An analysis of a student locus of control and school perception with sixth grade students

Anselmo Juarez Escobar
San Jose State University

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AN ANALYSIS OF A STUDENT LOCUS OF CONTROL
AND SCHOOL PERCEPTION WITH SIXTH GRADE STUDENTS

A Thesis
Presented to
the Faculty of the School of Social Work
San Jose State University

In Partial Fulfillment
of the Requirements for the Degree
Master of Social Work

By
Anselmo Juarez Escobar
May 1977
APPROVED FOR THE SCHOOL OF SOCIAL WORK

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APPROVED FOR THE UNIVERSITY GRADUATE COMMITTEE

[Signature]
I dedicate this thesis to my wife, Cecilia, and to my mother and father, for without their continued support this would not have been possible, and to my daughter Raechelle Elizabeth Escobar whose birth encouraged me to continue my education.
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Chapter I
REVIEW

Introduction and Background

This thesis was designed to investigate the influence of selected noncognitive factors on the development of educational competency in elementary school aged pupils. Since the early 1900's the problems of the poor have gained national attention and produced the subsequent poverty programs. The civil rights movement has become the catalyst for a surge of social science research into the life and problems of America's less fortunate.

Researchers in the field of education of the poor in America note positive correlation between the socioeconomic status of the family and the child's academic performance and test performance (Anastasi, 1958; Jensen, 1968). Deprivation in language skills (Bernstein, 1970) and handicaps in the development of symbolic processing of information (Hunt, 1972; Bereiter & Englemann, 1966) also have been noted as characteristic of the poor. Observations of childhood socialization patterns have resulted in suggestions that family life in poverty may handicap children in later schooling (Hess & Shipman, 1965; Deutsch, 1965). I.Q. differences between the poor and the affluent have been widely reported (Jensen, 1968; Das, 1973), and poverty and the resultant nutritional and physiological deprivation have been implicated as sources of educational failure (Birch & Gussow, 1970).

In 1966, an effort to examine the quality of education across America was presented in the Coleman report, commissioned by the United States Congress. This report has been criticized (Harvard
Educational Review, Winter, 1968), however, it provides considerable evidence that the impact of socioeconomic status (SES) on educational achievement is important. In part, the investigators concluded that achievement of low SES students in relation to middle SES pupils, depended on the school they attended, on the attitudes of peers and teachers, and on internal or external feelings of personal control. The impact of family background was a critical variable when considering the variation in achievement across the population. Despite methodological limitations, the Coleman report provides powerful evidence demonstrating the relationship between socioeconomic status and educational achievement. It also documented other factors which, in conjunction with the impact of SES, affect school achievement level, specifically ethnic group membership of pupils.

Due to the over representation of ethnic minorities among the poor, much of the research on the effects of poverty on educational achievement has been confounded. The concept of poverty and race are so inextricably linked that research on poverty is generally research on Mexican-Americans or other ethnic minority group. Arthur Jensen (1968, 1971, 1973), in his examination of the effects of race on I.Q., sometimes confounds his results by comparing minority work class children to Caucasian middle class children. In the past, statistical control for variation of socioeconomic status between comparison groups has been one method of separating race from social class. Statistical controls for variations of socioeconomic status between comparison groups created unnatural comparisons not found in the real world.
Research on poverty and race may be confounded by factors, some unknown. The effects of sex differences in interpreting the research on the educational implications of poverty and race is not clear, for example. The impact of sex role development and difference in the socialization of boys and girls has been well documented (Maccoby, 1966; Dwyer, 1973). Dwyer (1973) reviewed consistent results showing the educational superiority of girls over boys in early school life. While developmental maturational differences have been employed to explain sex achievement differences, research supports socialization differences between boys and girls as sources of achievement differences between the sexes throughout schooling (Dwyer, 1973). The relationship between poverty, race, and sex role socialization remains largely speculative, but it seems likely that poverty differentially affects the socialization of boys and girls (Farnham-Diggory, 1970).

In addition to the confounding of race, SES, and sex, most research has focused on abilities to identify differences, specifically cognitive variables. Researchers of the educational characteristics of minorities and the poor have sought to explain the discrepancy found between the cognitive performance of "standard," middle-class, Caucasian children and the groups that have come to be know as the educationally or culturally "disadvantaged." This difference in performance has been pursued in essentially three different ways: 1) the study of performance on intelligence tests (I.Q.) differences (Sattler, 1973), 2) the study of mental abilities other than I.Q. (Jensen, 1970; Lesser, et al., 1964), and 3) the study of achievement differences (Coleman, 1966; Wilson, 1963). Results of studies of these three
dimensions, I.Q., mental abilities, and achievement, lead one to conclude that for as yet unspecified reasons, ethnic minorities and the poor perform differently than Caucasian children on school-related and achievement activities. Achievement performance of minority children, other than Asian-American, is consistently lower than that of Caucasian pupils. However, mental abilities, I.Q., and achievement are not the only factors which influence performance. An examination of the literature on socialization indicates that success in school or society is affected by more complex variables than ability only. It is important to note that the theories of socialization were generally based upon white middle income people with the underlying assumption being that white middle income people are the standard of which all others are to be measured.

Review of Socialization Literature

The study of competence is the underlying focus of much socialization and developmental research (Inkles, 1966; Clausen, 1968). Although the word competence is used widely in both scientific and popular literature, the semantic variations of the concept are as broad as the uses of the term. A careful consideration of the definitions of competence is necessary in order to avoid the risk of misinterpreting the theoretical arguments presented (Chan, 1974).

The definition of competence varies according to theoretical positions concerning socialization and developmental processes. Since competence refers to the adequacy of socialization or developmental process, theorists emphasizing the development of internal emotional or psychic states (Freud, 1949; White, 1959; Erikson, 1959) or theorists
observing behavior (Bandura, 1969; Gewirtz, 1969) or spcietal effects (Inkeles, 1966) differ in their interpretation of the components of a competent individual.

Competence for neo-Freudians such as Erikson (1959), Murphy (1962), and Loevinger (1966) is the development of the ego strength necessary to handle stresses put upon individuals by biological drives and environmental contingencies. Maslow (1954) viewed competence in terms of "self-actualization." Maslow suggests that the development of competence comes from a self-initiated motivation to realize one's emotional potential, or to self-actualize. White (1959, 1963) suggests that man's drive to become competent is an innate drive which is separate from both psychic ego and organistic tension reduction. White refers to a competent self as a person who perceives himself as casually important and effective in his environment. Kohlberg (1969) and Piaget (1954) suggest that competence is the full development of universal cognitive and moral functions needed to participate in society. Gerwirtz (1969), Bandura (1969), Aronfreed (1969) and other social learning theorists suggest that competence is the learning of the behaviors and skills required to participate in society.

This list of psychological positions defining competent outcomes of the socialization or developmental process is not exhaustive, nor are the positions necessarily exclusive of each other. They do serve to indicate the variety of interpretations of concept of competence.

From a sociocultural perspective, competence can be considered as the end-goal of socialization. Competence refers to a standard by which the outcome of socialization of an individual for a role is
judged. The concept of competence is a relative term and depends on the role under investigation and the sociocultural definition of that role. Broadly conceived, competence may be regarded as obtaining by an individual, the behaviors and social skills required by society which allow that individual to perform successfully in situations and roles encountered throughout life (Inkeles, 1966; Brim, 1960; Foote & Cottrell, 1955; Erikson, 1959).

This definition of competence differs from the more traditional psychological definitions in two important respects. The sociocultural system and its demands are critically important. Secondly, the recognition of role-taking behavior becomes essential.

The development of a concept of competence for a particular role is bound by sociocultural influences (Inkeles, 1968). The development of the normative structure within societies creates the development of a standard of competence for the various available and required role positions one encounters. Historical, political, and philosophical doctrines, as well as economic, environmental, and biological limitations, are elements contributing to the definition of competence for each role. Further, the stability, size, isolation, complexity, and other structural features of the society will contribute to the stability of the definition of competence.

Performance within a role is measured against the definition of competence developed within the social structure. Requirements of physical skills, emotional expression, intellectual capacities, and social interaction skills are a few capacities with general standards of excellence that vary from role to role. Although society creates
the standard of competence for various roles in society, society also shapes the process of socialization towards competence by influencing factors such as diet, density of the population, abundance of care, structure of the family unit, the development of taboos, and formal and informal socializing techniques (Inkeles, 1968). From this perspective, society not only sets the requirements for competent performance but directly influences the process of socialization of individuals toward competence.

Inkeles (1968), investigating the elements of personal development necessary for socialization, suggests that the essential elements of personal development parallel the essential requirements needed in persons for a society to exist. Reviewing Levy's (1952) study of requirements of society, Inkeles concluded "... it remains clear that the list of requisites for any social order elaborated by sociologists is highly congruent with the elements which psychologists consider important parts of any personality system (Inkeles, 1968, p. 82)."

It seems reasonable to conclude that the investigation of competence, or the social definition of excellence in role performance, must involve a careful look at the process of socialization towards competence, keeping in mind the influence of the sociocultural system.

Inextricably linked to the socialization process, competence includes the individual's capacity to perform in roles defined for him by societal demands, to perform in roles that he aspires to, and to perform in innovative roles of his own design (Inkeles, 1966; 1968; Smith, 1968). This definition of competence emphasizes a person's ability to be flexible and elaborate the activities and roles in which he participates.
The goal of the socialization process and the outcome of normal development would be to produce individuals capable of performing within the demands of society. While the demands of societies differ according to structural features of the society, each society participates in the socialization process aimed at developing competent members able to sustain the society (Clausen, 1968; Whiting, 1963).

**Ability.** Competency in the student role requires certain levels of mental abilities, psychomotor abilities, fine and gross motor abilities, as well as minimal levels of sight, hearing, and other sensory modalities. Limitations in any one or more of these abilities may place the role performer in jeopardy of failing at the role. Compensating either with other abilities or restructuring of the role requirements by society with the support of external aids can increase the functioning level of persons with defective abilities. The blind person can be aided to compensate through the development of special material, and the person of limited perceptual abilities may be able to compensate through his motor or tactual modalities.

Rohwer (1971) contends that while school success is related to I.Q., school success is not dependent on "learning ability." He suggests that I.Q. tests measure not the potential to learn or the available capacity to learn, but measure what has been learned in a course of some period of time. What has been learned by an individual is then compared to the amount learned by a collection of same-age peers. The I.Q. could be viewed as a measure of learning ability only if all the children within an age level had exactly equal opportunity to learn the relevant material needed in an I.Q. test. Since social
economic class and ethnic membership mandate gross variations in opportunity, Rowher suggests more basic psychological measures can provide a clearer picture of children's learning proficiency. He presents evidence which he interprets to suggest that paired-associated methods would be of great value in estimating learning proficiency in children.

The nature of the I.Q. test and the associated biases in its administration can be interpreted to indicate that the I.Q. test may serve as a measure of functioning level of persons in the role of student, but fall short of estimating mental ability necessary to perform the role. Estimation of ability to perform the role of student becomes problematic in research on the development of competence in the role of student. Arthur Jensen (1969) suggests that mental ability needed to perform in school might be broken into two distinct processes labeled Level I (basic/associative ability) and Level II (conceptual ability). Jensen summarizes the difference of Level I and II in the following way:

"Level I involves the simple registration, storage, and recall of sensory inputs and is more prominent in short-term memory and rote learning ... Level I ability have been measured by tests of short-term memory, such as digit span, and by paired-associate and serial rote learning ... Level II involves mental manipulation of sensory inputs, relating them to stored memories, and generalization, abstraction, transfer, reasoning, conceptualization and problem solving ... Level II ability have been measured by standard tests of intelligence, especially tests of fluid intelligence, and by experimental conceptual learning tasks."

