, find support in the data. That is, perceived expectations and evaluations of others and self-concept of academic ability do relate to academic performance in positive ways as expected. However, self-concept of academic ability does not generally function as an intervening variable between perceived expectations and evaluations of parents and teachers and academic achievement in this study. It did, however, function in this way for perceived best friend's expectations and evaluations. It is suspected that this finding may be an indication that these children seek to directly comply with what they perceive to be the wishes of these others (parents and teachers). Self-concept of academic ability, on the other hand, was found to function quite well as a threshold variable for academic achievement. That is, high self-concept of academic ability showed itself to be a necessary, but not sufficient, condition for academic achievement.

Other assertions (hypotheses four through six) relating social environment and school climate factors to academic achievement received less clear support from the data. However, they were not completely contradicted by the data either. Thus, self-investment in the student role, which was thought to be a consequence of the child's perception of his ability or inability to control his environment, to some extent at least, was not found to relate to sense of control/sense of futility in this way, but it did relate rather well to perceived future relevance of school. This seems to suggest that, in continued work with the self-investment construct, some attention might profitably be directed to investment of self with anticipation of some future return conceived in fairly pragmatic and concrete terms, e.g., "a good job," rather than exclusively in such abstract terms as "self-esteem" maintenance or

increments. Although self-investment in the student role did not relate to sense of control/sense of futility as it was expected to relate, the latter construct did relate quite well to measured academic achievement (as Coleman, 1966, and others have also found to be the case for other minority children). Self-investment and perceived future relevance of school, on the other hand, related less well to academic achievement. This is seen as indicating that, although students perceive, or at least report, their student role and academic achievement to be very important to them, other factors hinder them in reaching this end. The data on perceived competitiveness of peers and perceived teacher indifference to academic achievement suggest what two of these factors might be: (1) aggressive, competitive behavior, which may be seen as required for academic achievement, is not acceptable to these students -- some amount of competitiveness is acceptable, and particularly so, it seems, if competition is with a standard of excellence or even between groups rather than between individuals, and the data show a moderate level of perceived competition among peers to relate better to achievement than either high or low levels of perceived competition; and (2) consistent teacher concern for academic achievement, rather than teacher indifference or inconsistency in teacher attitudes toward achievement within the school, is found to relate fairly well to academic achievement. On the other hand, perceived academic norms of the school (largely conceptualized here as created by peers) do not relate so well to academic achievement -- as the Wax, Wax, and Dumont (1964) study suggested. Examination of perceived peer attitudes toward the student role and academic achievement revealed these to be rather positive as was the case with the individual's own attitudes. Academic performance, however,

was not seen as following from these attitudes. This, too, might be interpreted as suggesting that other factors block the valued end, academic achievement. Alternatively, it might also be suggested that either the measure of perceived academic norms utilized here is inadequate or the level of academic achievement observed in these schools is evaluated within the context of these schools to be acceptable while they are evaluated to be unacceptable (i.e., lower than they ought to be) when evaluated by an outside observer utilizing a standard from outside of the given social system -- i.e., standardized achievement tests and national norms of achievement.

Discussion and Limitations

In this discussion some attention is given to aspects of the tentatively proposed model on which "hard data" were not gathered. Of particular interest here are teachers' attitudes and orientations especially in relation to the status characteristic, "Indianness." Field observations and impressions drawn from informal interviews and discussions with teachers and school administrators serve as the basis for much of this discussion. This, of course, is limited by researcher bias and other such inadequacies. It may, however, suggest some promising directions for future studies, and it does suggest something about the viability of certain assertions in the model.

Other discussion is focused on the findings of this study and inferences drawn with respect to various aspects of the model. Of particular interest here are those findings which lend mixed support to assertions made in the model.

In the findings on the relationships of perceived expectations and evaluations of others, self-concept of academic ability, and academic achievement, the unexpected finding that self-concept does not function as an intervening variable between perceived (parents and teacher) expectations and evaluations and achievement emerged. However, both perceived expectations and evaluations and self-concept did relate to achievement This was interpreted as suggesting that these children may directly comply with these perceived expectations and evaluations. If this is the case, one might then ask why this should be so with parents and teacher expectations. In responding to this inquiry, this researcher suspects that several factors enter the picture: (1) orientation toward older persons; (2) concepts of respect and wisdom; and (3) pragmatic orientation toward education. These factors, interpreted from the Indian point of view, seem to be somewhat interrelated. First, the traditional Indian (for this tribal group, according to ethnographers) orientation to older persons has been one of respect. This attitude of respect for older persons is suspected by this researcher to be an enduring orientation for Indian children. To cite but one example of this, this researcher recalls two occasions when older Indian men were invited to talk to the high school sociology class (which this researcher was teaching) about the Indian family and traditional style of life and about Indian religion. The almost total attention which the students gave to these two speakers was impressive and seemed to indicate far more than interest in their presentations. In the case of the first older man, who was very witty in a "home-spun" way, this researcher could not but help imagine the response such a speaker would have received had he spoken in a non-Indian school (and had he been a non-Indian

speaking about the family and life in American society during his boyhood). It is strongly suspected that the simple ways and speech would have not brought the same response from white American adolescents. In this case, however, the students seem to respond as they were cued to respond (to jokes, serious points, etc.) by the speaker. Similar attentiveness and response were observed in the elementary classroom of a female Indian teacher. Much to the interest of this researcher, the children showed little or no inclination to "fool around" in her class, as had been the complaint of other (non-Indian) teachers. When the teacher was asked about this, she said that she had also noticed that the children seem to behave and perform better in her class than in other classes which she had seen in the school. Part of the explanation may be that she makes clearer performance demands on her students and part of the explanation may also be that the children have learned to behave in this respectful way toward Indian adults. Part of the respect accorded older people by Indian children seems to relate to the Indian concept of wisdom (again as reported by ethnographers and suggested by field observations to still be the case). For example, one young Indian teacher commenting on an Indian man said, "He has a lot of wisdom, even though he is not very old. He is really wise." The suggestion implied here is that ordinarily wisdom is seen as associated with age. It is the "older ones" who have seen and experienced many things who are considered to be wise. According to tradition, one learns not from reading a lot of books and studying or being directed in various activities, but in watching and listening. While visiting the home of an older Indian couple, this researcher and several friends who accompanied her were impressed by the attention which the grandchildren paid to the old

man when he told his many stories. These were clearly children learning in the traditional way. Thus, it is suspected that when children hear their parents, grandparents, or other adults tell about the son/daughter, niece/nephew, or other individual who "got a good education and now has a good job" (as this researcher often heard them relate), children learn these same pragmatic orientations toward education. When their parents, grandparents, or others (generally relatives), then, "talk to" the children ("talking to" being the way of dealing with errant individuals) about their school work -- as they apparently do in spite of the traditional norm of noninterference -- the children, respecting the wisdom of these older persons, are seen as complying, or at least attempting to comply (since other things may still interfere), with their wishes.*

The notion that students attempt to comply with the perceived wishes of their teachers does not appear to be a startling thought nor one confined to Indian students alone. It seems that students everywhere spend a good deal of time attempting to interpret and give meaning to questions and requests of their teachers. Until recently when philosophies of education began to more highly value "questioning behavior" (more popularly at least), students were not encouraged to challenge teachers in the classrooms. Instead, the role of student was conceived of as a flow in one direction, from teacher to student, and students knew that evaluations of them in that process depended on their ability to reproduce bits of information transmitted to them in that flow. Hence students spent a good deal of time interpreting questions and

*A paper written by a high school student and reproduced in Appendix G illustrates many of these things.

expectations and attempting to comply by returning the desired information or exhibiting the desired behavior. Interpretation here, then, is not seen as necessarily implying meaning assignment in terms of the self.

In spite of the philosophies of education, it is suspected that a good deal of this kind of "learning" still goes on. It was seldom observed that Indian children, either elementary school or high school, questioned a teacher in the classroom, and this observation seemed to have nothing to do with the operation of the "code of silence" about which Wax, Wax, and Dumont (1964) have written. In fact, classroom behavior was very much unlike that described by Wax, Wax, and Dumont, and the mission director suggested that things (without being specific here) had changed in many ways since the time of that study. For the most part, the children seem rather docile, doing or attempting to do as their teachers requested them to do. One school, perhaps, provided some exception to this picture. This is the school which was characterized earlier as "open and relatively unstructured." Here the children moved around a good deal, worked largely from individualized learning packets at their own pace (which was observed to be almost nothing for some students), and showed less "compliant" behavior -- largely because, it seems, that little direction was provided with which they could either comply or not comply. Furthermore, it seems that fewer demands for achievement were made on the children in this school, even in terms of working on the learning packets. Since an important part of the philosophy behind individualized instruction (which often, in the estimation of this observer, means little or no instruction) is that each child proceeds at his own pace in learning, some of the teachers,

at least, seemed to view no work on a packet to mean that "the child isn't ready yet." Unfortunately, the achievement data from this particular school is very limited so that it is difficult to say what affect this philosophy has on the child's achievement. The data on reading achievement for this school, show the achievement to be very poor -- much worse than in the other schools (see "Achievement" in Chapter IV). However, because these data were obtained for only a little more than half of the subjects drawn from that school, its reliability is questionable. At any rate, the findings of this study indicate that actual achievement may be related more directly to perceived teacher expectations and evaluations than had originally been supposed, and these findings may be interpreted as "compliance" by the children with their perception of teacher expectations of them in the classroom. Some measure of such compliance may be examined in future work in this area.

More serious negative findings appeared in the latter part of data analysis when hypotheses four through six were examined. Self-investment in the student role, especially, appears to be a problem here. Self-investment neither correlated as expected with sense of control/sense of futility nor with academic achievement. It did correlate well, however, with perceived future relevance of the school (which also did not relate well with academic achievement). Several alternative interpretations of these findings are possible, and the determination of which is most probable is seen as a problem for future research. One alternative is that sense of control/sense of futility do not enter into the child's considerations of whether or not to risk self-esteem through investment in the student role, but that it relates directly to his academic performance -- if he perceives that he cannot "win," he "will not play the

game." On the other hand, the measure of self-investment employed here may be inadequate. Since it correlated fairly well with perceived future relevance of school, this may mean that the construct measured that one dimension of self-investment -- whether the long-range return for achieving behavior in school is worthwhile. However, other dimensions related to sense of control/sense of futility apparently are not included in the measure of self-investment utilized here so that it is not known whether the individual has indeed made a decision to risk self-esteem in the pursuit of this valued end. In other words, the "calculated risk" aspect of the investment process may be the missing element here. Still another alternative is that both self-investment and perceived future relevance are present, but other variables are operating to inhibit achievement. In general, it might be said that the data suggest that students value education and perceive the student role to be an important one, largely from a pragmatic point of view, and in spite of this they achieve at low levels. It was suggested that the perception that aggressive, competitive behavior, which is not acceptable, is necessary for high achievement may inhibit some students from seeking to achieve. It was also suggested that perception of teacher concern rather than indifference is another variable here. If children perceive that teachers view achieving behavior as important, they will adopt this same orientation and behave accordingly. If, on the other hand, children perceive that teachers regard achieving behavior as unimportant, they seem to adapt this orientation and behave accordingly. Worst of all, however, according to the data presented in this study, if the children perceive that teachers are divided and contradict one another

on the importance of achieving behavior, they perform worst of all, having, perhaps, no reliable cues in school to guide them in expected behavior. Finally, a fourth possibility is that the children are performing at levels which they perceive to be appropriate within the context of their school. When judged by a standard outside of that special system, however, they are judged to be performing at less than acceptable levels. Such an interpretation seems plausible given the low average level of performance in these schools.

In considering the third and fourth alternatives just presented, it seems appropriate to turn attention to the teachers in these schools who not only exhibit attitudes (of concern, indifference, etc.) which the children interpret and, perhaps, adopt, but who also provide action opportunities and make judgments -- of children's performance as well as the appropriateness of certain action opportunities for them. Consideration of these points is also seen as involving an assessment of the appropriateness of the status-expectation conceptualizations in the proposed model. The question thus seems to be whether teachers make judgments about children and their learning potential and whether they consequently provide action opportunities (and withold others) on the basis of their identification of these children as "Indians."

Most teachers, when questioned about their Indian students, expressed no doubts about the intellectual abilities of their students. They did, however, express a good deal of concern about the ability of their students to perform given the social environment in which the children live. In particular, they were most critical of the Indian family and the home life of these children. "Indianness" appeared to function not so much as a status attribute calling up negative assessments of

their students directly, but rather as a focus for a hale of attributes characterizing the parents and home life of these children, hence the students' social environment outside of school, and, via this path, "realistic" expectations for the academic performance of their students. Teachers presented variations on this theme. Some saw parents as physically abusing their children (not only through beatings, but also through failure to provide an adequate diet and healthful living environment) and thereby making it impossible for their children to function effectively in school. Many teachers, it seemed, who showed themselves to be concerned, viewed problems in the home (and, in many cases, it is suspected that these "problems" were a matter of conjecture rather than actual knowledge of the situation) as an "excuse" to not burden the child more by challenging him in school; rather, they viewed their role as one of providing a secure, caring alternative environment for the children. There is evidence here, that different states of the diffuse status characteristic were involved in the teachers' perceptions of these "problems" since reference was frequently made, by the teachers in one school, to a particular residential area where many "full-bloods" lived as characterized by such problems. One can only wonder how much concern really exists when these teachers fail to provide the child with opportunities for learning those skills (e.g., reading, writing, computational, etc.) which are so important for him if he is to make his way in a society in which he is already handicapped by racist attitudes toward him.

Still other teachers suggested that they could not "motivate" the children in the school because parents provide so little positive encouragement to help them along. Hence they seem to view efforts on

their part as futile, placing blame on the Indian parents and their presumed lack of concern for the education of their children. It is curious that people who supposedly care so little about education are perceived by the children to be most interested and concerned about their performance of the student role! Also curious is the finding that the academic performance of these children is related to the perceived expectations and evaluations of their parents. Teachers, apparently, do not perceive that these expectations and evaluations even exist!

Finally, some teachers and school administrators evidence a sense of futility with respect to the education of these children, not so much from the perception that the home environment defeats their efforts as from the perception that the social environment of the reservation, and particularly the economic aspect of it, offered little incentive to their students to "get an education" and, consequently, led them (teachers and administrators) to question the worthwhileness of their efforts in providing an education for these children. In one faculty meeting attended by this researcher, this kind of "futility" expressed by teachers led to a discussion of the pros and cons of academic vs. vocational orientations in high school education. Significant to this researcher is the fact that what the Indian people wanted in the education of their children was not considered, but rather what was considered was what these non-Indians judged to be best for the Indian people.

Thus, from the observations made in this study, there seems to be reason to suspect that "Indianness" does function as a diffuse status characteristic, calling up, in some teachers, at least, other characteristics attributed to individuals identified with this status characteristic.

The characteristics in this halo are not necessarily attributed to the child directly, but more often to his parents and home and indirectly through these to the child in the student role. Future study of this question, then, should pay particular attention to this indirect path bearing on the teacher's academic expectations for the child and the kind of action opportunities which the teacher subsequently provides for the child in the school. Related to his, future research might also inquire about the possible relationship of teacher sense of futility with the child's sense of control/sense of futility, sense of investment in the student role, and academic achievement.

Conclusions

Given the limitations previously discussed in this study -- particularly the fact that the study was conducted with elementary school American Indian children, all members of a Plains tribe and living on a reservation in the Plains of the United States -- several important conclusions may be drawn from the findings presented here:

(1) Self constructs employed in studies with non-Indian subjects and found to be valid for those subjects also appear to be appropriate for the American Indian subjects in this study.

(2) Some degree of a competitive orientation is found to be acceptable to this sample of American Indian children. However, a highly competitive school climate, calling especially for such behavior between individuals, seems to be less acceptable to these children as well as detrimental to their academic achievement.

(3) Perceived expectations and evaluations of others (i.e., best friend, teachers, and parents) are directly related to both self-concept of academic ability and academic achievement for these children.
(4) Self-concept of academic ability is directly related to academic achievement and functions as a threshold variable with respect to it.
(5) Sense of control/sense of futility bears a direct relationship to academic achievement for these Indian children.
(6) School climates characterized by moderate levels of competition among students and teacher concern for academic achievement are conducive to bringing about such achievement.
(7) Parents, and particularly mothers, serve as significant others both for their children's self-concept of academic ability and academic achievement.

Implications

The immediate intention of this study has been twofold: to suggest a model defining the process by which social psychological variables work together and result in the pattern of academic failure which has been observed among American Indian children; and to provide a first assessment of that model. The implications to be drawn from this study are thus seen as relating primarily to the second of these two intentions. It clearly would be premature to draw action-oriented (with respect to the school and classroom) implications from the study at this point since the impetus to begin work on such a processual model came from a perceived need to define the process of academic failure well enough that alternative points of intervention could be identified and consequences of intervention at each of those points could be predicted. Such action

oriented implications thus await the development of this model. This study, on the other hand, only represents a step in that direction.

Analysis of the data in this study provides support for the tentative model, at least, in its broad outlines. Such support is seen as implying the viability of this model in defining the process of academic failure which is of concern here. The mixed findings with respect to hypotheses four through six (relating in particular to self-investment in the student role, perceived future relevance of school, perceived academic norms of the school, and teacher demand for achievement) are seen as not necessarily implying that these assertions are in error (for they do receive some support), but that these particular constructs are in need of further thinking and refinement. The observations on self-investment in the student role and perceived future relevance of school are particularly important for their implications to a part of the model yet to be developed in detail, namely "Adaptation: Cost-Benefit Calculation." This part of the model was purposely left undefined and vague in order that field research might be employed to identify elements likely to enter into such a calculation. The consistent finding (cf., Coleman, 1966; Brookover, et al., 1973; and this study) that the minority child's perception of his ability or inability to control his environment is related to his academic achievement, for example, seems to imply that this is one element to consider in that calculation. The observation that pragmatic orientations, such as perceived future relevance of school, seem to characterize many of the Indian people's attitudes toward education also implies that this orientation may also enter into such a calculation, in anticipation of perceived benefits to be derived from self-investment in the student role. The finding, however,

that neither self-investment in the student role nor perceived future relevance of school (which related well to each other) related as expected to academic achievement, implies the need for additional work on these two concepts before they can adequately be entered into the "cost-benefit calculation."

Two implications may also be drawn from this study with respect to peers. First, since perceived best friend's expectations and evaluations were found to relate consistently and significantly to both self-concept of academic ability and academic achievement, as did perceived teacher and parents' expectations and evaluations, there seems to be a clear need to indicate in the model the part played by peers in the process of academic failure. Second, inasmuch as perceived expectations and evaluations of best friend was found to be so importantly related to self-concept and achievement, the negative finding of a lack of relationship between perceived academic norms of peers and academic achievement needs further exploration with the implication (derived from this negative and inconsistent finding) that the measure of academic norms utilized here may be inadequate.

Finally, on the most general level, the implications of this study are two: (1) that the tentatively proposed model has some promise of providing the sought-after processual model which may be useful for intervention-planning; and (2) that social psychological variables, which are employed in this model and which have been found to distinguish between high- (at or above grade level) and low- (one or more grades behind grade level) achieving students, are important variables potentially, at least, leading to academic failure by American Indian children.

Contribution of This Study

This study is viewed as making a contribution to the Indian education literature and sociological theory in several ways. First, in suggesting a tentative model to define the process of academic failure, it has pulled together many isolated findings offered in "explanation" of the observed academic failure of American Indian children. In so doing, it not only begins to "fit the pieces of the puzzle together," but it also begins to offer some hope of intervening in that process through identification of alternative points of intervention and indicating predictable consequences of intervention at each of those points. Second, some confidence has been established in assumptions underlying this study and some beginning has been made in questioning assumptions derived from reports of Indian life in the past. Contrary to ethnographic reports, many assumptions which would be and which have been made about Indian children based on earlier reports would not appear to be erroneous. Third, the study provides some cross-cultural support for Mead's conceptualization of the "self" and its genesis. This is particularly important since Mead's formulations were developed and formerly tested in the context of white, middle-class values and orientations. Fourth, and finally, the study makes a contribution to thinking on the exchange model involving self-investment by suggesting this model for the student role and academic achievement and by suggesting elements which seem likely to enter into this calculation.

Recommendations

Results of this study basically provide for recommendations for continued work on the processual model. This is to be expected since the

study was to serve as an assessment of the tentatively proposed model. In addition, however, recommendations are also made for ethnographic kinds of work which are beyond the concerns of this particular work in model development. Two final recommendations, which are made with some hesitation because of the stage of work on this processual model, are directed to school policy.

First, recommendations for continued work on the processual model call for research focusing on five areas:

(1) self-investment and the cost-benefit calculus. Two observations from this study suggest that pragmatic concerns be considered among the anticipated benefits to be derived from investment in the student role. The consistent findings on sense of control/sense of futility also appear to be worthy of consideration as an element which enters into the decision to invest or not to invest.

(2) "Indianness" as a diffuse status characteristic. Observations made in this study suggest that "Indianness" does function as a diffuse status characteristic which indirectly influences children's achievement via teachers' perceptions of the child's family, home life, and community. Continued work on this model is seen as profitably focusing on the nature of the attributes associated with this characteristic, the differential action opportunities resulting from identification of individuals with this characteristic, and educators' attitudes of futility in relation to their work with Indian children. Work might also focus on children's perceptions of such attitudes.