Jensen (1969; 1973) reports that Level I and II are highly correlated for middle SES children but are not correlated for lower SES children. Jensen (1973) reports further that findings suggest that the association between Level I and Level II is only slight and may be due only to their association as genetically linked abilities. Further,
Jensen reports Level I abilities appear equally distributed over socioeconomic classes (Jensen, 1969), and the differences between Caucasians and Chicanos, for example, is far greater on Level II than on Level I (Jensen, 1973). Jensen (1969; 1973) concludes that low SES and high SES as well as Chicano and Caucasians differ in Level II learning, but not in Level I learning. Jensen suggests that the inadequacy in Level II learning in Chicanos and low SES populations accounts for their poor performance as students.

Rohwer (1971) takes issue with Jensen's conclusions and maintains that the separation of Level I and Level II learning is not supportable, but rather that Level I and Level II both require conceptual, abstract abilities. Rohwer points to the evidence that paired-associated learning and the process of remembering digits in a series (both suggested by Jensen as Level I) are not only conceptual but, in the case of paired-associated methods, require transformation strategies as well. Rohwer (1971) concludes that learning proficiency must distinguish between acquiring and producing new information (e.g., digit span) and recalling previously learned material (e.g., I.Q. measure), and between formal conceptual activities (e.g., using formal conceptual rules) and imaginative conceptual rules (e.g., innovating conceptual strategies).

It appears profitable to distinguish between mental abilities in terms of learning abilities and functioning level when investigating the impact of ability on the performance of student role performers. The assessment of mental abilities is confounded by noncognitive variables such as knowledge of the requirements and expectations of the activity.
and motivation to perform the activity. Academic performance as well as I.Q. can be considered assessments of functioning level which is mediated by factors other than simply mental ability.

**Knowledge of role.** A second mediating variable between an individual's role performance and sociocultural and socializing influences is his knowledge of the expectations and requirements of the role.

The conceptual foundation for knowledge of the role is dependent on the sociological view of social behavior (Brim, 1960; 1966; Kerckoff, 1969; 1972). Behavior is considered social only if the actions of others toward the actor is taken into account. The choice of behavior by an actor reflects in part his expectations of the actions of others (Kerckoff, 1969; Homans, 1961; Goffman, 1959). In part, adequate role performance becomes dependent upon the development of self-other relationships and the adequate interpretations of the actions, reactions, and expectations by the other. The adequacy of role performance is influenced by the development of a clear image of the requirements of the role. One's image of a role develops through the interpretation of the actions of others towards the role performer. Simply stated, playing a role is guided by one's conception of the roles played by others. A clear image of the student role and the quality of performance in the student role is influenced by the quality of knowledge and social perception of others in the school setting. Goffman (1959) commenting on role performance suggests that not only knowledge of the role of other players influence one's performance, but observations of the "setting," the physical environment, decor, and the like, are other critical
variables in the development of self-action by the role performer.

While knowledge of the role includes a person's interpretation of the rules and requirements of the role, one important aspect of role knowledge is a person's social perception of the role. Variation in social perceptions of a role is hypothesized as a source of variance in role performance (Dubin & Dubin, 1965). The assumption that all pupils perceive the role of the student in the same manner ignore differences in affectual perceptions by pupils. Researchers have suggested that children's feelings about the student role is related to student achievement (Coleman, et al., 1966; Davidson & Long, 1968). Dubin and Dubin (1965) concluded that role performance cannot be explained solely by investigating knowledge of the physical functioning or cultural context of the role, but researchers must consider subtle affectual aspects of role knowledge that may produce performance variation among children. Children may equally know the roles and functions of the student role, but may differ widely in their affectual social perceptions of schooling and the student role.

Evidence of the impact of differences in social perception of the expectations of a role can be divided into studies of the impact of self-concept on behavior (Zirkel, 1971; Wylie, 1961; Coopersmith, 1967) and studies of the social perception of the attitudes of others towards the role performer and that impact on the role performer (Brophy & Good, 1972; Davidson & Lang, 1960; Dubin & Dubin, 1965). Studies of the global concept of self-image have not yielded a satisfactory relationship between self-image and behavior for discrete roles such as the student role (Kunce, Getsinger, & Miller, 1972; Kanekar, 1972). Therefore,
it seems more profitable to study role image for particular roles or role expectations and the expectations of others towards specific roles.

Of specific concern are empirical studies of the relationship between the social perception of children with a particular role and their role performance. Miller (1972) reports that preschool children who perceived their parents as controlling and accepting exhibited positive and independent behaviors as students. Preschool children perceiving their parents as positive and/or over-indulgent exhibited negative and dependent behaviors as students. School related perceptions of middle class, Caucasian children (Yamamoto, Thomas, Karnes, 1969; Davidson and Lang, 1960), minority children (Thomas & Yamamoto, 1971), and handicapped children (Thomas, Yamamoto, & Morris, 1970; Thomas & Yamamoto, 1972) have been studied. Lucas, Kunkel, and McElhinney (1970) report wide variations in their perceptions of schooling. Of 6,500 fourth through sixth graders interviewed, Lucas et.al., report one-third of the students expressed aberrant and negative social perceptions about school. Lucas, et. al., did not pursue the differences in the characteristics of the one-third who had negative role information.

Davidson and Lang (1960) attempted to investigate the cause for negative student images, as well as poor performance. This study is among the few studies relating children's feelings and performance to children's perception of others toward them, thus providing empirical evidence for the importance of the development of role knowledge. The study points to the critical relationship between one's social perception and one's performance. Important socioeconomic class differences, achievement variations, and sex differences were observed in
their study. Variation of students' perception of the attitudes of others toward themselves may be affected by socioeconomic factors and differences in male-female socialization.

Kerckoff (1971) outlines the variability and the information available to persons of various social classes concerning role prescriptions. Inkeles (1966) concludes that without providing minorities the knowledge about what and how to socialize the children to be competent, equalizing educational opportunity will result in continual failure. Economic inequalities preclude certain role performers from being exposed to the folk legend, fairy tales, and ethical doctrines, all of which embody societal definitions of the general expectations of its members. Race and race related policies are other regulators on the type and quality of information or knowledge available to groups of individuals.

Differential socialization of boys and girls may also affect development of role knowledge. Dwyer (1973) reviews reports that girls and boys differ in their social perception of aspects of schooling. Dwyer reports a child's perception of the appropriateness of reading for one's own sex was positively related to achievement in reading. Coleman (1961), in his study of adolescent society, noticed clear differences in the perception of student roles by boys and girls. Mazurkiewicz (1960) reports that the majority of fathers and sons he studied classified reading as a feminine activity. Mazurkiewicz also found a positive correlation between a father's opinion and a child's opinion about reading. Mazurkiewicz's findings imply differences in male-female socialization which may lead to variations in role perceptions.
Social perceptions of a role appear to be influenced by many social structured features of the society and appears to directly affect a person's performance within a role. Variations in social perception may be a result of immature social perceptions or may be an accurate perception of one's environment, and that environment may be a result of bias within the society. Racial minorities or the economically poor may be at variation with the necessary knowledge or social perception of various roles and these variations may depress their role performance. Their variations of social perceptions may be either inadequate or immature development of social perceptions or more probably a reflection of the reality of their predicament which requires their perception and expectations of their roles to be necessarily fatalistic and thus affect their role performance (Chan, 1974).

The performance or functioning level of a role-player seems to be contingent, in part, on required abilities as well as the adequacy of the social perceptions of the expectations and requirements of the role. The third factor affecting functioning level is motivation.

**Motivation.** It may be that the child has the ability to perform the role, and he may understand the social requirements and expectations of the role, but he may see little reason or incentive to perform the role. Motivation difference can be described as variations, or in extreme cases, failure in earlier socialization, in linking value or rewards with the production of performance of the particular role under investigation (Bialer, 1961). Different cultural backgrounds, various mothering patterns, and the like, may be conceivable antecedents to variant motivational patterns (Kerckoff, 1969). The motives for an
individual also vary among the many roles he must play. There is reason to believe that required roles may conflict to bring about inadequate motivation in the lesser role (Brim, 1966). The role of a gang member may conflict with that person's role as a student in school. One role may reduce the motivation to perform in the other role.

The concept of motivation is broad and encompasses a wide variety of research and theoretical considerations. One aspect of motivation which may be especially important is understanding the factors influencing role performance is the construct locus of control.

The research into the concept of locus of control of internal (I), as opposed to external (E) feeling of control over behavior, has grown in popularity over the past decade (Rotter, 1966; Lefcourt, 1966, 1972; Joe, 1971). Rotter (1954; 1966; Rotter, Seeman & Livirant, 1962) stimulated much of the interest in internal control through his interest in describing the clinical setting in psychotherapy. Rotter (1954) noted that while some patients change their behavior in response to new experiences and the outcome of past experiences, other patients seemed to ignore new experiences and viewed events in their lives as being a product of chance or control by others. Simply stated then, locus of control is the placement of responsibility for the outcome of events. Internal control refers to persons who feel that their own actions have the potential for altering the surrounding environment or events. External control refers to the belief that rewards and reinforcement are not controlled by the individual. Fate, luck, significant-other and other external variables are some common explanations of external control. Extensive and elaborate theoretical views have developed
around the construct of personal or other controls. Rotter (1954), Seeman (1963, 1966, 1971), and others consider locus of control to be the development of a general expectancy learned by the individual of the source of reinforcement across situations.

While the generalized concept of locus of control may help in describing individuals as generally internal or external, Mirels (1970) provides evidence of a more complex construct than that presented by Rotter. Crandall and her colleagues at the Fel's Research Institute have distinguished the difference between feelings of control for successful events (I+) and feelings of control for failure events (I-) (Crandall, V.C., Katkousky, W., & Crandall, V.J., 1965). More profitable research in locus of control must separate measures for success, as well as failure and may be more profitable if the measures are role specific (Crandall, et al., 1965; Chan & Keogh, 1974; Mirels, 1970).

The development of internal or external control has been investigated by both theoretical presentations (Rotter, 1954, 1966; Rotter, Seeman & Liverant, 1962; Bailer, 1961; Aronfreed, 1964, 1968; Aronfreed, Cutich, and Pagen, 1963) and the empirical study of antecedent child rearing practices (Crandall, V.C., 1973; Lefcourt, 1972; Joe, 1971).

School achievement and locus of control have been the direct focus of some studies. Lessing (1969) reported feelings of control predicted grade point averages even when I.Q. was controlled. The Coleman report (Coleman, Campbell, Hobson, McPartland, Mood, Weinfeld, & York, 1966) reported a relationship between personal control and achievement. Lefcourt (1972) reviews other studies relating internal control to high achievement and external control to depressed achievement. One study
(Katz, 1967), however, found little relationship between achievement and personal control among Black children. Excluding Katz's (1967) study, consistent research has been reported linking internality to good achievement and externality to limited achievement.

Even though a different belief in personal control may be adaptive for certain impoverished racial groups, this difference in locus of control is hypothesized as contributing to their inadequate performance as students. Since the construct of locus of control can be considered one critical variable in the motivational set of role performance, it appears from the evidence that variations in locus of control may account for some of the variations among individuals in their performance of a similar role.