(3) peer role in the process of academic achievement/academic failure. Observation of the relationships of perceived best friend's expectations and evaluations with self-concept of academic ability and academic achievement suggest that peers, or at least best friend, are important others for American Indian children in their student role and should, therefore, be indicated in the model. The negative finding on perceived academic norms of the school (as largely created by peers) suggest that more work needs to be done on defining peer norms which are relevant to achievement.

(4) longitudinal studies to learn as much as possible about children and their achievement patterns. Although the achievement data examined in this study revealed no evidence of a "cross-over phenomenon," some differences in achievement were observed among fifth and eighth grade students. In order to determine whether any changes in achievement or attitudes do occur and what the nature of these changes might be if they do occur, longitudinal study of the same group of children over time is seen as the best method for observing such changes.

(5) "experimental" studies, comparing Indian children in high and low achieving schools. Such studies are seen as important in identifying school climate variables relevant to academic achievement. The studies by Brookover, et al., may serve as the prototype for this kind of work.

In addition to these studies, findings of this study on self-attitudes and competitiveness suggest that "modern" ethnographic-types

of studies are needed to update our knowledge of American Indian life. Assumptions based on earlier ethnographic reports are viewed as questionable today given the fact that Indian life, like all life, is not static but constantly changing.

Finally, insofar as policy recommendations are sought after from this research, the role of parents in the education of their children should be considered very seriously. Many educators are found to view parents' involvement in the education of their children as either totally absent or as negative. On the contrary, children are found to perceive their parents' expectations and evaluations as important both to their self-concept of academic ability and their academic achievement. In fact, children report that their parents, and particularly their mothers, are most significant others for their academic endeavors. It is, consequently, suggested that if parents were recognized for the positive contributions which they can make to the education of their children and if they are granted more of a role in that process, this may work to the advantage of the children. Bringing parents and community members into the education system, however, is seen as a responsibility resting primarily with the schools. One Indian educator described the present situation as involving an "invisible fence" which set the school off from the rest of the community from the Indian's point of view. In order to remove this "fence" and make use of the interest and concern which Indian people apparently do have for the education of their children, efforts will have to be made from those inside the alien community (the school community). Such efforts will not only have to make the people feel welcome in the schools, but they will also have to show respect (such as Indian children learn) for the people and their concerns about

the education of their children. Educators will also have to realize that such "fence removal" is likely to take some time partly because of educators' need to remove barriers which exist in their own attitudes and because the people have learned to live with the "fence" so long that the process of learning to live without the "fence" may also be expected to take time. The specific methods by which a school brings the community (parents and others) into the school system is seen as a matter to be determined in the community by community leaders and educators.

Lastly, the consistent finding in this study and in other studies of academic achievement by minority children that sense of control bears a direct relationship with academic achievement and sense of futility bears an inverse relationship with academic achievement suggests that efforts to improve academic achievement might profitably be directed here. In attempting to instill a sense of control -- the belief that one's efforts are worthwhile -- in the children, attention might be given to the provision of positive role models for the children. If it is the case that an important mode of learning for these children is through observation of others, it is conceivable that the presence of Indian teachers (not just aids who have little status) and school administrators may help to develop such a sense of control in these children. Such individuals represent individuals who have obtained "good jobs" and positions of responsibility and authority through their investments in education and their own efforts. If it is also true that individuals learn the attitudes and orientations of those with whom they interact in any given milieu, then it also seems to be important to direct attention to the sense of futility which many teachers seem to express with

respect to their work in reservation schools. Such expressions of futility may well be an important source of children's sense of futility and academic failure. Thus, it again appears that much of the effort needed to bring about academic achievement must come from within the social system of the school.

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APPENDICES

APPENDIX A

STUDENT QUESTIONNAIRE

STUDENT SURVEY

Directions: This is not a test. There are no "right" or "wrong" answers. Your teachers and your principal will not see your answers. I am interested in students and their ideas about school. I would like you to help me. Please answer these questions as best you can.

1. Name _____

Please answer the following questions by circling the number on the right of your best answer to each question.

2. How old were you on your last birthday?

7 years old	1
8 years old	2
9 years old	3
10 years old	4
11 years old	5
12 years old	6
13 years old	7
14 years old	8
15 years old or more	9

3. Are you a boy or a girl?

boy	1
girl	2

4. What grade are you in?

2nd grade	1
3rd grade	2
4th grade	3
5th grade	4
6th grade	5
7th grade	6
8th grade	7

5. How many years have you been at this school?

1 year or less	1
2 years	2
3 years	3
4 years	4
5 years	5
6 years	6
7 years	7
8 years or more	8

If your father does not live with you or if he is not alive, please answer the following question for the person in your house who earns the most money for your family.

6. What type of work does your father do? Give a short description of his job.

_____

_____

_____

7. How many brothers do you have? (Please write the number.) _____

How many sisters do you have? (Please write the number.) _____

8. How many of your brothers and sisters live in your house with you? (Please write the number.) _____

9. How many of your brothers and sisters have jobs? (Please write the number of brothers + sisters.) _____

10. How many of your brothers and sisters go to school? (Please write the number in each kind of school.)

Pre-school (kindergarten or headstart) _____

Grades 1 - 4 . . . . . _____

Grades 5 - 8 . . . . . _____

High School . . . . . _____

College . . . . . _____

11. Are you the oldest child in your family? Yes 1
No 2

Are you the youngest child in your family? Yes 1
No 2

Answer the following questions by circling the number on the right of your best answer. Remember, no one in this school will see your answers, so please tell just what you think. Choose only one answer for each question.

12. If you could go as far as you wanted in school, how far would you <u>like</u> to go?

Finish grade school 1
Go to high school for a while 2
Finish high school 3
Go to college for a while 4
Finish college 5

13. How many students in your class try hard to get good grades on their school work?

Almost all of them 1
Most of them 2
Half of them 3
Some of them 4
Almost none of them 5

14. How many students in your class will work hard to do better work than their friends do?

Almost all of them 1
Most of them 2
Half of them 3
Some of them 4
Almost none of them 5

15. How many students in your class don't care if they get bad grades in school?

Almost all of them 1
Most of them 2
Half of them 3
Some of them 4
Almost none of them 5

16. If most of the students in your class could go as far as they wanted in school, how far would they go?

Finish grade school 1
Go to high school for a while 2
Finish high school 3
Go to college for a while 4
Finish college 5

17. If your <u>teacher</u> told you that you were a poor student, how would you feel?

I would feel very bad 1
I would feel a little bad 2
It wouldn't bother me very much 3
It wouldn't bother me at all 4

18. How important is it to you to be a good student?

It's the most important thing I can do 1
It's important, but other things are just as important 2
It's important, but other things are more important 3
It's not very important 4

19. If your <u>parents</u> told you that you were a poor student, how would you feel?

I would feel very bad 1
I would feel a little bad 2
It wouldn't bother me very much 3
It wouldn't bother me at all 4

20. If your <u>best friend</u> told you that you were a poor student, how would you feel?

I would feel very bad 1
I would feel a little bad 2
It wouldn't bother me very much 3
It wouldn't bother me at all 4

21. How do you think most of the students in your class feel when one of you does a bad job on school work?

They feel badly and want to help 1
They feel sorry, but don't say anything 2
They really don't care 3
They are secretly happy that it happened 4

22. What do you think most students say when a student has done good or better than he usually does in his school work?

He was just lucky, he won't do that good next time 1
Anyone could do it if they studied 2
I wish I could do as well as he did 3
I'm glad for him and I hope he does as well next time 4

23. How important do most of the students in your class feel it is to do well in school work?

Almost everybody thinks it is the most important thing you can do 1
Most students think it is pretty important to do well in school 2
Doing well in school work is a good thing, but other things are important too 3
Most students don't seem to care how well they do, but it's okay for others to do well . . . 4
Most students don't seem to care how well they do, but they don't like other students to do well either 5

Please answer the following questions by circling the number which best answers the question for you. Choose only one answer for each question.

24. People like me will not have much of a chance to do what we want to in life.

Strongly agree 1
Agree 2
Disagree 3
Strongly disagree 4

25. People like me will never do well in school even though we try hard.

Strongly agree 1
Agree 2
Disagree 3
Strongly disagree 4

26. I can do well in school if I work hard.

Strongly agree 1
Agree 2
Disagree 3
Strongly disagree 4

27. In this school, students like me don't have any luck.

Strongly agree 1
Agree 2
Disagree 3
Strongly disagree 4

28. Think of your friends. Do you think you can do school work better, the same, or poorer than your friends?

Better 1
The same 2
Poorer 3

29. Think of the students in your class. Do you think you can do school work better, the same, or poorer than the students in your class?

Better 1
The same 2
Poorer 3

30. Do you think you could finish college?

Yes, with no problem at all 1
Yes, as long as I work hard 2
Yes, but I will probably have a lot of problems 3
No, it will be too hard 4

31. If you went to college, do you think you would be one of the best students, about the same as most of the students, or not as good as most of the students?

One of the best 1
About the same as most of the students 2
Not as good as most of the students 3

32. Forget how your teachers mark your work. How good do you think your own work is?

Excellent 1
Good 2
About the same as most of the students 3
Not as good as most of the students 4
Poor 5

33. What marks do you think you really can get if you try?

Mostly A's 1
Mostly B's 2
Mostly C's 3
Mostly D's 4
Mostly F's 5

(Note: These response categories were appropriately altered to conform with the grading system of the school.)

Now I would like you to answer some questions about people whom you know. Answer these questions by circling the number as you have been doing.

34. When you do good work in school, who do you most want to know about it?

My mother 1
My father 2
My brother 3
My sister 4
My teacher 5
My best friend 6
Other 7
If other, who? _____

35. Who is the most interested in your work in school?

My mother 1
My father 2
My brother 3
My sister 4
My teacher 5
My best friend 6
Other 7
If other, who? _____

36. Sometimes what other people think of us is very important to us and sometimes it is not very important. Below is a list of people whose opinion of you may or may not be very important to you. Please circle the number to the right of the answer that tells how important their opinions of you are to you.

A. My parents' opinion of me is:

Very important to me 1
Somewhat important to me 2
Not very important to me 3

B. My teachers' opinions of me are:

Very important to me 1
Somewhat important to me 2
Not very important to me 3

C. The opinions which classmates from my own district have of me are:

Very important to me 1
Somewhat important to me 2
Not very important to me 3

D. The opinions which classmates from other districts have of me are:

Very important to me 1
Somewhat important to me 2
Not very important to me 3

Now I would like you to answer some questions about your best friend. Stop for a minute and think who your best friend is. Answer these questions by circling the number as you did in the other questions. Remember, your best friend will not see your answers.