Conclusion and Statement of the Conceptual Hypothesis

Variation among the academic performance of members of various social classes, races, and sexes has been studied in a variety of ways. I. Q. scores and other mental measurement have been shown to have strong relationships with academic achievement. However, traditional intelligence measures have been criticized because of the lack of concern for the influence of noncognitive factors on test performance. Achievement scores as well as I. Q. may be considered to be measures of functioning levels which, while providing a measure of performance, are confounded by other mediating variables. Studies of the process of socialization suggest that noncognitive variables may be as important in the development of competent role performance as intellectual ability. Two noncognitive variables of importance may be role knowledge and role motivation.
Broadening one's perspective as to the possible variables which might affect role performance is not enough. Results of studies showing the relationship between academic performance, race, and social class are often confounded by the interaction between race and socioeconomic status. It is evident from demographic information that Chicanos are over-represented in the lower socioeconomic levels in American society. Observations of racial differences in educational performance are difficult to interpret when social class bias between races is not taken into account. Researchers reporting variations in Chicano and Caucasian achievement must be concerned with the bias of socioeconomic status involved in their results.

The purpose of this study is to investigate two noncognitive variables in educational performance as they relate to socioeconomic status, racial background, sex, and achievement level. The study is also designed to attempt to study the effects of SES differences independent of racial differences and to study racial differences independent of SES differences.

All pupils of comparable basic learning ability are hypothesized to differ in social perceptions and feelings of personal control in the following ways:

1) Pupils from different socioeconomic backgrounds, but from the same racial group, will differ in their role perceptions and feelings of personal control. Specifically, it is suggested that Chicano pupils from different socioeconomic levels would differ in their social perceptions of schooling and feelings of personal control. Pupils
from higher income families are predicted to have more positive perceptions about schooling and feel greater personal control for successes and for events in general than pupils from lower income families. Chicano pupils from lower income families are predicted to feel more responsible for failures than Chicano pupils from higher income families.

2) When racial groups are compared without regard for differences in socioeconomic status, racial groups will differ in role perceptions and feelings of internal control. Specifically, when Chicano and Caucasian pupils are compared without regard to differences in family income levels, Caucasian pupils are predicted to have more positive school perceptions and feel more internal control for successes and for events in general than Chicano pupils. Chicano pupils will feel more internal control for failures than Caucasian pupils when differences in SES backgrounds between racial groups are not considered.

3) When racial groups of the same SES background are compared, racial groups will not differ in role perception or feelings of responsibility. Specifically, Chicano and Caucasian pupils of the same socioeconomic status are predicted not to differ in role perception or in feelings of responsibility for events.

4) Girls are predicted to have more positive school perception and feel more responsible for successes and for events in total than nonachievers. Nonachievers will feel more responsibility for failures than achievers.
Chapter II

METHODS

Plan of the Study

This study was designed to investigate differences in social perception of schooling and motivation by achieving and non-achieving pupils in elementary school. Contrasts in social perception and motivation were made according to socioeconomic status, sex, achievement performance, and race. Experimental hypotheses were developed based on the structure of the sample and the instruments employed.

Sampling

The Schools

Three elementary schools in a large county in California participated in the project. Because of the preliminary nature of this investigation and the importance of meeting socioeconomic requirements of the sample, schools were nonrandomly sampled. The three schools were chosen to represent three different socioeconomic income levels; low, low-medium, and medium. Low income schools were defined as schools whose median family income was under $5,000, the majority of the students qualified for the federal free lunch program, and participated in school district poverty programs. Low-medium income schools were defined as schools whose median family income was from $5,000 to $10,000, the majority of students qualified for federal free lunch program, and participated in school district poverty programs. Medium income schools were defined as schools whose median family income was over $10,000, had a low percentage of children who qualified for free lunch program, and
did not participate in federal poverty programs. Table 1 contains descriptive information on the three schools selected. Table 2 contains percentage of ethnic composition of the sample schools.

Pupils sampled from school 1 were representative of children from medium socioeconomic status homes. School 1 was located in a residential, medium to high income community. The total enrollment of the medium income school ranged from 500 pupils to 800 pupils.

Pupils within schools 2 and 3 represented children from low-medium and low income families, respectively. Both schools were located in rural areas. The total pupil enrollment for school 2 was 300 to 500, and for school 3 was under 500.

While each child's SES background was assessed by a method described in the next section, socioeconomic variations among children may also reflect socioeconomic differences by school. School by school differences were apparent in the analysis of individual pupil socioeconomic status variation.

The Children

All sixth grade children attending the schools sampled were eligible to be included in the final pupil sample. Only children meeting the following four criteria were selected: 1) The child participated in the October, 1976, state-wide, achievement testing; 2) the child was not eliminated by the test administrators or teachers because of suspected mental deficiency or because he could not conform to the test requirements; 3) the child was able to read English; 4) the child was present during the testing periods. Of 162 children available, 157 children
Table 1
Descriptive Statistics For Sample Schools

<table>
<thead>
<tr>
<th>School</th>
<th>Enrollment</th>
<th>AFDC&lt;sup&gt;a&lt;/sup&gt; in %</th>
<th>Free Lunch&lt;sup&gt;b&lt;/sup&gt; in %</th>
<th>Median Income&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Sp. Pov. Pro.&lt;sup&gt;d&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>720</td>
<td>6.0</td>
<td>2.5</td>
<td>$13,805</td>
<td>---</td>
</tr>
<tr>
<td>School 2</td>
<td>470</td>
<td>56.9</td>
<td>56.4</td>
<td>$7,626</td>
<td>5</td>
</tr>
<tr>
<td>School 3</td>
<td>207</td>
<td>63.2</td>
<td>66.9</td>
<td>$4,715</td>
<td>3</td>
</tr>
</tbody>
</table>

Data obtained from school district office

a. % children from Aid to Families with Dependent Children
b. % children receiving free lunch
c. median family income
d. special poverty program
Table 2

% of Ethnic Composition

Sample Schools

<table>
<thead>
<tr>
<th>School</th>
<th>Chicano</th>
<th>White</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>School 1</td>
<td>33.6</td>
<td>55.5</td>
<td>10.9</td>
</tr>
<tr>
<td>School 2</td>
<td>35.5</td>
<td>52.5</td>
<td>12.0</td>
</tr>
<tr>
<td>School 3</td>
<td>75.9</td>
<td>21.0</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Data obtained from school district office

1. includes Chinese, Japanese, Filipinos, and other Asians
were included in the final sample. Table 3 represents a breakdown of the demographic characteristics of the pupil sample. Eighty-three children were Chicano and 41 children were Caucasian. The Caucasian sample did not include pupils with Spanish surnames. The samples included 14 low-income pupils, 22 low-medium-income pupils, and 121 medium-income pupils.

Ethnic identification of the pupils was made by visual inspection by the test administrators. Each child was observed and coded according to procedures to be explained more fully later.

Socioeconomic status for each child was also determined at the time of testing. While the schools were selected as representative of particular income levels, individual variations within schools demanded child-by-child ratings. Teachers were asked to classify each child in their classrooms in one of three economic classifications: 1) low income, 0-$5,000; 2) low-medium, $5,000 to $10,000 and 3) medium income, $10,000+. This technique of teacher ratings of socioeconomic status has been found to be as reliable as other methods (Gorsuch, 1972, Chan, 1974). Children unable to be rated by their teachers received the rating of their school. Standard teacher instructions and forms for SES ratings are provided in Appendix A.

Reading achievement was chosen as the criterion for distinguishing achievers and nonachievers. Reading achievement rather than arithmetic or language achievement was selected because of its self-evident importance as a variable in school success and because of its strong association with student success in other academic areas.
Table 3

Demographic Description
of Sample Population

<table>
<thead>
<tr>
<th>Socioeconomic Status</th>
<th>Low</th>
<th>Low-Medium</th>
<th>Medium</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>Chicanos n=83</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Caucasiuns n=41</td>
<td>7</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Blacks n=4</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Filipinos n=19</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Puerto Ricans n=7</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Vietnamese n=1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Mexican-Americans n=1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Each child in the sample participated in the state-wide achievement test administration approximately three months prior to the beginning of the present investigation. These children were administered the Comprehensive Tests of Basic Skills (CTBS). This battery of tests measures students' achievement in the reading, language, and arithmetic areas. The reading achievement portion of the battery yields a raw score which can be converted into a "grade equivalent score." The reading achievement battery includes one part on vocabulary and a second part on comprehension. Vocabulary is designed to assess a student's knowledge of words in phrases. Comprehension is designed to assess understanding sentences, paragraphs, stories, letters, and poems. School site personnel administered the tests and also spent some time prior to the testing preparing their students to take the test. School personnel stated that they attempted to optimize student performance.

Individual student achievement performance information was provided to the researchers by the teachers. The sample was then divided into achievers and non-achievers. Achievers were defined as those pupils whose reading grade equivalent score was 5.0 or better. Non-achievers were children whose reading grade equivalent score was 4.9 or below. A grade equivalent of 4.9 was chosen as the dividing point for achievers and non-achievers because it placed the non-achiever more than one grade level below his chronological grade level and in the bottom third of the nationwide distribution of the test. This conservative estimate of non-achievers was also designed to account for test error and test administration idiosyncrasies.
The high density of Chicano children in low and low-medium income schools illustrate the necessity of carefully distinguishing between the impact of social class and race on the outcome of educational research. Therefore, the entire sample was organized in three different ways.

Subsample 1. Subsample 1 was designed to study the effects of social class independent of race. Only the Chicano pupils were included in this subsample. The total Chicano sample was divided into three socioeconomic levels with 4 low income, 7 low-medium income, and 72 medium income pupils making up the total of 83 Chicano children.

Subsample 2. Subsample 2 was designed to study the effects of racial group membership without considering the confounding variable of social class. Eighty-three Chicanos, 41 Anglos, 4 Blacks, 19 Filipinos, 7 Puerto Ricans, 1 Vietnamese, and 1 Mexican-American.

Subsample 3. Subsample 3 was designed to investigate the effects of race when social class differences are equalized. Since most of the Caucasian children sampled were within the medium SES classification, a socioeconomic class by race analysis was possible only within medium income level. Seventy-two medium income Chicano students and 22 medium income Caucasian students were included in this subsample.

Each of the three subsamples was further divided by sex and reading achievement level. Table 4 represents a description of these subsamples.

In summary, the 157 children were included in the research sample. Three subsamples of children were organized for analysis. Each of these subsamples was divided by sex and divided by achievement, into achievers and non-achievers based on their grade equivalent score on the reading achievement portion of the CTBS, a standardized achievement test.
Table 4
N's for Sample Cells
Breakdowns by Subsample

Subsample 1 (Chicanos Only)
n=83

| Socioeconomic Status | Low-medium |  |  |  |  |  |  |
|----------------------|------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                      | Low        | Medium          | Medium          | Low             | Medium          |
|                      | Ach        | Nonach          | Ach             | Nonach          | Ach             | Nonach          |
| Boys                 | 0          | 2               | 0               | 3               | 17              | 20              |
| Girls                | 1          | 1               | 3               | 1               | 26              | 9               |

Subsample 2 (All SES)
n=124

| Race        | Chicano Students | Anglo Students |  |  |  |  |  |
|-------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|             | Ach              | Nonach          | Ach             | Nonach          | Ach             | Nonach          |
| Boys        | 17               | 25              | 6               | 17              |
| Girls       | 30               | 11              | 7               | 11              |

Subsample 3 (Middle SES Only)
n=94

| Race        | Chicano Students | Anglo Students |  |  |  |  |  |
|-------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|             | Ach              | Nonach          | Ach             | Nonach          | Ach             | Nonach          |
| Boys        | 17               | 20              | 5               | 5               |
| Girls       | 26               | 9               | 6               | 6               |
Measurement Device

All measurement devices were administered to the entire sample of children. A measure of basic ability, four inter-related measures of school perceptions, and a measure of locus of control were employed.