37. How good of a student does your best friend expect you to be?

One of the best 1
Better than most of the students 2
Same as most students 3
Not as good as most students 4
He (She) doesn't really care 5

38. Think of your best friend. Would your best friend say you can do school work better, the same, or poorer than other children your age?

Better 1
The same 2
Poorer 3

39. What grades does your best friend think you can get?

Mostly A's 1
Mostly B's 2
Mostly C's 3
Mostly D's 4
Mostly F's 5

(See note with Question 33.)

Now I would like to ask some questions about the teachers in this school. Answer these questions as you answered the other ones by circling the number. Remember, no teacher will see your answers so be as honest as you can.

40. How many teachers in this school tell students to try and get better grades than their classmates?

Almost all of the teachers 1
Most of the teachers 2
Half of the teachers 3
Some of the teachers 4
Almost none of the teachers 5

41. Of the teachers that you know in this school, how many don't care if the students get bad grades and do bad work?

Almost all of the teachers 1
Most of the teachers 2
Half of the teachers 3
Some of the teachers 4
Almost none of the teachers 5

42. Of the teachers that you know in this school, how many make the students work too hard?

Almost all of the teachers 1
Most of the teachers 2
Half of the teachers 3
Some of the teachers 4
Almost none of the teachers 5

43. How good of a student does the teacher you like the best expect you to be in school?

One of the best 1
Better than most students 2
Same as most students 3
Not as good as most students 4
He (She) doesn't really care 5

44. Think of your teachers now. Would they say you can do school work better, the same, or poorer than other children your age?

Better 1
The same 2
Poorer 3

45. Do your teachers think you could finish college?

Yes 1
Maybe 2
No 3

46. What grades do your teachers think you can get?

Mostly A's 1
Mostly B's 2
Mostly C's 3
Mostly D's 4
(See note with Question 33.) Mostly F's 5

Now I would like to ask you some questions about your parents or guardians. Answer them the same way you answered the other questions.

47. How far do you think your parents believe you will go in school?

Finish grade school 1
Go to high school for a while 2
Finish high school 3
Go to college for a while 4
Finish college 5

48. How good of a student do your parents expect you to be in school?

One of the best 1
Better than most of the students 2
Same as most of the students 3
Not as good as most of the students 4
They don't really care 5

49. Think of your mother and father. Do your mother and father say you can do school work better, the same, or poorer than your friends?

Better 1
The same 2
Poorer 3

50. Do your mother and father think you could finish college?

Yes 1
Maybe 2
No 3

51. What grades do your mother and father think you can get?

(See note with Question 33.)

Mostly A's 1
Mostly B's 2
Mostly C's 3
Mostly D's 4
Mostly F's 5

52. If you received a good report card, what would your parents most likely do?

Nothing special 1
Praise me 2
Give me special privileges 3
Give me money or some special reward 4
Other 5
If other, what? _____

_____

53. If you received a poor report card, what would your parents most likely do?

Nothing special 1
Scold or talk to me 2
Take away privileges 3
Punish me severely in some way 4
Other 5
If other, what? _____

_____

I have just a few more questions for you about school. Please answer them in the same way as you have been answering the others by circling the number of the answer which is best for you.

54. When I do a good job on my school work, I am more popular with the other students. They like me more.

Yes 1
No 2
Doesn't make any difference . 3

55. If I do well in school, it will be easier for me to get the kind of job I want when I finish school.

Yes 1
No 2
Doesn't make any difference . 3

56. Sometimes what you want to happen is not what you think will really happen. How far do you think you really will go in school?

Finish grade school 1
Go to high school for a while 2
Finish high school 3
Go to college for a while 4
Finish college 5

57. How important do you think it is for you to finish high school?

Very important 1
Somewhat important 2
Not very important 3
Not at all important 4

58. How important do you think it is for you to finish college?

Very important 1
Somewhat important 2
Not very important 3
Not at all important 4

59. How well would you say you get along with classmates from <u>your own</u> district?

I get along with most of them very well 1
I get along with some of them 2
I don't get along with them very well 3
I don't get along with them at all 4

60. How well would you say you get along with classmates from <u>other</u> districts?

I get along with most of them very well 1
I get along with some of them 2
I don't get along with them very well 3
I don't get along with them at all 4

61 Think about your school. Would you say that your school is a friendly place?

Very friendly 1
Somewhat friendly 2
Not very friendly 3
Very unfriendly 4

62. Do you ever think of yourself as being different, in some important way, from other students in this school?

No 1
Yes 2

If you answered Yes, please tell in what way you think of yourself as different.

_____

_____

_____

63. Do you ever feel that <u>other</u> people think of you as being different in some important way?

No 1
Yes 2

If you answered Yes, please tell in what way they (other people) think of you as different:

_____

_____

_____

THANK YOU FOR YOUR HELP. IF THERE ARE SOME OTHER THINGS WHICH YOU WOULD LIKE TO WRITE ABOUT THE SCHOOL OR THESE QUESTIONS, YOU MAY WRITE ON THE BACK OF THIS PAGE.

APPENDIX B

INVENTORY OF VARIABLES

INVENTORY OF VARIABLES

School in which the child is enrolled. "School was coded to identify the three types of schools -- BIA, public, and mission.

Age of the child.

Sex of the child.

Grade in which the child is enrolled.

Number of years the child has been attending the school in which he is presently enrolled.

Occupation of the Father or other head of household.

Socioeconomic status --based on Father's occupation.

Number of siblings in the child's family.

Number of siblings residing in the home of the child.

Number of employed siblings.

Number of siblings attending school -- recorded separately for preschool, lower elementary (grades 1 - 4), upper elementary (grades 5 - 8), high school, and college.

Number of potential role model siblings -- index based on siblings in high school, college, or employed.

Birth order of respondent.

Educational aspirations of the child.

Self-investment in the student role.

Perceived educational aspirations of peers.

Self-concept of academic ability.

Other perceived as most important in evaluating school work.

Other perceived as most interested in school work.

Reported importance of parents' evaluations of self.

Reported importance of teacher's evaluations of self.

Perceived importance of classmates' evaluations of self.

Perceived best friend's expectations and evaluations.

Perceived parents' expectations and evaluations.

Perceived teacher expectations and evaluations.

Perceived parents' educational aspirations for child.

Expected response of parents to good report from school.

Expected response of parents to poor report from school.

Expected esteem from peers for good academic performance.

Reported quality of social relations with classmates.

Perceived "friendliness" of school.

Educational expectations of child.

Perceived competitiveness of peers.

Reported response of child to parents' evaluation of child as student.

Reported response of child to teacher evaluations of child as student.

Reported response of child to best friend's evaluation of child as student.

Perceived response of classmates to another's success.

Perceived response of classmates to another's failure.

Perceived academic norms of school.

Sense of control over own life.

Sense of control in school.

Perceived efficacy of hard work in school.

Sense of control/sense of futility.

Perceived academic push from teachers.

Perceived teacher indifference to academic achievement.

Perceived teacher demand for academic achievement.

Reported expectation of "good job" following good performance in school.

Perceived importance of finishing high school.

Perceived importance of finishing college.

Perceived future relevance of school.

Perception of self as different from others.

Perceived other's judgment of self as different from others.

Reading achievement -- standardized measure.

Composite achievement -- standardized measure.

Grade point average.

APPENDIX C

INDICES CONSTRUCTED IN THIS STUDY

Socioeconomic Status (SES)

Data for this index are derived from Question 6 of the Student Questionnaire.

6. What type of work does your father do? Give a short description of his job. (In the event that the child did not live with his father or if the father was deceased, the child was directed to answer for "the person in your house who earns the most money for your family.")

The following code was employed in the index:

1 = Unemployed.
2 = Low Status -- unskilled and semi-skilled occupations which require little educational preparation. Occasional workers are included here.
3 = Middle Status -- white collar and skilled occupations which require some college or technical training.
4 = High Status -- positions of power, prestige, and decision-making which require a college degree.

Potential Role Model Siblings

Data for this index are derived from Questions 9 and 10 of the Student Questionnaire.

9. How many of your brothers and sisters have jobs?

10. How many of your brothers and sisters go to school? (Here attention focused on those in High School and College.)

The sum of such siblings represents the number of potential role model siblings.

Self-Concept of Academic Ability

Data for this index are derived from Questions 28 - 33 of the Student Questionnaire.

28. Think of your friends. Do you think you can do school work better, the same, or poorer than your friends?

29. Think of the students in your class. Do you think you can do school work better, the same, or poorer than the students in your class?

30. Do you think you could finish college?

31. If you went to college, do you think you would be one of the best students, about the same as most of the students, or not as good as most of the students?

32. Forget how your teachers mark your work. How good do you think your own work is?

33. What marks do you think you really can get if you try?

Responses to these items were summed and divided into categories to represent high, moderately high, moderate, moderately low, and low self-concept of academic ability.

Perceived Best Friend's Expectations and Evaluations

Data for this index are derived from Questions 37 - 39 of the Student Questionnaire.

37. How good of a student does your best friend expect you to be in school?

38. Think of your best friend. Would your best friend say you can do school work better, the same, or poorer than other children your age?

39. What grades does your best friend think you can get?

Responses to these items were summed and divided into categories to represent high, moderate, and low perceived expectations and evaluations.

Perceived Teacher Expectations and Evaluations

Data for this index are derived from Questions 43 - 46 of the Student Questionnaire.

43. How good of a student does the teacher you like the best expect you to be in school?

44. Think of your teachers now. Would they say you can do school work better, the same, or poorer than other children your age?

45. Do your teachers think you could finish college?

46. What grades do your teachers think you can get?

Responses to these items were summed and divided into categories to represent high, moderate, and low perceived expectations and evaluations.

Perceived Parents' Expectations and Evaluations

Data for this index are derived from Questions 47 - 51 of the Student Questionnaire.

47. How far do you think your parents believe you will go in school?

48. How good of a student do your parents expect you to be in school?

49. Think of your mother and father. Do your mother and father say you can do school work better, the same, or poorer than your friends?

50. Do your mother and father think you could finish college?

51. What grades do your mother and father think you <u>can</u> get?

Responses to these items were summed and divided into categories to represent high, moderately high, moderate, moderately low, and low perceived expectations and evaluations.

Perceived Parental Support for Academic Achievement

Data for this index are derived from Questions 52 and 53 of the Student Questionnaire.

52. If you received a good report card, what would your parents most likely do?

53. If you received a poor report card, what would your parents most likely do?

Responses to these items were interpreted as showing strong positive support (overt indication of approval), weak positive support (verbal approval), no positive support ("Nothing Special"), strong sanction (overt indication of disapproval), weak sanction (verbal disapproval), and no sanction ("Nothing Special"). Responses to the two questions are then combined using the following code:

1 = strong +, strong -
2 = strong +, weak -
3 = weak +, strong -
4 = weak+, weak -
5 = no +, strong -
6 = strong +, no -
7 = no +, weak -
8 = weak +, no -
9 = no +, no -

Perceived Academic Norms of School

Data for this index are derived from Questions 13, 14, 21, and 23 of the Student Questionnaire.

13. How many students in your class try hard to get good grades on their school work?

14. How many students in your class will work hard to do better work than their friends do?

21. How do you think most of the students in your class feel when one of you does a bad job on school work?

22. What do you think most students say when a student has done good or better than he usually does in his school work?

Responses to these items were summed and divided into categories to represent high, moderately high, moderate, moderately low, and low perceived academic norms.

Social Relations in School

Data for this index are derived from Questions 59 - 61 of the Student Questionnaire.

59. How well would you say you get along with classmates from your own district?

60. How well would you say you get along with classmates from other districts?

61. Think about your school. Would you say that your school is a friendly place?

Responses to these items were summed and divided into categories to represent good social relations, moderate social relations, and poor social relations.

Sense of Control/Sense of Futility

Data for this index are derived from Questions 24 - 27 of the Student Questionnaire.

24. People like me will not have much of a chance to do what we want to in life.

25. People like me will never do well in school even though we try hard.

26. I can do well in school if I work hard.

27. In this school, students like me don't have any luck.

The numerical order of the responses to items 24, 25, and 27 were reversed in coding to maintain consistency in polarity (i.e., 1 = most positive; 5 = most negative).

Responses to these items were summed and divided into categories to represent high sense of control, moderate sense of control, intermediate control/futility, moderate sense of futility, and high sense of futility.

Perceived Future Relevance of School

Data for this index are derived from Questions 55, 57, and 58 of the Student Questionnaire.

55. If I do well in school, it will be easier for me to get the kind of job I want when I finish school.

57. How important do you think it is for you to finish high school?

58. How important do you think it is for you to finish college?

Responses to these items were summed and divided into categories to represent high perceived relevance, moderate perceived relevance, and low perceived relevance.

Identification of Significant Others for School Work

Data for this index are derived from Questions 34 and 35 of the Student Questionnaire.

34. When you do good work in school, who do you most want to know about it?

35. Who is the most interested in your work in school?

Essentially this index identifies the other who is consistently identified by the child on these two questions. Thus, the values in the index correspond to the response selections provided with these two questions. Index value 9 indicates inconsistent choice of others.

Self-Investment in the Student Role

Data for this index are provided by Questions 17 - 20 of the Student Questionnaire.

17. If your <u>teacher</u> told you that you were a poor student, how would you feel?

18. How important is it to you to be a good student?

19. If your <u>parents</u> told you that you were a poor student, how would you feel?

20. If your best friend told you that you were a poor student, how would you feel?

Responses to these items were summed and divided into categories to represent high investment, moderately high investment, moderate investment, moderately low investment, and low investment.

Perceived Competitiveness among Students

Data for this index are derived from Questions 13 - 15 of the Student Questionnaire.

13. How many students in your class try hard to get good grades on their school work?

14. How many students in your class will work hard to do better work than their friends do?

15. How many students in your class don't care if they get bad grades in school?

Responses to item 15 were reversed in coding in order to maintain consistency in polarity. Responses were summed and divided into categories to represent high perceived competitiveness, moderately high perceived competitiveness, moderate perceived competitiveness, moderately low perceived competitiveness, and low perceived competitiveness.

APPENDIX D

INTERCORRELATION MATRICES

INTERCORRELATION MATRICES

Self-concept of Academic Ability

Item 28	1.000					
29	.313	1.000				
30	.063	.148	1.000			
31	.226	.222	.293	1.000		
32	.259	.265	.216	.285	1.000	
33	.066	.133	.148	.161	.212	1.000

Perceived Best Friend's Expectations and Evaluations

Item 37	1.000		
38	.333	1.000	
39	.193	.166	1.000

Perceived Teacher Expectations and Evaluations

Item 43	1.000			
44	.171	1.000		
45	.208	.194	1.000	
46	.072	.146	.117	1.000

Perceived Parents' Expectations and Evaluations

Item 47	1.000				
48	-.225	1.000			
49	-.170	.367	1.000		
50	-.390	.259	.258	1.000	
51	-.089	.310	.179	.156	1.000

Perceived Parental Support for Academic Achievement

Item 52	1.000	
53	.244	1.000

Perceived Academic Norms of School

Item 13	1.000			
14	.416	1.000		
21	.145	.054	1.000	
23	.114	.142	.218	1.000

Social Relations in School

Item 59	1.000			
60	.178	1.000		
61	.186	.118	1.000	

Sense of Control/Sense of Futility

Item 24	1.000			
25	.193	1.000		
26	-.020	.026	1.000	
27	.058	.305	.164	1.000

Perceived Future Relevance of School

Item 55	1.000		
57	.338	1.000	
58	.231	.438	1.000

Self-Investment in Student Role

Item 17	1.000			
18	.273	1.000		
19	.566	.199	1.000	
20	.531	.156	.500	1.000

Perceived Competitiveness among Students

Item 13	1.000		
14	.416	1.000	
15	.118	.031	1.000

APPENDIX E

COMPARISON OF INTERCORRELATION MATRICES OF MAJOR CONSTRUCTS, HENDERSON STUDY (1972) AND HESS STUDY

COMPARISON OF INTERCORRELATION MATRICES OF MAJOR CONSTRUCTS, HENDERSON STUDY (1972) AND HESS STUDY

Self-Concept of Academic Ability

Henderson Study

Item 31	1.000					
32	.434	1.000				
34	.149	.164	1.000			
35	.212	.236	.231	1.000		
37	.257	.293	.208	.307	1.000	
38	.159	.194	.211	.243	.342	1.000

Hess Study

Item 28	1.000					
29	.313	1.000				
30	.063	.148	1.000			
31	.226	.222	.293	1.000		
32	.259	.265	.216	.285	1.000	
33	.066	.133	.148	.161	.212	1.000

Perceived Best Friend's Expectations and Evaluations

Henderson Study

Item 42	1.000			
43	-.146	1.000		
47	-.245	.337	1.000	

Hess Study

Item 37	1.000			
38	.333	1.000		
39	.193	.166	1.000	

Perceived Teacher Expectations and Evaluations

Henderson Study

Item 58	1.000			
59	.273	1.000		
61	.235	.240	1.000	
63	.319	.295	.296	1.000

Hess Study

Item 43	1.000			
44	.171	1.000		
45	.208	.194	1.000	
46	.072	.146	.117	1.000

Perceived Parents' Expectations and Evaluations

Henderson Study

Item 64	1.000				
65	-.229	1.000			
66	-.225	.414	1.000		
68	-.306	.282	.254	1.000	
70	-.281	.337	.352	.306	1.000

Hess Study

Item 47	1.000				
48	-.225	1.000			
49	-.170	.367	1.000		
50	-.390	.259	.258	1.000	
51	-.089	.310	.179	.156	1.000

Perceived Competitiveness of Peers

Henderson Study

Item 13	1.000		
14	.362	1.000	
15	-.144	.073	1.000

Hess Study

Item 13	1.000		
14	.416	1.000	
15	.118	.031	1.000

Self-Investment in Student Role

Henderson Study

Item 17	1.000			
18	.244	1.000		
19	.552	.305	1.000	
20	.424	.138	.405	1.000

Hess Study

Item 17	1.000			
18	.273	1.000		
19	.566	.199	1.000	
20	.531	.156	.500	1.000

Perceived Academic Norms of School

Henderson Study

Item 19	1.000	
22	.275	1.000

Hess Study

Item 21	1.000	
23	.219	1.000

Sense of Control/Sense of Futility

Henderson Study

Item 26	1.000			
27	.347	1.000		
28	-.035	-.116	1.000	
29	.281	.359	-.125	1.000

Hess Study

Item 24	1.000			
25	.193	1.000		
26	-.020	.026	1.000	
27	.059	.305	.164	1.000

APPENDIX F

SUPPLEMENTARY TABLES AND FIGURES

SUPPLEMENTARY TABLES AND FIGURES

Table E1. Academic Achievement (Composite) by Sex of Respondent.

	Composite Achievement					
	Grade Advanced		Within	Grade Behind		
Sex	2.0+	1.0-1.9	Appropriate	1.0-1.9	2.0+	Total
Male	2(1.2)	4(2.4)	49(29.2)	52(31.0)	61(36.3)	168
Female	1(0.1)	8(6.0)	50(37.3)	41(30.6)	34(25.4)	134
Total	3(1.0)	12(4.0)	99(32.8)	93(30.8)	95(31.5)	302

d.f.=4 X^2=6.978 n.s.

Table E2. Academic Achievement (Reading) by Sex of Respondent.

	Reading Achievement					
	Grade Advanced		Within	Grade Behind		
Sex	2.0+	1.0-1.9	Appropriate	1.0-1.9	2.0+	Total
Male	6(3.1)	11(5.6)	49(25.1)	51(26.2)	80(41.0)	195
Female	3(1.9)	9(5.6)	48(29.6)	43(26.5)	59(36.4)	162
Total	9(2.5)	20(5.6)	97(26.6)	94(26.3)	139(38.9)	357

d.f.=4 X^2=2.055 n.s.

Table E3. Academic Achievement (Grade Point Average) by Sex of Respondent.

	Grade Point Average				
Sex	3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
Male	19(7.5)	79(31.3)	131(52.0)	23(9.1)	252
Female	24(11.0)	81(37.2)	110(50.5)	3(1.4)	218
Total	43(9.1)	160(34.0)	241(51.3)	26(5.5)	470

d.f.=3 X^2=15.591 $p<.01$

Table E4. Composite Achievement by School.

	Composite Achievement					
	Grade Advanced		Within	Grade Behind		
School	2.0+	1.0-1.9	Appropriate	1.0-1.9	2.0+	Total
A	1(0.9)	3(3.0)	30(29.7)	29(28.7)	38(37.6)	101
B	2(1.8)	6(5.4)	43(38.7)	27(24.3)	33(29.7)	111
C	2(5.4)	5(13.5)	11(29.7)	8(21.6)	11(29.7)	37
D	0(0.0)	1(2.0)	23(45.1)	11(21.5)	16(31.4)	51
Total	5(1.7)	15(5.0)	107(35.7)	75(25.0)	98(32.7)	300

Table E5. Reading Achievement by School.

	Reading Achievement					
	Grade Advanced		Within	Grade Behind		
School	2.0+	1.0-1.9	Appropriate	1.0-1.9	2.0+	Total
A	3(3.0)	5(4.9)	25(24.8)	28(27.7)	40(39.6)	101
B	7(6.4)	6(5.4)	42(38.2)	23(20.9)	32(29.1)	110
C	4(10.8)	7(18.9)	9(24.3)	10(27.0)	7(18.9)	37
D	0(0.0)	3(5.9)	18(35.3)	11(21.6)	19(37.3)	51
E	2(2.4)	1(1.2)	8(9.6)	27(32.5)	45(54.2)	83
Total	16(4.2)	22(5.7)	102(26.6)	99(25.9)	143(37.4)	382

Table E6. Self-Concept of Academic Ability by Ethnicity.