Basic Learning Ability

Digit Span Memory Test. A group digit span memory test was given to all subjects. The purpose of this test was to assess "basic learning abilities" in order to provide a method of controlling for variations in ability within the sample. Basic abilities, a construct employed by Jensen (1969, 1970), is suggested to be a reflection of associative and memory abilities. Rohwer (1971) suggests digit span as an adequate measure of formal acquisition learning. Although having little relationship to IQ measures and achievement scores, digit span can indicate a child's basic adequacy to learn. Chapter I contains a more adequate summary of the rationale for choosing digit span memory as a measure of basic ability.

The digit span memory test used in the study was developed by Arthur Jensen (1964). While Jensen developed three conditions by which digits are presented, other research has suggested little variation in the performance of individuals across conditions (Keogh & MacMillan, 1971). Only an immediate recall condition was employed in the present study.

Subjects were provided a two page test booklet with a series of boxes printed on the paper. The first page contained three rows of three boxes each and constituted the example problems. The second page included six rows of boxes beginning with a row of four boxes and increasing by one box per row to a total of nine boxes. A copy of the
digit span memory test booklet is provided in Appendix B. Students were asked to listen, immediately recall, and write a series of numbers in the boxes provided. The group of numbers increased in difficulty from a series of four to a series of nine. Numbers within each series were presented in one-second intervals.

Detailed procedures for the administration of the instrument are presented in the Procedures section. Standard digit span scoring procedures used by Jensen (1964) were employed. Children were given one point for every number they could record in the order in which it was presented. Scores could range from 0 to 39.

Social Perception of Schooling

Four measures appropriate for upper elementary school students were chosen as measures of school perception or students' feelings about important aspects of schooling. The four measures were developed and revised by The Instructional Objective Exchange (1972). The four measures entitled, "The School Play," "Looking Back," "The Story," and "Imagine That" are inferential measures which, upon inspection, have high reliability and validity and meet the theoretical considerations of this study. Table 5 presents internal consistency and test-retest stability statistics from the four subtests.

Test 1. The School Play. The School Play (IOX, 1972) is designed to measure perception of the school structure and general climate of school. Students are asked to examine 19 statements which they would consider for inclusion in a play about what happens in their school. Appendix C contains the entire instrument. Two examples of statements are:
Table 5

Attitudes Towards School Measures

Internal Consistency and Test-Retest Stability

<table>
<thead>
<tr>
<th>Sub-Test</th>
<th>Internal Consistency Index $\pi$</th>
<th>Test Rates and Stability Index $\pi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>.74</td>
<td>.69</td>
</tr>
<tr>
<td>Test 2</td>
<td>.67</td>
<td>.86</td>
</tr>
<tr>
<td>Test 3</td>
<td>.68</td>
<td>.75</td>
</tr>
<tr>
<td>Test 4</td>
<td>.62</td>
<td>.90</td>
</tr>
</tbody>
</table>

(Source; I.O.X., 1972)
1. Most pupils are not happy here.

10. People take good care of our school.

Considering the standards developed by the Instructional Objective Exchange, one point is awarded to the student for properly excluding or including the various statements presented. A score of 0-19 is obtainable. The internal consistency for test items is reported to be $r = .74$, and the test-retest stability index is reported to be $r = .69$. The School Play appears to be a reasonable measure of a subject's perception of school structure and social atmosphere of his schooling.

**Test 2. Looking Back.** The second instrument, Looking Back (IOX, 1972), is designed to measure general attitudes and perceptions about the role of schooling. The subject is asked to pretend he is in junior high school and is asked to reflect "back" to his elementary school days and decide if he will remember any of fourteen different sentiments or feelings about his "earlier" school days. Appendix D contains the full version of the test. An example of two statements are:

7. I was happy when I was at school.

8. I used to like to stay home.

One point is awarded for each positive statement "remembered" and for each negative statement rejected. Scores from 0 to 14 are possible. Internal consistency of the measure is reported as $r = .67$ with a test-retest stability index as $r = .86$ (IOX, 1972). Looking back can be considered a reasonable measure of general sentiment and perceptions of the role of schooling.

**Test 3. The Story.** The third social perception measure was The Story (IOX, 1972). The Story is a 16 item measure of a student's per-
ception of himself and his peer group.

Children are asked to select from a list of 16 statements those that they would like to include in a realistic story about students in school. Friendship patterns, openness, friendliness, and a feeling of belonging are the areas of the student's relationship to his peers measured by this instrument. Example statements considered by students for inclusion in The Story are:

4. I feel like part of a group at school.
12. Other pupils bother me in class.

Appendix E contains the full instrument.

Scoring of the instrument is based upon the subject's inclusion or exclusion of statements designated positive or negative in describing themselves and their peers. A score of 0 to 16 is possible with one point for each proper response. The Story has an internal consistency of \( r = .68 \) and a test-retest stability index of \( r = .75 \) (IOX, 1972). The Story can be considered a sound measure of a subject's perceptions of himself and his peers within a school contest.

Test 4. Imagine That (I.T.) I.T. (IOX, 1972) is designed to measure student's attitude toward teachers. Students' perceptions of the mode of instruction, interpersonal relationship of teachers with students, and authority and control are tapped by this instrument.

A series of ten situations are presented to the subject. For each situation there are four alternatives for action. The subject is asked to choose the response he feels is appropriate. The full test is presented in Appendix F. An example of one situation is:
8. My teacher finds out what we have learned by giving us tests.
   a) My teacher gives tests that are much too hard.
   *b) My teacher gives good tests.
   c) My teacher tests us too much.
   *d) My teacher's tests are fun.

The two starred responses have been deemed by the test developers as reflecting positive attitudes towards the mode of instruction.

Four questions are designed to reflect a teacher's instructional mode. Four are questions about authority and control. Two questions concern interpersonal relationships with pupils. The overall measure yields scores from 0 to 10, or one point per positive answer. The internal consistency of the measure is reported to be $r = .62$, and the test-retest stability index is reported as $r = .90$ (IOX, 1972). Generally, the I.T. can be considered a good measure of students' attitudes concerning the role of teachers.

**Scoring Tests 1-4.** As indicated in the description of each sub-test, children are awarded one point for each response that matches the criteria developed by IOX. For each subtest higher scores indicate more positive perceptions or feelings about schooling.

The sum of the scores on tests, 1, 2, 3, and 4 will be referred to as Sum 1-4, and is interpreted as an indication of an overall perception of aspects of schooling measured by the subtest.

While they are labeled school attitude measures, the tests measure: 1) social perceptions of the social structure and general climate of school; 2) general attitudes and perceptions about the role of schooling;
3) student's perception of his peers and the role of his peers in general; and 4) student's perception of the role of the teacher, authority, and teacher-student relations.

A comment on validity and inferential measures. Validity of measures of social perceptions, attitudes, sentiment, and the like is difficult to ascertain. Careful examination of each question for each measure can ensure reasonable confidence as to the face validity of the measure against the stated objective of the test, but no direct method of validity testing was conducted by the designers of the instruments (IOX, 1972).

After a review of the literature on the subject of school sentiment IOX (1972) reports the identity of six dimensions deemed important in understanding a learner's attitude toward schooling. These six dimensions include attitudes about teachers, school subjects, learning, social structure and climate, peers, and a general attitude of schooling. IOX developers then systematically translated the dimensions into ideal objectives or criterion attitudes considered to be positive perceptions of schooling, and set upon the task of developing measures to assess their objectives.

On the matter of inferential measures vs. direct self-report measures, the inferential measures were deemed more acceptable for this study because they are less fakable and yield highly consistent and relevant data comparable to direct questionnaires. While IOX has developed both direct and inferential measures and while other more direct instruments are reported in the literature, the inferential measure was considered as personally more acceptable by this researcher.
Motivation -- Locus of Control

Locus of control has been hypothesized in the previous chapter as an aspect of motivation. For the purpose of this inquiry a locus of control instrument was selected which directly measured feelings of responsibility for events of a child in the role of student.

Test 5. The Intellectual Achievement Responsibility Questionnaire (IAR). The IAR comprised of 34 forced choice questions divided into situations reflecting success and failure in school related or academic events (Crandall, et al., 1965). Separate scores can be calculated for internal responsibility felt for success (I+) and internal responsibility for failure (I-). A copy of the measure is included in Appendix G. Two example questions are:

Key 1. If a teacher passes you to the next grade, would it probably be

_____ a. because she likes you, or

_____ b. because of the work you did?

2. Suppose you study to become a teacher, scientist, or doctor, and you fail. Do you think this would happen

_____ a. because you didn't work hard enough or

_____ b. because you needed some help and other people didn't give it to you?

The scale limits the type of external control possibilities to persons, specifically "significant other," parents, teachers, and peers. A unique and significant finding in the Crandall work is the separation of internal responsibility scores for successes and failures, I+ and I-. She suggests that the development if I+ and I- may reflect two different
accomplishments; that is, one could feel responsibility for successes or failures without the same sense of control for the other. Crandall (1965) found that there was a generally low relationship between I+ and I- scores.

Caution must be used when interpreting the total I score since this score is the total of I+ and I-. The total score may mask important differences between the two feelings in an individual child and may also mask differences between children who have the same scores (Chan & Keogh, 1976). Scoring on the IAR is calculated by awarding one point for each correct internal response. An I- score, and I+ score, and a total I score can be calculated. The IAR has proven to be useful and popular measure of internal responsibility for school related events.

**Procedures**

All tests were administered to groups of children in sixth grade classrooms in the three participating schools. One school had mixed fifth and sixth classrooms. In this case, all children in the mixed classroom were tested but only the sixth grade students were included in the sample.

Test administrators were trained and graduate students from a major university in the local area. Two men, one first year and one second year graduate students from the School of Social Work constituted the research team.

One test period of approximately 45 minutes duration was required for completion of all test materials. Part one was the social perceptions of schooling instruments (tests 1,2,3,4). Part two included the Intellectual Achievement Responsibility Questionnaire and the Digit
Span Memory test. Each test was printed on differently colored paper for easy identification by the pupils.

Each test includes detailed test instructions with the exception of the Digit Span Memory test. A general description of testing procedures is provided below.

**Part I.** Upon entering each classroom testers were introduced to the classroom by the classroom teacher. Students were informed that the testers were university researchers interested in talking to sixth graders about life at school. Students were told that the information they provided would help design better schools and help train better teachers. The test materials were described as "opinion poll" much like those they have seen in the newspapers. Students were assured that their responses would not be made known to their parents, teachers, or principal, and would in no way affect their grades or school progress. Any child not wishing to participate could so choose. No child refused to participate.

The Part I folder included the four subscales instruments measuring children's social perception or attitudes towards schooling (tests 1,2, 3,4). As these materials were distributed, the teachers coded the ethnic identification for each child on the child's test folder. The numbers 1 for Anglo, 2 for Chicano, 3 for Black, 4 for Filipino, 5 for Portuguese, 6 for Vietnamese, 7 for Mexican-American, and 8 for Puerto Rican were employed. After the distribution of test materials for Part I, the administrators served as the observer-trouble shooters, and were available with sharpened pencils.
Test 1 was printed on white paper, test 2 on yellow, test 3 on white, and test 4 on yellow paper. Each test was identified by the test reader by name and color. Pretest examples were visually checked by the observer to insure that all children understood the basic format of each instrument. At regular intervals within each test, the test administrator read a statement reminding the students to choose the answer they liked best and assured them that there were no right or wrong answers.

**Part II.** The second testing part included the Intellectual Achievement Responsibility Questionnaire (IAR) and the digit span memory test. Upon completion of Part I, the administrator distributed the yellow color questionnaire marked "Questions About School." This title replaced the more lengthy and perhaps threatening title for the IAR.