	Self-Concept of Academic Ability					
Ethnicity	High	Moderately High	Moderate	Moderately Low	Low	Total
Indian	44(9.1)	199(41.4)	202(44.1)	25(5.2)	2(0.4)	472
Non-Indian	5(17.2)	15(51.7)	8(27.6)	0(0.0)	1(3.4)	29
Total	49(9.8)	214(42.7)	210(41.9)	25(5.0)	3(0.6)	501

d.f.=4 X^2=8.859 n.s.

Table E7. Self-Investment in the Student Role by Ethnicity.

	Self-Investment					
Ethnicity	High	Moderately High	Moderate	Moderately Low	Low	Total
Indian	155(32.2)	129(26.8)	126(26.2)	59(12.3)	12(2.5)	481
Non-Indian	11(37.9)	12(41.4)	4(13.8)	2(6.9)	0(0.0)	29
Total	166(32.5)	141(27.6)	130(25.5)	61(12.0)	12(2.4)	510

d.f.=4 X^2=5.489 n.s.

Table E8. Academic Achievement (Composite) by Perceived Best Friend's Expectations and Evaluations.

	Composite Achievement					
Friend's	Grade Advanced		Within	Grade Behind		Total
Expectations	2.0+	1.0-1.9	Appropriate	1.0-1.9	2.0+	
High	3(1.7)	9(5.2)	70(40.5)	47(27.2)	44(25.4)	173
Moderate	0(0.0)	3(2.7)	27(24.3)	37(33.3)	44(39.6)	111
Low	0(0.0)	0(0.0)	1(11.1)	1(11.1)	7(77.8)	9
Total	3(1.0)	12(4.1)	98(33.4)	85(29.0)	95(32.4)	293

N.R.=188 d.f.=8 X^2=22.154 $p<.005$ Kendall's Tau B=.224

Table E9. Academic Achievement (Reading) by Perceived Best Friend's Expectations and Evaluations.

	Reading Achievement					
Friend's	Grade Advanced		Within	Grade Behind		
Expectations	2.0+	1.0-1.9	Appropriate	1.0-1.9	2.0+	Total
High	8(4.1)	12(6.2)	63(32.3)	48(24.6)	64(32.8)	195
Moderate	1(0.7)	8(5.9)	27(19.9)	42(30.9)	58(42.6)	136
Low	0(0.0)	0(0.0)	4(25.0)	2(12.5)	10(62.5)	16
Total	9(2.6)	20(5.8)	94(27.1)	92(26.5)	132(38.0)	347

N.R.=134 d.f.=8 X^2=16.631 $p<.05$ Kendall's Tau B=.156

Table E10. Academic Achievement (GPA) by Perceived Best Friend's Expectations and Evaluations.

Friend's Expectations	Grade Point Average 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	35(14.6)	87(36.2)	105(43.8)	13(5.4)	240
Moderate	8(4.3)	59(32.1)	105(57.1)	12(6.5)	184
Low	0(0.0)	2(7.1)	25(89.3)	1(3.6)	28
Total	43(9.5)	148(32.7)	235(52.0)	26(5.8)	452

N.R.=29 d.f.=6 X^2=32.846 $p<.001$ Kendall's Tau B=.199

Table E11. Academic Achievement (Composite) by Perceived Teacher Expectations and Evaluations.

Teacher Expectations	Composite Achievement: Grade Advanced 2.0+	1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	2.0+	Total
High	3(2.0)	9(6.0)	65(43.0)	38(25.2)	36(23.8)	151
Moderate	0(0.0)	3(2.3)	31(23.5)	45(34.1)	53(40.2)	132
Low	0(0.0)	0(0.0)	2(22.2)	1(11.1)	6(66.7)	9
Total	3(1.0)	12(4.1)	98(33.6)	84(28.8)	95(32.5)	292

N.R.=189 d.f.=8 X^2=25.940 $p<.001$ Kendall's Tau B=.251

Table E12. Academic Achievement (Reading) by Perceived Teacher Expectations and Evaluations.

Teacher Expectations	Reading Achievement: Grade Advanced 2.0+	1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	2.0+	Total
High	8(4.5)	15(8.5)	55(31.3)	43(24.4)	55(31.3)	176
Moderate	1(0.6)	5(3.1)	38(23.7)	47(29.4)	69(43.1)	160
Low	0(0.0)	0(0.0)	1(11.1)	2(22.2)	6(66.7)	9
Total	9(2.6)	20(5.8)	94(27.2)	92(26.7)	130(37.7)	345

N.R.=136 d.f.=8 X^2=18.573 $p<.01$ Kendall's Tau B=.187

Table E13. Academic Achievement (GPA) by Perceived Teacher Expectations and Evaluations.

Teacher Expectations	Grade Point Average 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	31(14.3)	78(35.9)	100(46.1)	8(3.7)	217
Moderate	12(5.5)	68(30.9)	124(56.4)	16(7.3)	220
Low	0(0.0)	2(15.4)	9(69.2)	2(15.4)	13
Total	43(9.6)	148(32.9)	233(51.8)	26(5.8)	450

N.R.=31 d.f.=6 X^2=19.872 p<.003 Kendall's Tau B=.179

Table E14. Academic Achievement (Composite) by Perceived Parents' Expectations and Evaluations.

Parents' Expectations	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	2(1.8)	6(5.3)	58(51.3)	28(24.8)	19(16.8)	113
Moderately High	1(1.0)	6(5.9)	27(26.5)	33(32.4)	35(34.3)	102
Moderate	0(0.0)	0(0.0)	12(16.7)	22(30.6)	38(52.8)	72
Moderately Low to Low	0(0.0)	0(0.0)	1(20.0)	1(20.0)	3(60.0)	5
Total	3(1.0)	12(4.1)	98(33.6)	84(28.8)	95(32.5)	292

N.R.=189 d.f.=12 X^2=44.498 p<.001 Kendall's Tau B=.325

Table E15. Academic Achievement (Reading) by Perceived Parents' Expectations and Evaluations.

Parents' Expectations	Reading Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	5(3.8)	14(10.6)	46(34.8)	28(21.2)	39(29.5)	132
Moderately High	3(2.4)	6(4.8)	32(25.8)	37(29.8)	46(37.1)	124
Moderate	1(1.2)	0(0.0)	14(16.7)	27(32.1)	42(50.0)	84
Moderately Low to Low	0(0.0)	0(0.0)	2(40.0)	0(0.0)	3(60.0)	5
Total	9(2.6)	20(5.8)	94(27.2)	92(26.7)	130(37.7)	345

N.R.=136 d.f.=12 X^2=29.356 $p<.003$ Kendall's Tau B=.214

Table E16. Academic Achievement (GPA) by Perceived Parents' Expectations and Evaluations.

Parents' Expectations	Grade Point Average: 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	25(15.0)	62(37.1)	75(44.9)	5(3.0)	167
Moderately High	13(8.2)	58(36.5)	83(52.2)	5(3.1)	159
Moderate	4(3.5)	27(23.9)	67(59.3)	15(13.3)	113
Moderately Low to Low	1(10.0)	0(0.0)	8(80.0)	1(10.0)	10
Total	43(9.6)	147(32.7)	233(51.9)	26(5.8)	449

N.R.=32 d.f.=9 X^2=37.034 $p<.001$ Kendall's Tau B=.215

Table E17. Academic Achievement (Composite) by Self-Investment in Student Role.

Self-Investment	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	0(0.0)	3(3.3)	35(38.0)	27(29.3)	27(29.3)	92
Moderately High	1(1.3)	5(6.4)	22(28.2)	19(24.4)	31(39.7)	78
Moderate	2(2.6)	3(3.9)	23(29.9)	29(37.7)	20(26.0)	77
Moderately Low to Low	0(0.0)	1(1.8)	19(34.5)	18(32.7)	17(30.9)	55
Total	3(1.0)	12(4.0)	99(32.8)	93(30.8)	95(31.5)	302

N.R.=179 d.f.=12 X^2=11.906 n.s. Kendall's Tau B=.010

Table E18. Academic Achievement (Reading) by Self-Investment in Student Role.

Self-Investment	Reading Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	2(1.8)	5(4.4)	30(26.5)	31(27.4)	45(39.8)	113
Moderately High	3(3.2)	6(6.5)	20(21.5)	24(25.8)	40(43.0)	93
Moderate	3(3.2)	5(5.4)	29(31.2)	25(26.9)	31(33.3)	93
Moderately Low to Low	1(1.7)	4(6.9)	16(27.6)	14(24.1)	23(39.7)	58
Total	9(2.5)	20(5.6)	95(26.6)	94(26.3)	139(38.9)	357

N.R.=124 d.f.=12 X^2=4.365 n.s. Kendall's Tau B=-.038

Table E19. Academic Achievement (GPA) by Self-Investment in Student Role.

Self-Investment	Grade Point Average 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	17(11.3)	50(33.3)	73(48.7)	10(6.7)	150
Moderately High	13(10.5)	37(29.8)	66(53.2)	8(6.5)	124
Moderate	10(8.1)	39(31.5)	69(55.6)	6(4.8)	124
Moderately Low to Low	3(4.5)	29(43.3)	33(49.3)	2(3.0)	67
Total	43(9.2)	155(33.3)	241(51.8)	26(5.6)	465

N.R.=16 d.f.=9 X^2=7.507 n.s. Kendall's Tau B=.007

Table E20. Academic Achievement (GPA) by Sense of Control/Sense of Futility.

Control/ Futility	Grade Point Average 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High Control	6(26.1)	7(30.4)	9(39.1)	1(4.3)	23
Moderate Control	18(11.1)	49(30.2)	91(56.2)	4(2.5)	162
Intermediate	16(7.5)	77(36.3)	106(50.0)	13(6.1)	212
Moderate to High Futility	3(4.8)	19(30.6)	32(51.6)	8(12.9)	62
Total	43(9.4)	152(33.1)	238(51.9)	26(5.7)	459

N.R.=22 d.f.=9 X^2=20.970 $p<.05$ Kendall's Tau B=.085

Table E21. Academic Achievement (Composite) by Perceived Future Relevance of School.

Future Relevance	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	3(1.4)	9(4.2)	79(37.1)	58(27.2)	64(30.0)	213
Moderate	0(0.0)	3(5.3)	15(26.3)	19(33.3)	20(35.1)	57
Low	0(0.0)	0(0.0)	4(20.0)	6(30.0)	10(50.0)	20
Total	3(1.0)	12(4.1)	98(33.8)	83(28.6)	94(32.4)	290

N.R.=191 d.f.=8 X^2=7.846 n.s. Kendall's Tau B=.118

Table E22. Academic Achievement (Reading) by Perceived Future Relevance of School.