Procedures for administration of the IAR followed the same procedures in Part I. The instructions and questionnaire were carefully read by the administrator, and the example question was checked for each child by the observer. Because of the nature of the answers available on the IAR, the testers emphasized that there were no right or wrong answers to the questions, but each answer was a matter of opinion and, as in tests 1, 2, 3, 4, a statement reminding the students to choose the answer they liked best was read at regular intervals throughout the test.

At the end of test 4, materials were distributed for the digit span memory test. Children were told to listen carefully and follow the instructions carefully. Students were informed that a test administrator would ask them to hold their pencils in the air, he would then read them
a series of numbers which they were to try to remember. The administrator would say "begin" and they were to write all the numbers they could remember in the boxes provided. The children were warned to listen carefully and write the numbers in the order in which they heard them. Children were told to skip boxes of numbers they had forgotten and write the numbers they remembered in the boxes where they belonged.

Three trial series were presented before the actual testing began. Test administrators were also given the option of stopping between series of numbers to insure that all children were ready to go to the next series of numbers with their pencils held in the air.

At the completion of the digit span memory test, all test materials were collected. Children were then asked if they had any questions or concerns about the testing in either session or about college and university life in general. Test administrators answered all questions and ended Part II by thanking the students for their participation in the study.

After completing all testing within a school, test administrators offered their thanks to the teachers and school administrators for their participation and were informed that the principal investigator would return later to explain the results and resultant implications of the study to the school staff and anyone else the school deemed necessary.

**Summary.** One hundred fifty-seven sixth grade children were selected from three elementary schools in a large California county. Schools were nonrandomly selected to reflect either low, low-medium, or medium socioeconomic income schools. SES ratings were obtained for each child.
Digit span memory test was chosen as a measure of basic ability and was administered to the sample in order to control for differences in mental ability. Four subtests of attitudes of schooling were administered as measures of knowledge or social perception towards schooling. The IAR was administered as a measure of locus of control, hypothesized as an aspect of motivation.

The sample was organized for analysis in three ways. First, in order to investigate SES differences independent of racial bias, subsample 1 included only Chicano pupils from three SES levels. Second, the effects of racial differences were investigated in subsample 2, but without regard to differences in the SES distributions of Chicano and Caucasian student differences were again under investigation but only for medium income pupils.

**Experimental Hypothesis.** The following experimental hypotheses were generated in the form of the sample and instruments described. These hypotheses were organized in relation to the subsample organized for analysis.

**Subsample 1, Chicanos Only**

**Hypothesis 1.** It is predicted that subjects will significantly differ on their measures of school perception based upon their SES.

**Hypothesis 2.** It is predicted that subjects will significantly differ in their measures of Intellectual Achievement Responsibility Questionnaire (IAR) based upon SES.
Hypothesis 3. It is predicted that subjects will significantly differ in measures of school perception based upon gender.

Hypothesis 4. It is predicted that subjects will significantly differ in measures of IAR based upon gender.

Hypothesis 5. It is predicted that subjects will significantly differ in measures of school perception based upon achievement.

Hypothesis 6. It is predicted that subjects will significantly differ in measures of IAR based upon achievement.

Subsample 2, Chicanos and Anglos Only

Hypothesis 7. It is predicted that subjects will significantly differ in measures of school perception based upon ethnic background.

Hypothesis 8. It is predicted that subjects will significantly differ in measures of IAR based upon ethnic background.

Hypothesis 9. It is predicted that subjects will significantly differ in their measures of school perception based upon gender.

Hypothesis 10. It is predicted that subjects will significantly differ in measures of IAR based upon gender.

Hypothesis 11. It is predicted that subjects will significantly differ in measures of school perception based upon achievement.
Hypothesis 12. It is predicted that subjects will significantly differ in measures of IAR based upon achievement.

Subsample 3, Middle Income Chicanos and Anglos Only

Hypothesis 13. It is predicted that subjects will significantly differ in measures of school perception based upon ethnic background.

Hypothesis 14. It is predicted that subjects will significantly differ in measures of IAR based upon ethnic background.

Hypothesis 15. It is predicted that subjects will significantly differ on school perception based upon gender.

Hypothesis 16. It is predicted that subjects will significantly differ on IAR based upon gender.

Hypothesis 17. It is predicted that subjects will significantly differ in measures of school perception based upon achievement levels.

Hypothesis 18. It is predicted that subjects will significantly differ in measures of IAR based upon achievement levels.
Data were organized to test the experimental hypotheses presented in Chapter II. Before analyzing effects of sex, socioeconomic status, and race on pupils' perceptions of schooling and locus of control, the possible impact of the variable, digit span memory was examined for the entire sample. Then, an analysis of the relationship between the scores on the dependent measure was conducted for the entire sample. After these preliminary examinations, separate analyses of the data for the three subsamples were performed. For each subsample, the test scores for the measure of school perception and "Intellectual Achievement Responsibility Questionnaire" were used as dependent measures. Analysis of the impact of each dependent measure was then interpreted if a significant F-ration was found in the ANOVA test.

Intermeasure relationship. Before proceeding to the analysis of data according to subsamples, the effects of the variable, digit span memory, was examined in order to determine if equalizing the sample across this measure of mental ability was essential. Secondly, an analysis of the relationship between the dependent measures was examined in order to determine the usefulness of combining the dependent measures for the variable analysis.

The variation in basic ability among the pupils sampled was measured by the digit span memory test described in Chapter II. The analysis of the sample distribution of digit span scores in relation to the sample distribution of the dependent measures indicates only minimal relationships. Table 6 contains the product-moment coefficients of correlation between
digit span memory scores and each dependent measure. In all cases the distribution of digit span memory scores should be less than 5% of the variance with each of the dependent measures.

After the examination of the possible impact of the variable, the relationships between the dependent measures were examined. Table 7 contains the product-moment coefficients between dependent measures for the entire sample. The analysis of the correlation coefficients indicated that there are relationships between subtests, but unique qualities of each subtest are also present. The strong relationships between the subtests and the Sum 1-4 scores can be interpreted as an indication that the subtests are measuring different aspects of the same basic construct, school perception.

The strength of the association between school perception scales and the IAR has been interpreted to suggest that the measures share between 5 to 15 percent in common variance but appear to tap two moderately independent constructs.
Table 6

Correlation of the Variable Digit Span Memory Test to Dependent Measures

\( N = 157 \)

Pearson Correlation Coefficients

<table>
<thead>
<tr>
<th>Test</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Sum 1-4</th>
<th>IAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digit Span</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory Test</td>
<td>.025</td>
<td>.092</td>
<td>.190</td>
<td>.085</td>
<td>.096</td>
<td>.0599</td>
</tr>
</tbody>
</table>

Table 7
Analysis of the Relationship Between Dependent Measures

<table>
<thead>
<tr>
<th>Tests</th>
<th>Test 1</th>
<th>Test 2</th>
<th>Test 3</th>
<th>Test 4</th>
<th>Sum 1-4</th>
<th>IAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test 1</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 2</td>
<td>0.452</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 3</td>
<td>0.421</td>
<td>0.331</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test 4</td>
<td>0.308</td>
<td>0.280</td>
<td>0.240</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum 1-4</td>
<td>0.766</td>
<td>0.684</td>
<td>0.689</td>
<td>0.525</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IAR</td>
<td>0.250</td>
<td>0.194</td>
<td>0.288</td>
<td>0.200</td>
<td>1.000</td>
<td></td>
</tr>
</tbody>
</table>
Subsample 1.

Subsample 1 was designed to study the effects of social class without the confounding influence of ethnic group differences. This subsample included only Chicano pupils and was divided into three SES levels; achievers, nonachievers, and gender.

Hypothesis 1. It is predicted that subjects will significantly differ on their measures of school perception based upon their SES.

To analyze the relationship between SES and School perception an ANOVA procedure was utilized, whereby the Null Hypothesis stated the \( \bar{X}_1 - \bar{X}_2 - \bar{X}_3 \) and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

Table 8
An Analysis of School Perception
By SES For Chicanos Only

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>53.2734</td>
<td>1</td>
<td>53.2734</td>
<td>0.8891</td>
</tr>
<tr>
<td>Within groups</td>
<td>4853.4776</td>
<td>81</td>
<td>59.9194</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4906.7500</td>
<td>82</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n.s.

From the results of the above table, \( F_{1,80} = 0.8991 \) p. .05), we conclude that the null hypothesis cannot be rejected, therefore it can be inferred that subjects because of their socioeconomic status do not
significantly differ on their school perception test.

**Hypothesis 2.** It is predicted that the subjects will significantly differ in their measures of Intellectual Achievement Responsibility Questionnaire (IAR) based upon SES.

To analyze the relationship between SES and IAR an ANOVA procedure was utilized, whereby the Null hypothesis stated that $\bar{X}_1=\bar{X}_2=\bar{X}_3$ and the alternative hypothesis states that two or more of the groups significantly different at the .05 alpha level.

**Table 9**

An Analysis of IAR

By SES For Chicanos Only

<table>
<thead>
<tr>
<th>ANOVA Table</th>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>groups</td>
<td>28.3242</td>
<td>1</td>
<td>28.3242</td>
<td>1.4647</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>groups</td>
<td>1566.4180</td>
<td>81</td>
<td>19.3385</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1594.7422</td>
<td>82</td>
<td></td>
<td>n.s.</td>
</tr>
</tbody>
</table>

From the results of the above table, ($F_{1,81}= 1.4647 p>.05$), we conclude that the null hypothesis cannot be rejected, therefore, it can be subjects, because of their socioeconomic status, do not significantly differ on their IAR results.

**Hypothesis 3.** It is predicted that the subjects will significantly differ in measures of school perception based upon gender.
To analyze the relationship between gender and school perception an ANOVA procedure was utilized, whereby the Null hypothesis stated that \( \overline{X}_1 = \overline{X}_2 = \overline{X}_3 \) and the alternative hypothesis stated that two or more of groups are significantly different at the .05 alpha level.

Table 10
An Analysis of School Perception
By Gender For Chicanos Only

<table>
<thead>
<tr>
<th>ANOVA Table</th>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>groups</td>
<td>28.3242</td>
<td>1</td>
<td>28.3242</td>
<td>1.4647</td>
</tr>
<tr>
<td></td>
<td>Within</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>groups</td>
<td>1566.4180</td>
<td>81</td>
<td>36.4828</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1594.7422</td>
<td>82</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>n.s.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the above table, \( (F_{1,81} = 1.4647 \ p > .05) \), we conclude that the null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their gender status, do not significantly differ on their school perceptions results.

Hypothesis 4. It is predicted that the subjects will significantly differ in measures of IAR based upon gender.

To analyze the relationship between IAR and gender an ANOVA procedure was utilized, whereby the Null hypothesis stated that \( \overline{X}_1 = \overline{X}_2 = \overline{X}_3 \) and the alternative hypothesis states that two or more of the groups are
significantly different at the .05 alpha level.

Table 11
An Analysis of IAR
By Gender For Chicanos Only

ANOVA Table

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>53.2734</td>
<td>1</td>
<td>53.2734</td>
<td>.08891</td>
</tr>
<tr>
<td>Within</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>4853.4766</td>
<td>81</td>
<td>59.9194</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4906.7500</td>
<td>82</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the above table, \( F_{1,81} = .08891 \) (p > .05), we con-
Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their gender status, do not significantly differ on their IAR results.

Hypothesis 5. It is predicted that the subjects will significantly differ in measures of school perception based upon achievement.

To analyze the relationship between achievement and school perception an ANOVA procedure was utilized, whereby the Null hypothesis stated that \( \bar{X}_1 = \bar{X}_2 = \bar{X}_3 \) and the alternative hypothesis states that the two or more of the groups are significantly different at the .05 alpha level.
Table 12

An Analysis of School Perception

By Achievement For Chicanos Only

ANOVA Table

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>129.3437</td>
<td>1</td>
<td>129.3437</td>
<td>7.1495</td>
</tr>
<tr>
<td>Within groups</td>
<td>1465.3984</td>
<td>81</td>
<td>18.0913</td>
<td></td>
</tr>
</tbody>
</table>

Total 1594.7422
* p<.05

From the results of the above table, ($F_{1,81} = 7.1495$ $p<.05$), we conclude that the Null hypothesis can be rejected, therefore, it can be inferred that subjects, because of their achievement status, do significantly differ on their school perception.

Hypothesis 6. It is predicted that the subjects will significantly differ in measures of IAR based upon achievement.

To analyze the relationship between achievement and IAR an ANOVA procedure was utilized, whereby the Null hypothesis stated $X_1 = X_2 = X_3$ and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.
Table 13
An Analysis of IAR
By Achievement For Chicanos Only

ANOVA Table

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>172.7930</td>
<td>1</td>
<td>172.7930</td>
<td>2.9566</td>
</tr>
<tr>
<td>Within</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>4733.9570</td>
<td>81</td>
<td>58.4439</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4906.7500</td>
<td>82</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the above table, \( F_{1,81} = 2.9566 \ p>.05 \), we conclude that the Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their achievement status, do not significantly differ on their IAR.

Summary of analysis of Subsample 1. One analysis of subsample 1 revealed significant effects for school perception by achievement. Chicano students who were rated above the national average scored significantly higher than those who rated below the national average based upon school perception.

Subsample 2.

Subsample 2 was designed to study the effects of ethnic group membership without considering the confounding relationship between race and social class. Children were examined in this subsample without regard for social class and divided into achievers and nonachievers and by gender
Chicanos and Anglos were used in this subsample.

**Hypothesis 7.** It is predicted that the subjects will significantly differ in their measures of school perception based upon ethnic background.

To analyze the relationship between school perception and ethnic background an ANOVA procedure was utilized, whereby the Null hypothesis stated that $X_1 = X_2 = X_3$ and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

**Table 14**

An Analysis of School Perception

By Ethnic Background

For Chicanos and Anglos

<table>
<thead>
<tr>
<th>ANOVA Table</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>0.2852</td>
<td>1</td>
<td>0.2852</td>
<td>0.0056</td>
</tr>
<tr>
<td>Within groups</td>
<td>6206.7148</td>
<td>122</td>
<td>50.8747</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6207.0000</td>
<td>123</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the above table, ($F_{1,122} = 0.0056 \ p > .05$), we conclude that the Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their ethnic background, do not
significantly differ on their school perception results.

Hypothesis 8. It is predicted that the subjects will significantly differ in their measure of IAR based upon ethnic background.

To analyze the relationship between IAR and ethnic background, an ANOVA procedure was utilized, whereby the Null hypothesis stated \( \bar{X}_1 = \bar{X}_2 = \bar{X}_3 \) and the alternative hypothesis stated that two or more of groups are significantly different at the .05 alpha level.

Table 15
An Analysis of IAR
By Ethnic Background
For Chicanos and Anglos

<table>
<thead>
<tr>
<th>ANOVA Table</th>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Squares</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between groups</td>
<td>31.2969</td>
<td>1</td>
<td>31.2969</td>
<td>0.9859</td>
</tr>
<tr>
<td></td>
<td>Within groups</td>
<td>3872.7031</td>
<td>122</td>
<td>31.7435</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3904.0000</td>
<td>123</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the proceeding table, \( F_{1,122} = 0.9859 \) \( p > .05 \), we conclude that the Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their ethnic background, do not significantly differ on their school perception results.
Hypothesis 9. It is predicted that the subjects will significantly differ in their measures of school perception based upon gender.

To analyze the relationship between school perception and gender an ANOVA procedure was utilized, whereby the Null hypothesis stated that $X_1 = X_2 = X_3$ and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

Table 16
An Analysis of School Perception
By Gender
For Chicanos and Anglos

<table>
<thead>
<tr>
<th>ANOVA TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
</tr>
<tr>
<td>Between</td>
</tr>
<tr>
<td>groups</td>
</tr>
<tr>
<td>Within</td>
</tr>
<tr>
<td>groups</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

From the results of the above table, ($F_{1,122} = 2.3131 p > .05$), we conclude that the Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their gender, do not significantly differ on their school perception.

Hypothesis 10. It is predicted that the subjects will significantly
differ in their measures of IAR based upon gender.

To analyze the relationship between IAR and gender an ANOVA procedure was utilized, whereby the Null hypothesis stated that $\bar{X}_1 = \bar{X}_2 = \bar{X}_3$ and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

Table 17

An Analysis of IAR
By Gender

For Chicanos and Anglos

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>70.0000</td>
<td>1</td>
<td>70.0000</td>
<td>1.3916</td>
</tr>
<tr>
<td>Within groups</td>
<td>6137.0000</td>
<td>122</td>
<td>50.3033</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6207.0000</td>
<td>123</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n.s.

From the results of the above table, $(F_{1, 122} = 1.3916 p > .05)$, we conclude that the Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their gender, do not significantly differ on their IAR results.

Hypothesis 11. It is predicted that the subjects will significantly differ in their measures of school perception based upon achievement.
To analyze the relationship between school perception and achievement an ANOVA procedure was utilized, whereby the Null hypothesis stated that $X_1 = X_2 = X_3$ and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

Table 18
An Analysis of School Perception
By Achievement
For Chicanos and Anglos

<table>
<thead>
<tr>
<th>ANOVA Table</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>356.2500</td>
<td>1</td>
<td>356.2500</td>
<td>7.4285</td>
</tr>
<tr>
<td>Within</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>5850.7500</td>
<td>122</td>
<td>47.9570</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6207.0000</td>
<td>123</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the above table, ($F_{1, 122} = 7.4285$ $p \leq .05$), we conclude that the Null hypothesis can be rejected, therefore, it can be inferred that subjects, because of their achievement rating do significantly differ on their School Perception test.

**Hypothesis 12.** It is predicted that the subjects will significantly differ in their measures of IAR based upon achievement.

To analyze the relationship between IAR and achievement an ANOVA
procedure was utilized, whereby the Null hypothesis stated that $X_1 = X_2 = X_3$ and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

Table 19
An Analysis of IAR
By Achievement
For Chicanos and Anglos

ANOVA Table

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>337.7187</td>
<td>1</td>
<td>337.7187</td>
<td>11.5531</td>
</tr>
<tr>
<td>Within</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>3566.2812</td>
<td>122</td>
<td>29.2318</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3904.0000</td>
<td>123</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* $p \leq .05$

From the results of the above table, $(F_{1,122} = 11.5531 \ p \leq .05)$, we conclude that the Null hypothesis can be rejected, therefore, it can be inferred that subjects, because of their achievement rating, do significantly differ on their IAR results.

Summary of analysis of Subsample 2. Two analyses of subsample 2 revealed significant effects for achievement by school perception and for IAR. Chicanos and Anglos who were rated above national average scored significantly higher than Chicanos and Anglos who were rated below national average on both school perception and IAR.
Subsample 3 was designed to study the effects of ethnic group membership when the effects of SES differences were controlled. Only data from medium SES subjects was utilized for analysis. Subjects in subsample 3 were divided into achievers and nonachievers and by gender.

**Hypothesis 13.** It is predicted that the subjects will significantly differ in their measures of school perception based upon ethnic background.

To analyze the relationship between school perception and ethnic background an ANOVA procedure was utilized, whereby the Null hypothesis states that \( \bar{X}_1 = \bar{X}_2 = \bar{X}_3 \) and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

**Table 20**

An Analysis of School Perception

By Ethnic Background

For Medium Income Chicanos and Anglos

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>0.1250</td>
<td>1</td>
<td>0.1250</td>
<td>0.002</td>
</tr>
<tr>
<td>Within groups</td>
<td>5305.8750</td>
<td>92</td>
<td>57.6725</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5306.0000</td>
<td>93</td>
<td></td>
<td>n.s.</td>
</tr>
</tbody>
</table>
From the results of the preceeding table, \( F_{1,92} = 0.002 \ p > .05 \), we conclude that the null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their ethnic background, do not significantly differ on their school perception test results.

**Hypothesis 14.** It is predicted that the subjects will significantly differ in their measures of IAR based upon ethnic background.

To analyze the relationship between IAR and ethnic background an ANOVA procedure was utilized, whereby the Null hypothesis stated that \( \bar{X}_1 = \bar{X}_2 = \bar{X}_3 \) and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

**Table 21**

**An Analysis of IAR**

**By Ethnic Background**

**For Medium Income Chicanos and Anglos**

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>66.8164</td>
<td>1</td>
<td>66.8164</td>
<td>2.187</td>
</tr>
<tr>
<td>Within groups</td>
<td>2810.8594</td>
<td>92</td>
<td>30.5528</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2877.6758</td>
<td>93</td>
<td></td>
<td>n.s.</td>
</tr>
</tbody>
</table>

From the results of the above table, \( F_{1,92} = 2.187 \ p > .05 \), we
conclude that the Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their ethnic background, do not significantly differ on their IAR.

**Hypothesis 15.** It is predicted that subjects will significantly differ on school perception based upon gender.

To analyze the relationship between school perception and gender an ANOVA procedure was utilized, whereby the Null hypothesis stated that $X_1 = X_2 = X_3$ and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

Table 22

An Analysis of School Perception

By Gender

For Medium Income Chicanos and Anglos

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>138.2500</td>
<td>1</td>
<td>138.2500</td>
<td>2.461</td>
</tr>
<tr>
<td>Within</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>5167.7500</td>
<td>92</td>
<td>56.1712</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5306.0000</td>
<td>93</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the above table, ($F_{1,92} = 2.461 \ p > .05$), we conclude that the Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their gender, do not significantly
differ on their school perception results.

**Hypothesis 16.** It is predicted that subjects will significantly differ on IAR based upon gender.

To analyze the relationship between IAR and gender an ANOVA procedure was utilized, whereby the Null hypothesis stated that \( \bar{X}_1 = \bar{X}_2 = \bar{X}_3 \) and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

Table 23

An Analysis of IAR

By Gender

For Medium Income Chicanos and Anglos

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>66.8164</td>
<td>1</td>
<td>66.8164</td>
<td>2.187</td>
</tr>
<tr>
<td>Within</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>groups</td>
<td>2810.8594</td>
<td>92</td>
<td>30.5528</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2877.6758</td>
<td>93</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the results of the above table, \((F_{1,92} = 2.187 p > .05)\), we conclude that the Null hypothesis cannot be rejected, therefore, it can be inferred that subjects, because of their gender do not significantly differ on their IAR results.
**Hypothesis 17.** It is predicted that subjects will significantly differ in measures of school perception based upon achievement levels.

To analyze the relationship between school perception and achievement levels an ANOVA procedure was utilized, whereby the Null hypothesis stated that \( \bar{X}_1 = \bar{X}_2 = \bar{X}_3 \) and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

**Table 24**

**An Analysis of School Perception**

**By Achievement Levels**

**For Medium Income Chicanos and Anglos**

ANOV A Table

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>617.8125</td>
<td>1</td>
<td>617.8125</td>
<td>12.124</td>
</tr>
<tr>
<td>Within groups</td>
<td>4688.1875</td>
<td>92</td>
<td>50.9586</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5306.0000</td>
<td>93 *</td>
<td>p \leq .05</td>
<td></td>
</tr>
</tbody>
</table>

From the results of the above table, \( (F, 92 = 12.124 \ p \leq .05) \), we conclude that the Null hypothesis can be rejected, therefore, it can be inferred that subjects, because of their achievement level, do significantly differ on school perception results.
Hypothesis 18. It is predicted that subjects will significantly differ in measures of IAR based upon Achievement Levels.