Future Relevance	Reading Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	7(2.7)	16(6.2)	71(27.4)	68(26.3)	97(37.5)	259
Moderate	1(1.6)	4(6.3)	19(29.7)	17(26.6)	23(35.9)	64
Low	1(5.0)	0(0.0)	4(20.0)	6(30.0)	9(45.0)	20
Total	9(2.6)	20(5.8)	94(27.4)	91(26.5)	129(37.6)	343

N.R.=138 d.f.=8 X^2=2.910 n.s. Kendall's Tau B=.019

Table E23. Academic Achievement (GPA) by Perceived Future Relevance of School.

Future Relevance	Grade Point Average: 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	40(11.9)	113(33.6)	165(49.1)	18(5.4)	336
Moderate	3(3.5)	23(26.7)	53(61.6)	7(8.1)	86
Low	0(0.0)	9(36.0)	15(60.0)	1(4.0)	25
Total	43(9.6)	145(32.4)	233(52.1)	26(5.8)	447

N.R.=34 d.f.=6 X^2=12.130 n.s. Kendall's Tau B=.125

Table E24. Academic Achievement (Composite) by Perceived Academic Norms of School.

Perceived Norms	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	0(0.0)	2(5.4)	8(21.6)	14(37.8)	13(35.1)	37
Moderately High	1(0.8)	3(2.5)	35(28.7)	40(32.8)	43(35.2)	122
Moderate	2(1.7)	6(5.2)	46(39.7)	32(27.6)	30(25.9)	116
Moderately Low to Low	0(0.0)	1(4.3)	9(39.1)	4(17.4)	9(39.1)	23
Total	3(1.0)	12(4.0)	98(32.9)	90(30.2)	95(31.9)	298

N.R.=183 d.f.=12 X^2=11.263 n.s. Kendall's Tau B=-.105

Table E25. Academic Achievement (Reading) by Perceived Academic Norms of School.

Perceived Norms	Reading Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	1(2.2)	0(0.0)	9(20.0)	16(35.6)	19(42.2)	45
Moderately High	1(0.7)	8(5.8)	37(26.6)	34(24.5)	59(42.4)	139
Moderate	6(4.4)	10(7.4)	41(30.1)	34(25.0)	45(33.1)	136
Moderately Low to Low	1(3.1)	2(6.3)	7(21.9)	9(28.1)	13(40.6)	32
Total	9(2.6)	20(5.7)	94(26.7)	93(26.4)	136(38.6)	352

N.R.=129 d.f.=12 X^2=12.162 n.s. Kendall's Tau B=-.087

Table E26. Academic Achievement (GPA) by Perceived Academic Norms of School.

Perceived Norms	Grade Point Average 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	4(6.7)	18(30.0)	34(56.7)	4(6.7)	60
Moderately High	17(9.1)	59(31.6)	99(52.9)	12(6.4)	187
Moderate	19(11.1)	65(38.0)	79(46.2)	8(4.7)	171
Moderately Low to Low	3(7.3)	10(24.4)	26(63.4)	2(4.9)	41
Total	43(9.4)	152(33.1)	238(51.9)	26(5.7)	459

N.R.=22 d.f.=9 X^2=6.770 n.s. Kendall's Tau B=-.044

Table E27. Academic Achievement (Reading) by Perceived Competitiveness of Peers.

Perceived Competitiveness	Reading Achievement: Grade Advanced 2.0+	1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	2.0+	Total
High	1(2.0)	2(4.0)	12(24.0)	11(22.0)	24(48.0)	50
Moderately High	6(3.8)	8(5.0)	39(24.5)	45(28.3)	61(38.4)	159
Moderate	1(0.9)	8(6.8)	37(31.6)	28(23.9)	43(36.8)	117
Moderately Low to Low	1(3.2)	2(6.5)	7(22.6)	10(32.3)	11(35.5)	31
Total	9(2.5)	20(5.6)	95(26.6)	94(26.3)	139(38.9)	357

N.R.=124 d.f.=12 X^2=7.321 n.s. Kendall's Tau B=-.053

Table E28. Academic Achievement (GPA) by Perceived Competitiveness of Peers.

Perceived Competitiveness	Grade Point Average				
	3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	6(8.5)	22(31.0)	39(54.9)	4(5.6)	71
Moderately High	19(9.4)	62(30.5)	109(53.7)	13(6.4)	203
Moderate	14(9.2)	56(36.6)	75(49.0)	8(5.2)	153
Moderately Low to Low	4(10.5)	15(39.5)	18(47.4)	1(2.6)	38
Total	43(9.2)	155(33.3)	241(51.8)	26(5.6)	465

N.R.=16 d.f.=9 X^2=3.150 n.s. Kendall's Tau B=-.057

Table E29. Academic Achievement (Reading) by Perceived Teacher Push for Achievement.

Perceived Teacher Push	Reading Achievement					
	Grade Advanced		Within	Grade Behind		
	2.0+	1.0-1.9	Appropriate	1.0-1.9	2.0+	Total
High	4(2.9)	10(7.1)	34(24.3)	37(26.4)	55(39.3)	140
Moderately High	1(1.3)	6(7.7)	20(25.6)	21(26.9)	30(38.5)	78
Moderate	0(0.0)	1(2.3)	14(31.8)	13(29.5)	16(36.4)	44
Moderately Low	2(4.3)	3(6.5)	16(34.8)	9(19.6)	16(34.8)	46
Low	2(5.3)	0(0.0)	10(26.3)	12(31.6)	14(36.8)	38
Total	9(2.6)	20(5.8)	94(27.2)	92(26.6)	131(37.9)	346

N.R.=135 d.f.=16 X^2=10.826 n.s. Kendall's Tau B=-.018

Table E30. Academic Achievement (Composite) by Perceived Teacher Push for Achievement.

Perceived Teacher Push	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	2(1.7)	4(3.3)	39(32.5)	37(30.8)	38(31.7)	120
Moderately High	0(0.0)	3(4.8)	23(36.5)	13(20.6)	24(38.1)	63
Moderate	0(0.0)	1(2.4)	11(26.8)	18(43.9)	11(26.8)	41
Moderately Low	0(0.0)	3(7.7)	13(33.3)	12(30.8)	11(28.2)	39
Low	1(3.3)	1(3.3)	12(40.0)	5(16.7)	11(36.7)	30
Total	3(1.0)	12(4.1)	98(33.4)	85(29.0)	95(32.4)	293

N.R.=188 d.f.=16 X^2=14.265 n.s. Kendall's Tau B=-.017

Table E31. Academic Achievement (GPA) by Perceived Teacher Push for Achievement.

Perceived Teacher Push	Grade Point Average: 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	23(12.5)	62(33.7)	90(48.9)	9(4.9)	184
Moderately High	9(9.5)	36(37.9)	46(48.4)	4(4.2)	95
Moderate	5(10.2)	11(22.4)	28(57.1)	5(10.2)	49
Moderately Low	6(8.6)	18(25.7)	41(58.6)	5(7.1)	70
Low	0(0.0)	21(39.6)	29(54.7)	3(5.7)	53
Total	43(9.5)	148(32.8)	234(51.9)	26(5.8)	451

N.R.=30 d.f.=12 X^2=15.088 n.s. Kendall's Tau B=.088

Table E32. Academic Achievement (Reading) by Perceived Teacher Indifference.

Perceived Indifference	Reading Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	6(3.8)	10(6.4)	50(31.8)	35(22.3)	56(35.7)	157
Moderately High	3(4.7)	4(6.3)	15(23.4)	17(26.6)	25(39.1)	64
Moderate	0(0.0)	0(0.0)	7(18.4)	10(26.3)	21(55.3)	38
Moderately Low	0(0.0)	1(2.6)	10(26.3)	14(36.8)	13(34.2)	38
Low	0(0.0)	5(10.2)	12(24.5)	16(32.7)	16(32.7)	49
Total	9(2.6)	20(5.8)	94(27.2)	92(26.6)	131(37.9)	346

N.R.=135 d.f.=16 X^2=19.669 n.s. Kendall's Tau B=.060

Table E33. Academic Achievement (Reading) by Perceived Teacher Demand for Achievement.

Perceived Demand	Reading Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	4(5.4)	7(9.5)	20(27.0)	21(28.4)	22(29.7)	74
Moderately High	2(2.6)	3(3.9)	21(27.3)	25(32.5)	26(33.8)	77
Moderate	0(0.0)	4(8.2)	11(22.4)	14(28.6)	20(40.8)	49
Moderately Low	1(1.8)	3(5.5)	14(25.5)	12(21.8)	25(45.5)	55
Low	2(2.2)	3(3.3)	28(30.8)	20(22.0)	38(41.8)	91
Total	9(2.6)	20(5.8)	94(27.2)	92(26.6)	131(37.9)	346

N.R.=135 d.f.=16 X^2=13.573 n.s. Kendall's Tau B=.078

Table E34. Academic Achievement (Composite) by Perceived Teacher Demand for Achievement.

Perceived Demand	Composite Achievement: Grade Advanced 2.0+	Grade Advanced 1.0-1.9	Within Appropriate	Grade Behind 1.0-1.9	Grade Behind 2.0+	Total
High	1(1.6)	6(9.5)	28(44.4)	12(19.0)	16(25.4)	63
Moderately High	2(3.3)	0(0.0)	20(32.8)	23(37.7)	16(26.2)	61
Moderate	0(0.0)	3(6.8)	13(29.5)	12(27.3)	16(36.4)	44
Moderately Low	0(0.0)	1(2.3)	13(29.5)	13(29.5)	17(38.6)	44
Low	0(0.0)	2(2.5)	24(29.6)	25(30.9)	30(37.0)	81
Total	3(1.0)	12(4.1)	98(33.4)	85(29.0)	95(32.4)	293

N.R.=188 d.f.=16 X^2=23.540 n.s. Kendall's Tau B=.136

Table E35. Academic Achievement (GPA) by Perceived Teacher Demand for Achievement.