To analyze the relationship between IAR and achievement levels an ANOVA procedure was utilized, whereby the Null hypothesis stated that $X_1 = X_2 = X_3$ and the alternative hypothesis states that two or more of the groups are significantly different at the .05 alpha level.

Table 25
An Analysis of IAR
By Achievement Levels
For Medium Income Chicanos and Anglos

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>Degrees of Freedom</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>306.4336</td>
<td>1</td>
<td>306.4336</td>
<td>10.964</td>
</tr>
<tr>
<td>Within groups</td>
<td>2571.2422</td>
<td>92</td>
<td>27.9483</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2877.6758</td>
<td>93</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p ≤ .05

From the results of the above table, ($F_{1,92} = 10.964 p ≤ .05$), we conclude that the Null hypothesis can be rejected, therefore, it can be inferred that subjects, because of their achievement level, do significantly differ on IAR results.

Summary of analysis of Subsample 3. Two analyses of subsample 3
revealed significant effect for achievement; achievement by school perception and achievement by IAR.
Summary of the findings

Analysis of the data allowed the following conclusions:

1) The low relationship between scores on the Digit Span Memory Test and the dependent measures was interpreted to suggest that basic ability was not related to school perception or feelings of responsibility for academic events.

2) The dependent measures were sufficiently related to required the employment of analysis of variance technique, but measures of school perceptions and the measure of feelings of responsibility appear to be independent constructs.

3) Subsample 1 was designed to investigate the effects of social class differences without the confounding influence of racial differences. Only Chicano pupils divided into three socioeconomic levels were included in subsample 1.

Chicano pupils from different SES groups did not differ significantly in their school perceptions. Although medium income Chicano pupils were more positive in their feelings about school than low-medium income Chicano pupils, and low-medium Chicano pupils were more positive in their feelings about school than low income Chicano pupils. The same was true for the IAR test.

Gender in subsample 1 differed on all measures of school perception and in feelings of responsibility for failures but not significantly. Specifically though, girls were more positive in their feelings about school than boys and also scored higher on feelings of responsibility for IAR.

Achievers and nonachievers in subsample 1 differed on measures of
school perception significantly with achievers having a more positive school perception than nonachievers. Achievers indicated more feeling of responsibility for successes in IAR, but not significantly.

4) Subsample 2 investigated the differences between Chicano and Anglo students without regard for socioeconomic differences. Chicano and Anglo pupils were not found to differ in their school perceptions or their IAR scores based on ethnic background. For gender, Chicano and Anglo pupils were not found to differ in their school perceptions or their IAR scores on achievement. Achievers were more positive in their feelings about school than nonachievers and also scored higher on the IAR test.

5) Subsample 3 was designed to investigate differences between Chicano and Anglo pupils, removing the effects of SES differences between the racial groups. Only medium SES pupils were included in subsample 3.

Chicano and Anglo pupils were not found to differ in their school perception or their IAR based upon background. For gender, Chicano and Anglo pupils were not found to differ in their school perception or their IAR scores. Chicano and Anglo pupils were found to differ in their school perception and IAR scores based upon achievement. Achievers were more positive in their feelings about school than nonachievers and also scored higher on IAR test.
CHAPTER IV
DISCUSSION

It was the intentions of the researcher to investigate differences between pupils of different socioeconomic status, racial backgrounds, and six groups based on achievement. Most research has attempted to explain achievement differences in terms of variations in mental abilities or developmental maturation of pupils. This investigation was an attempt to broaden consideration to other nonintellectual factors which might also influence student performance. Two such nonintellectual factors are social perception of the student role and locus of control.

This study was designed as a preliminary investigation of aspects of role perception and role motivation in sixth grade children of different school achievement levels. The total sample of 157 sixth grade pupils was variously reconstructed to consider the dependent measures as they related to 1) social class differences (Chicanos only), 2) race differences without regard to social class differences (all Chicano and all Anglo pupils), and 3) race differences between Chicano and Anglo pupils of the same social class.

It was predicted that, if variation in basic ability could be controlled, pupils from different socioeconomic levels, but of the same racial background, would differ in their feelings of responsibility for the outcomes of school events. Specifically, among Chicano pupils, it was expected that medium SES pupils would be more positive about school and feel more internal responsibility for outcomes in school than would low-medium SES pupils, who in turn would be more positive and internal than low SES pupils. Further, it was hypothesized that racial groups,
without regard for differences in SES, would differ in their school perceptions and feelings of responsibility for academic events. Specifically, Anglo pupils, when compared to Chicano pupils, were predicted to be more positive in their feelings about school and to seem more internal control in general, and for successes in particular, when SES differences between the two groups were not considered. Chicano pupils were predicted to be more internal for failures than Anglo pupils, when pupils were not matched on SES level; however, when racial groups were matched on socioeconomic level, no differences between Chicano and Anglo pupils were predicted.

Sex and achievement levels were also of concern in the present study. Girls were predicted to be more positive in role perception and more internal in feelings of personal control than boys in all conditions. Achievers were also expected to be more positive and internal than non-achievers.

The results of the present investigation were interpreted as demonstrating the importances of school perception and locus of control on achievement. Findings from the various reconstructions of the total sample allowed the conclusion that school perception and locus of control differed according to achievement levels.

**Socioeconomic status differences.** Among various socioeconomic statuses, low SES, low-medium SES, and medium SES, Chicano pupils were not found to differ on measures of social perceptions of school, nor IAR. The results reported in Chapter III are interpreted as a failure on the part of the researcher for not having insured that there would be signi-
significant numbers of Chicanos in the low and low-medium SES categories. It was assumed at the time of gathering information that because of the schools selected there would be sufficient numbers of subjects in these categories. The researcher feels that in fact the subjects did come from different SES's, but due to the fact that the instructors were asked to rate the subjects, it is possible that the instructor over-rated the subjects.

Available research on attitudes or knowledge of various roles across income groups yields mixed conclusion in regard to the relationship between role knowledge and social class. Hartley (1960) provided evidence that lower-income boys assigned different activities to school perceptions and feelings of responsibility for failures only when the comparison groups came from heterogenous socioeconomic backgrounds. When pupils exclusively from medium SES families were compared, no differences between sex groups or achievement levels were found.

Racial group differences. In this investigation, ethnic group differences in school perceptions and IAR were investigated in two different ways. First, in subsample 2, Chicano and Anglo pupils were compared without regard to differences in socioeconomic status. In the analysis for subsample 3, the effects of social class differences were controlled by limiting the investigation to medium income Chicano and Anglo pupils only.

In the first ethnic group analysis, subsample 2, major differences were not found when comparing Chicano and Anglo pupils without regard to SES. Subsample 2 yielded no significant differences between ethnic groups on the school perception measures nor the IAR. Without regard to SES, Anglo pupils as a total group scored than Chicano pupils as a total
group in their IAR but not significantly. The same was true when SES was controlled in subsample 3. On school perception there was no significant differences when tested on subsample 2 or subsample 3.

In attempting to explain this occurrence it is important to realize that each of the schools selected had bilingual programs for the Chicano pupils, these programs possibly had the effect of assisting the Chicanos to raise their school perception and IAR test scores.

**Gender group differences.** In this investigation, gender group differences in school perceptions and IAR were investigated in three different ways. First, in subsample 1, Chicanos only; second in subsample 2, Chicano and Anglo pupils only; and third in subsample 3, middle income Chicano and Anglo pupils only. In the six different investigations, females scored higher than males, but not significantly. These results are not consistent with other studies of sex role differences reviewed by Dwyer (1972) and Maccoby (1966). Girls have in the past consistently been found to be more adaptive than boys in the elementary school setting. While the female advantage in elementary school often has been interpreted in maturational terms, girl-boy differences may also be interpreted as a result of the female orientation to primary school activities, biases in teacher-pupil interrelations, and differences in sex group socialization (Dwyer, 1973). In this investigation six of the teachers were male and only one was female. It seems probable to this investigator that gender of the teacher might have an effect on the outcome of school perception and the pupils' IAR test results.

**Achievement level differences.** In this investigation, achievement level was investigated by three different methods on school perception
and the IAR subsample 1, in which SES differences among Chicano pupils only were investigated, subsample 2, which investigated racial differences without regard to SES, and subsample 3, which was designed to investigate racial differences within the same SES level. No significant differences were found between achievers and nonachievers on subsample 1 for IAR. Achievers consistently scored significantly higher than nonachievers on school perception for the three subsamples, and significantly higher in subsample 2 and 3, for the IAR. These results provide strong support for Brim's (1960, 1966) thesis that variations in role performance would be a result of variations in role knowledge by achievers and nonachievers. Variation in school perceptions by achievers and non-achievers was possibly associated with differential peer relationships or perhaps was a result of socioeconomic differences. Variations in achievement appear to be associated with variations in the aspect of role knowledge presently investigated.

**Implications.** In this investigation an attempt was made to delinate factors other than intellectual abilities which are related to academic performance in school. Perception of the student role and locus of control were proposed as two noncognitive factors viewed as important in school performance. Recognizing that variation in mental abilities would be related to achievement in school and likely to school perception and locus of control, the research was designed to control experimentally for the variation in mental abilities. The measure of basic learning ability was digit span memory. Results of the present study provided strong evidence that variation in basic ability as measured by the Digit
Span Memory Test, was not related to variation in the two non-intellectual measures, school perception and locus of control. The relative independence of basic ability and the noncognitive measures allows results of the non-cognitive measures to be interpreted separately from mental abilities.

In short, differences in school perceptions and locus of control must be regarded as independent from variation in mental ability. Pupils' school perception and locus of control appear to have little relationship to their mental abilities, rather they appear influenced by achievement level.

The influence of social class differences and the distinctive social setting associated with each social class was not investigated sufficiently enough to see if these factors influence variation of school perceptions and locus of control. Present findings are interpreted as demonstrating the need for careful consideration of socio-economic differences among comparison groups when investigating differences between sexes, race, or achievement levels. Although racial groups, and gender groups levels do not appear to differ in school perception and locus of control, the quality of the differences and the direction of these differences varies.

The present results also implicate the need for careful consideration of school perception and locus of control differences among pupils when planning interventions and curricular programs for schools (i.e. bilingualism). Critical similarities in perception of school characteristics by pupils of different ethnic backgrounds were found in this study.
Conclusion

In conclusion, the following conceptual hypotheses were found not to be substantiated:

Conceptual hypothesis 1 - Pupils from different socioeconomic backgrounds, but from the same racial group, will differ in their roles and feelings of person control.

Conceptual hypothesis 2 - When racial groups are compared without regard for differences in socioeconomic status, racial groups will differ in role perceptions and feelings of internal control.

Conceptual hypothesis 3 - When racial groups of the same SES background are compared, racial groups will not differ in role perception or feelings of responsibility.

Conceptual hypothesis 4 - Girls are predicted to have more positive school perception and feel more responsibility for events than boys.

However, the following conceptual hypothesis was found to be substantiated in 5 out of 6 cases:

Conceptual hypothesis 5 - Achievers will have more positive school perceptions and feel more responsible for successes and for events in total than nonachievers.
REFERENCES


APPENDIX A
Instructions To Teacher

1) Under (student #) write the number of the booklet each student has.