Perceived Demand	Grade Point Average: 3.0-2.6	2.5-2.1	2.0-1.6	1.5-1.0	Total
High	12(10.9)	38(34.5)	57(51.8)	3(2.7)	110
Moderately High	10(9.7)	30(29.1)	53(51.5)	10(9.7)	103
Moderate	4(6.3)	22(34.4)	37(57.8)	1(1.6)	64
Moderately Low	6(9.0)	26(38.8)	33(49.3)	2(3.0)	67
Low	11(10.3)	32(29.9)	54(50.5)	10(9.3)	107
Total	43(9.5)	148(32.8)	234(51.9)	26(5.8)	451

N.R.=30 d.f.=12 X^2=12.961 n.s. Kendall's Tau B=.026

Response	Question Number 28	29	30	31	32	33
1	167(34.7)	135(28.1)	62(12.9)	81(16.8)	65(13.5)	361(75.1)
2	280(58.2)	305(63.4)	283(58.8)	316(65.7)	161(33.5)	81(16.5)
3	25(5.2)	31(6.4)	89(18.5)	74(15.4)	172(35.8)	30(6.2)
4			38(7.9)		57(11.9)	
5					17(3.5)	
NR	9(1.9)	10(2.1)	9(1.9)	10(2.1)	9(1.9)	9(1.9)

Figure E1. Responses of Indian Subjects to Self-Concept of Academic Ability Items.

Response	Question Number 13	14	21
1	173(36.0)	100(20.8)	130(27.0)
2	121(25.2)	136(28.3)	190(39.5)
3	85(17.7)	91(18.9)	126(26.2)
4	88(18.3)	128(26.6)	35(7.3)
5	14(2.9)	26(5.4)	

Figure E2. Responses of Indian Subjects to "Competitiveness" Items.

Response	Question Number 17	18	19	20
1	230(47.8)	272(56.5)	225(46.8)	178(37.0)
2	108(22.5)	126(26.2)	121(25.2)	112(23.3)
3	67(13.9)	47(9.8)	72(15.0)	88(18.3)
4	75(15.6)	36(7.5)	63(13.1)	103(21.4)
NR	1(0.2)	0(0.0)	0(0.0)	0(0.0)

Figure E3. Responses of Indian Subjects to Self-Investment Items.

Response	Question Number 34	35
Mother	228(48.3)	201(42.8)
Father	85(18.1)	79(16.8)
Brother	17(3.6)	17(3.6)
Sister	19(4.0)	22(4.7)
Teacher	59(19.5)	88(18.8)
Best Friend	45(9.5)	40(8.5)
Other	19(4.0)	22(4.7)

Figure E4. Responses of Indian Subjects to Significant Other Items.

Response	Question Number 17	19	20	
1	230(47.8)	225(46.8)	178(37.0)	
2	108(22.5)	121(25.2)	112(23.3)	
3	67(13.9)	72(15.0)	88(18.3)	
4	75(15.6)	63(13.1)	103(21.4)	
	36A	36B	36C	36D
1	327(68.0)	226(47.0)	158(32.8)	139(28.9)
2	105(21.8)	162(33.7)	214(44.5)	189(39.3)
3	38(7.9)	80(16.6)	97(20.2)	141(29.3)

Figure E5. Responses of Indian Subjects to Items on Evaluation by Others.

APPENDIX G

EDUCATION
(PROBLEMS OF THE INDIANS)

EDUCATION
(PROBLEMS OF THE INDIANS)*

What I basically like to write is the most serious problems and they are involved in the education of the Indians. Some of these problems may sound serious and simple. I think they sound serious to my point of view. I have quite a large number of cousins who are not getting their education. I talk to them and ask them why they are not getting their education and I get a large number of answers from them. I'm not the worst or the best topic writer I guarantee that I'm doing well a sensitive and understandable one. There is all kinds of schools all over the world in U.S.A. for every cripple and abled person. I think not even one school says that an Indian is welcome unless it is strictly for whites or blacks. There is all kinds of Mission and Indian schools for the Indians to attend. The staff may have a few Indian teachers but if the school is named after some great Indian leader of dedication or some famous Indian, you can surely find its an all Indian school and maybe a few white students. You see, these teachers work almost exclusively on the Indian students, and they make sure the students maintain a good passible education. Okay now, let's talk about the problems that are among the Indian students and if people get down on their can, the problems can be easily solved within an hour or so. The problems can't be solved without the assistance of the student. The student will be needed to answer questions and also give various reasons for the difficult future he has or is in now.

*This is a term paper which was presented by a young man who was enrolled in the sociology class which this researcher taught in a reservation high school. The paper is presented here in the exact words of the young writer.

What I mean by this is that he has his problem right now and doesn't need help anymore. Unless the problem is faced the human being can't fear nor run away, but have a bright future. Mostly all the problems is caused by the person themselves rather than the parent. The person's main problem is drinking and being a drug addict so the school has no longer use for them because the teacher or professer is talking to a person who doesn't care to listen or study. The person no longer cares to listen or work because he thinks the work is too hard. This is caused by lack of studying and learning. During class the person may fake work, but he gets bored on this job or class, whatever subject he participates in seems like its not worth trying for. If only the person knows how to study, he can be a great success to himself in the future. This person can't study because he makes an excuse that education is not for him, unless it is about a person's problems. This is not really the type of education you should get and it is probably against the law.to study on one subject day after day. Yeah, an Indian can be just as good as the white man if the Indian can improve his studies. As it is, only a very few people, the Indians, have reached the top and get a Master's degree, or something like that. I plan to be one of these few Indians who have reached the top. A problem is with the small kids also in elementary schools. This is always talked about with parents and teachers on how to keep the child in school or let him be. The problem is jealousy and prejudice. Although this happens among whites and Indians, it is also happening between the Indians. I overheard one of the High School teachers say that Indian Education is a National Tragedy and this is very true indeed. A few months ago, I visited one of my younger cousins up in

St. Francis to keep him in school. The parents asked me to because the young man wouldn't listen to one word what the parents say. It took me about four hours at least to talk some common sense into his head. He told me about his problems and I gave him facts that are possible to ignore to keep on with his school work. He told me his problems that could hurt everybody's feelings. He said that the school he attends are mixed with whites and Indians. The Indians was all they could was fight him just because his pa is a big man of the town. As you know, this is known as jealousy. He fights back but it only gets him into deeper trouble. He is expelled from the school and he attends another school in a different town. This time it is a white school and only a few Indians in it. The cousin of mine is not a wealthy kid, but lives on welfare and disable money with his parents and other relatives. The white students give him a rough time during meals, breaks, and classtime. He said during a meal, the other kids will slop it up and the teacher only says a few polite words to the hell-raisers. They don't give up until a fight is started and blood is wasted. The Indian student defends himself and he really gets in trouble while the others say he started it and the Indian student is outnumbered 10 - 1. So he can't talk himself out of the trouble. The folks come over to talk about it with the principal and frustration rises up in the folk's conversation. Although the parents are being dominated by the staff with enough fake proof about the boy, the father said there was a lack of understanding and that the white students' parents should be here to talk about it. This wasn't done but the ten boys were departed from any place near the Indian boy and other white boys come to do the same thing. This happens mostly everywhere and no matter where you go in a white school,

the trouble is always the same. Usually, like my cousin said, they'll call him stink, filthy, black Indian and funny looking. This is not true at all, because all the white students want is trouble. This happens everywhere and also money is one of the big problems. Also, the staff is too harsh on some of the students. A good education cannot be deserved unless every man and woman treats each other very nice in cooperation and respect one another. I guess I bragged enough, but what I really wanted to say is some of us Indians are lazy to get an education. Some of us are bashful because of our looks and some say they can't make it because they say they are dumb. This is not true at all, they haven't tried at all. Also, transportation and health are another big problems. Buses are provided but a lot say they can't make it to school because they overslept. This means that homework piles up and we don't care to finish so we fail our courses and don't care for school from then on. Health is serious. Some have T.B. and can't attend a regular school but you can attend a school for the sick or something. Its probably a government money aid, but the parents or the person themselves don't want to go because they'll miss each other. If one person dies in a family, the person no longer cares for school because the deceased usually makes him get an good education. Now let me write what the big serious problems are among the Indians. There is a serious lack of social and recreational activities in BIA schools. These problems are taken from the book. Student activities are closely regulated and little interaction between the sexes is allowed. Weekends are noted for their boredom. Some students resort to drinking and glue-sniffing to relieve the boredom. Students have little privacy, are locked into rigid schedules, and are placed under an oppressive

number of rules and regulations. In South Dakota, the subcommittee found suicide attempt rates more than twice the national average, delinquency rates for Indian adolescents nine times the national average, extensive and severe alcoholism problems on every reservation, an alarming amount of glue and gasoline sniffing among prepubertal Indian children, almost one in five adolescents had no adult male in the house, and the number of Indian children in foster homes was almost five times the national average. In a study of high school students in a plains tribe, 84 percent of the boys and 76 percent of the girls claimed they drank. 37 percent claimed they drank frequently. Another survey of Indian high school students found 339 our of 350 who disliked their hometown because of excessive drinking. On this reservation 70 percent of all juveniles offenses involved alcohol -- a total of 420 in a recent year. Psychologically, excessive drinking originates in feelings of worthlessness and powerlessness which are closely related to socio-economic and educational failure. Drinking is an expression of individual anger and serves as a vehicle for acting out aggressive and hostile feelings. Here are some complaints I get from parents just in recent months.

Sophia (7th grade) complained to me that her back hurt, and I looked and found a piece of pencil lead sticking in her back. She said that two girls were quarreling at her. When she was reading in class outloud, one of them walked behind her and poked her with her pencil. Sophia's mother then complained to the teacher, but the girls threatened to get even with Sophia who then refused to go to school because she was afraid and she thinks this might happen in other schools so she is now attending a Public School at the age of fourteen in the sixth grade. My cousin, Louise, dropped out of school. She said the Mixedblood girls

called her a "Dumb Squaw" and kept laughing at her because she doesn't do anything to help herself. Absalom is having such a hard time. He has played hookey so much that now he is thirteen years old and only in the fourth grade. All the little kids pick on him and make fun of him -- even on the bus they all pick on him and throw spitballs with rubber bands at him. He refuses to go to another school. Researchers have found that the Indian was a great poignancy. They thought they'd find better stuff, instead they found difficult reasons. Beginning with the Jesuit mission school for nationwide Indians in 1568, formal education of Indians was dominated by the church for almost 300 years. Jesuits and Franciscans were the first groups to try to remake the Indians in the mold of the white man, but the cause was taken up vigorously by Protestants when they gained a foothold in America. Education was adopted as the best means of accomplishing the task, and as early as 1617, King James called upon Anglican clergy to provide funds for educating children of these Barbarians in Virginia. The eventual result of his request was the establishment of the college of William and Mary, a college for the children of the infidels. Other schools for Indians were also started, but none were completely successful in achieving their civilization goals. For though the Indian students often left school with an understanding of the principles of Christianity and a solid grasp of reading and writing skills, they still shied away from the white man's way of life. One observer of the times noted, with obvious frustration, that after the Indians returned home, instead of civilizing and converting the rest, they have immediately relapt into infidelity and barbarism themselves. Prejudice, racial intolerance, and discrimination towards Indians is far more wide-

spread and serious than generally recognized. I guess I've written enough and besides I ran out of information and I was using a small pamphlet and my own words. As you know, I'm not the worst or best term paper writer. I deserve a C-.