2) Under (SES) to your best estimation, rate the student's socioeconomic status with the number 1, 2, or 3.
   1) $5,000 or under per year
   2) $5,000 to $10,000 per year
   3) $10,000 and over

3) Under (sex) rate the students sex with the number 1 for boy, 2 for girl.

4) Under (ethnic) rate the student with 1) Anglo, 2) Chicano, 3) Black, 4) Filipino, 5) Puerto Rican, 6) Vietnamese, 7) Mexican-American, and 8) Other

5) Under (AC/N) rate the student by achievement from the national test 1) above national mean 2) for under national mean.

6) Under (AC/C) rate the student by achievement to the class 1) in top half, 2) in bottom half.
Appendix C
THE SCHOOL PLAY

Your class is going to write a play about things that happen at your school. Each sentence describes something that might happen. If it happens at your school you should use it to make the play realistic. CIRCLE YES for each sentence you would include in a real play about your school or NO for each sentence you would leave out of a real play about school.

FOR EXAMPLE:

YES NO Our school has lots of books.

YES NO 1. Most of the pupils are not happy here.
YES NO 2. The people who make this school run are friendly.
YES NO 3. Many of the rooms are crowded or messy.
YES NO 4. This school has a nice building.
YES NO 5. The pupils at this school litter the playground.
YES NO 6. There are a lot of things to do at this school.
YES NO 7. Most of the grown-ups at this school care about the pupils.
YES NO 8. There is a band, club or other things for children to join.
YES NO 9. Many of the pupils who attend school here would like to go to another school.
YES NO 10. People take good care of our school.
YES NO 11. The classrooms seem bare at this school.
YES NO 12. Most of the pupils will always remember this school as being fun.
YES NO 13. The rules here are too strict.
YES NO 14. The grown-ups here will help me with my problems.

(Source: I.O.X., 1972)
Appendix E
LOOKING BACK

Pretend that you are a teenager attending junior high school. You are asked to think back to your elementary school years. The list below contains things that you might have thought when you were in elementary school. CIRCLE YES if you remember it as being true, or NO if you don't remember it as being true.

FOR EXAMPLE:
YES NO  We never had recesses in my elementary school.

YES NO 1. Most of my classmates liked my school.
YES NO 2. I often wanted to go places instead of school.
YES NO 3. I had good attendance.
YES NO 4. I enjoyed doing things at school.
YES NO 5. My friends and I couldn't wait to leave that school.
YES NO 6. I didn't look forward to school in the morning.
YES NO 7. I was happy when I was at school.
YES NO 8. I used to like to stay at home.
YES NO 9. I liked school better than most other things.
YES NO 10. I didn't like being made to go to school when I didn't want to.
YES NO 11. I often wished I didn't have to go to school.
YES NO 12. I looked forward to school after weekends and vacations.
YES NO 13. There were so many things to do at school that it was fun.
YES NO 14. School wasn't very important to me.

(Source: I.O.X., 1972)
THE STORY

You are going to write a true story about yourself and the pupils at your school. You want your story to be realistic. The following list contains things that might be true about the pupils at your school. CIRCLE YES if the sentence is one you would include in your story, or NO if you would not include it.

YES NO  1. If a new pupil came to my school he could make friends easily.
YES NO  2. The pupils at school like to make friends with many different types of children.
YES NO  3. A child can't make too many friends at my school.
YES NO  4. I feel like part of a group at school.
YES NO  5. I try to act like my friends because they will like me better if I do.
YES NO  6. My group only makes friends with certain types of children.
YES NO  7. The children in my group treat each other fairly.
YES NO  8. It was hard to make friends with the pupils at this school.
YES NO  9. Some children in my group of friends get pushed around.
YES NO 10. My friends at school are nice children.
YES NO 11. Most of the other pupils like me.
YES NO 12. Other pupils bother me in class.
YES NO 13. My friends at school don't like making new friends.
YES NO 14. Other groups of pupils are mean to my friends and me.
YES NO 15. I have a large group of friends at school.
YES NO 16. Most of the pupils at school aren't much fun.

(Source: I.O.X., 1972)
Appendix G
Imagine that you are writing short paragraphs about things happening at your school. Each paragraph below is not complete. Choose a sentence from A, B, C, and D that will complete the paragraph and circle that letter.

FOR EXAMPLE:

Each day at school we have lunch. We eat many things at lunch.

A. We eat sandwiches for lunch.
B. We eat toys and trucks for lunch.
C. We eat baseballs for lunch.
D. We eat flowers for lunch.

1. My teacher is passing out the homework and tests that were just graded.
   A. I know I will get the grades I deserve.
   B. I think that my teacher grades too hard.
   C. I don't think the grades will be fair.
   D. I think my teacher is a good grader.

2. Last week we used clay to make small bowls and animals. Today, Sally was fooling around and broke two of them by accident. My teacher was angry with Sally.
   A. My teacher is mean sometimes.
   B. My teacher is trying to teach Sally to be more careful.
   C. My teacher is right to get angry.
   D. My teacher is wrong to get angry.
3. This year our class wants to do something special for Thanksgiving. We think it would be fun to decorate our room.

A. My teacher will let the class plan the decorations.
B. My teacher will tell everybody what to do.
C. My teacher will do most of it herself.
D. My teacher will have committees to do everything.

4. My class is learning how to do some hard arithmetic problems. Today my teacher asked a boy to work a problem on the blackboard. He couldn't do it.

A. My teacher did not teach it well.
B. My teacher is not very good.
C. The boy was not listening.
D. The boy isn't very smart.

5. Our class is starting a new unit in social studies. Many of the pupils don't understand what the teacher is talking about.

A. The subject is very hard.
B. The teacher seems mixed up.
C. The teacher didn't make it very clear.
D. The teacher will try to explain it again.

6. My teacher has rules about how we should behave in class. I think some are silly and some are not fair.

A. My teacher wouldn't listen to me.
B. My teacher would want to hear what all the pupils think about the rules.
C. My teacher would like the class to help make up new rules.
D. My teacher would not change the rules.
7. I like my teacher. My teacher teaches me new and interesting things.
   A. But, my teacher is not very friendly.
   B. My teacher cares about me.
   C. My teacher is kind and friendly.
   D. But, my teacher is too strict.

8. My teacher finds out what we have learned by giving us tests.
   A. My teacher gives tests that are too hard.
   B. My teacher gives good tests.
   C. My teacher tests us too much.
   D. My teacher's tests are fun.

9. When my class is bad the teacher punishes us. Sometimes the teacher keeps us in during recess, or after school, or we don't get to play games.
   A. It makes me unhappy when the class gets punished.
   B. The teacher has to punish the class sometimes.
   C. If our class was better we couldn't get punished.
   D. I get angry at the teacher when the class gets punished.

10. Our school can have after school activities if teachers will help out.
    A. My teacher will want to help out.
    B. My teacher likes to do things with the children.
    C. My teacher will probably be too busy.
    D. My teacher doesn't care.
QUESTIONS ABOUT SCHOOL (IAR)

Here are some questions about things that happen in school. For each question there are two sentences to choose from. CIRCLE A if you think it is the best answer or B if that is the best answer. There are no right or wrong answers to these questions and no one will know how you answered.

FOR EXAMPLE:

There are many kinds of games we play at school. I like

A. outdoor games like baseball or jumprope.
B. indoor games like checkers or cards.

1. If a teacher passes you to the next grade, would it be
   A. because she like you, or
   B. because of the work you did?

2. When you do well on a test at school, is it
   A. because you studies for it, or
   B. because the test was especially easy?

3. When you have trouble understanding something in school, is it because
   A. the teacher didn't explain it carefully, or
   B. because you didn't listen carefully?

4. When you read a story and can't remember much of it, is it
   A. because the story wasn't written well, or
   B. because you weren't interested in the story?

5. Suppose your parents say you are doing well in school, is this
   A. because your school work is good, or
   B. because they are in a good mood or feeling well?
6. Suppose you did better than usual in a subject at school. Is that
   A. because you tried harder, or
   B. because someone helped you?

7. When you lose at a game or cards or checkers, does it happen
   A. because the other player is good at the game, or
   B. because you don't play well?

8. Suppose a person doesn't think you are very smart.
   A. can you make him change his mind if you try, or
   B. are there some people who will think you're not very smart or
      bright no matter what you do?

9. If you solve a puzzle quickly, is it
   A. because it wasn't a very hard puzzle, or
   B. because you worked on it carefully?

10. If a boy or a girl tells you that you are dumb, is it
    A. because they are mad at you, or
    B. because what you did really wasn't very smart?

11. Suppose you study to become a teacher, scientist, or doctor, and
    you fail. Do you think this is
    A. because you didn't work hard enough, or
    B. because you needed some help, and other people didn't give it
       to you.

12. When you learn something quickly in school, is it
    A. because you paid close attention, or
    B. because the teacher explained it clearly?
13. If a teacher says to you, "Your work is fine." Is it
   A. something teachers usually say to encourage pupils, or
   B. because you did a good job?

14. When you find it hard to work arithmetic or math problems at school, is it
   A. because you didn't study well enough before you tried them, or
   B. because the teacher gave problems that were too hard?

15. When you forget something you heard in class, is it
   A. because the teacher didn't explain it very well, or
   B. because you didn't try hard to remember?

16. Suppose you weren't sure about the answer to a question your teacher asked you, but your answer turned out to be right, is it
   A. because she wasn't as particular or picky as usual, or
   B. because you gave the best answer you could think of?

17. When you read a story and remember most of it, is it
   A. because you were interested in the story, or
   B. because the story was well written?

18. If your parents tell you you're acting silly and not thinking clearly, is it
   A. because of something you did, or
   B. because they are feeling tired or mad?

19. When you don't do well on a test at school, is it
   A. because the test was very hard, or
   B. because you didn't study for it?
20. When you win at a game of cards or checkers, is it
   A. because you play really well, or
   B. because the other person doesn't play well?

21. If people think you're bright or smart, is it
   A. because they happen to like you, or
   B. because you usually act that way?

22. If a teacher didn't pass you to the next grade, would it be
   A. because she didn't like you, or
   B. because your work wasn't good enough?

23. Suppose you don't do as well as usual in a subject at school. Is it
   A. because you weren't as careful as usual, or
   B. because somebody bothered you and kept you from working?

24. If a boy or girl tells you that you are smart, is it
   A. because you thought up a good idea, or
   B. because they like you?

25. Suppose you became a famous teacher, scientist or doctor. Do you think this would happen
   A. because other people helped you when you needed it, or
   B. because you worked very hard?

26. Suppose your parents say you aren't doing well in your school work. Is this
   A. because your work isn't very good, or
   B. because they are feeling tired or mad?
27. Suppose you are showing a friend how to play a game and he has trouble learning it. Is this
A. because he wasn't able to understand how to play, or
B. because you couldn't explain it well?

28. When you find it easy to work arithmetic or math problems at school, is it
A. because the teacher gave you especially easy problems, or
B. because you studied your book well before you tried?

29. When you remember something you heard in class, is it
A. because you tried hard to remember, or
B. because the teacher explained it well?

30. If you can't work a puzzle, is it
A. because you are not good at working puzzles, or
B. because the puzzle wasn't very good?

31. If your parents tell you that you are smart, is it
A. because they are feeling good, or
B. because of something you did?

32. Suppose you are explaining how to play a game to a friend and he learns quickly. Would this happen
A. because you explained it well, or
B. because he was able to understand it?

33. Suppose you're not sure about the answer to a question your teacher asks you and the answer you gave turns out to be wrong. Is it
A. because she was more picky than usual, or
B. because you answered too quickly?
34. If a teacher says to you, "try to do better." Is it

A. because this is something she might say to get you to try harder, or

B. because your work wasn't as good as usual?