MINORITY CHILDREN'S BELIEFS CONCERNING
OF REINFORCEMENTS IN INTELLECTUAL - ACADEMIC
ACHIEVEMENT SITUATIONS

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ABSTRACT

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By

Ardiccio Daniel Morales

Summary

Purposes of the Study

1. The major purpose of this study was to examine the perceptions of minority children concerning whether their intellectual-achievement development is internally controlled or externally controlled. To achieve this purpose the Intellectual Achievement Responsibility (IAR) Questionnaire and the I-E (internal-external) Scale were used.

2. The second purpose of this investigation was to examine whether some independent variables such as ethnicity, gender, or grade in school, could be measured by both the I-E and the IAR with comparable results.

3. An additional purpose was to determine if any of the following variables were related to internal-external control of reinforcement:

a. student's minority status
b. grade level
c. gender
d. number of children and ordinal position
e. counselor influence
f. teacher's minority status
g. whether the student lives with both parents or with a single parent

In order to explore these related purposes, ten hypotheses were developed.

Limitations of the Study

1. This study was limited to the 4th, 5th and 6th grades of a Midwestern elementary school. Students in grades K-3 were not considered for this study due to their inability to read and understand the questions and directions demanded by the instruments used.

2. The study does consider the socioeconomic status of the student since the area in which the school is located is classified as a lower income area.

Review of Literature

The review of literature in the area of reinforcement indicated that reinforcement is usually of external nature. This external nature is provided by significant others, usually teachers, parents, adults and peers. The review of literature in the area of internal versus external control indicated that whoever controls the reinforcement has influence over the internality or externality of the student. The review of literature in

the area of culture indicated that at this stage of development there is not a marked difference between the 4th, 5th and 6th graders.

Design of the Study

The Sample.--The sample from which this study was made consisted of 4th, 5th and 6th grade students from a Midwestern elementary school located in a low socio-economic area.

Instrumentation.--Two instruments were used to measure the internal-external control of reinforcement: The Intellectual Achievement Responsibility Questionnaire (IAR), and the Internal versus External Control of Reinforcement Scale (the I-E Scale).

Procedure.--The questions were tape recorded so that each child was presented verbal stimuli which had the same inflections, tone, and rate. The responses were marked on an answer sheet which had I+ and I- choices. The instructions presented in the oral administration requested the students to pick the answer "that best describes what happens to how you feel." The child was told that there were no right or wrong answers and was assured that the responses would not be revealed to anyone else.

Analysis.--The ten statistical hypotheses were tested by analysis of variance and appropriate Scheffe' comparisons.

Conclusions

1. Children from low socioeconomic positions and subjects from different ethnic groups did not differ significantly with regard to their overall level of internal or external control of reinforcement.

2. When boys and girls were compared the boys did not reflect a higher percent of internality than the girls.

3. Ethnic distributions appear to be less useful than the cross-ethnic descriptor such as socioeconomic status.

4. The answers given by the minority students to the I-E Scale have a wider range of scores between external and internal control of reinforcement than the answers given to the IAR.

5. Whether the student lives with both parents or a single parent was not related to externality or internality.

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Ardiccio Daniel Morales

A DISSERTATION

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DEDICATION

Dedicated to the Almighty God and Creator, to the memory of my Father, to my Mother, and to my lovely wife and my priceless children, Jennifer and Joy.

ACKNOWLEDGMENTS

Acknowledgment is presented to all of the beautiful children who acted as subjects in this study and also to the Administration and Staff of the elementary school who provided me with the opportunity to collect the data, and aided me during the data collection.

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stood by me during my period at Michigan State University. My father and mother who wanted so much for their children in all realms of life. To my sister and my brothers whose accomplishments in the academic world have made an impact on my life.

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CHAPTER I

INTRODUCTION

Background

Individuals vary concerning the extent that they feel they are masters of their own fate (internal), or they are guided by fate alone (external).

Whether an individual perceives sources of support (reinforcement or lack of it) as predominantly internal (within self) or external (in hands of others) is thought to be related to some extent to the individual's own culture.

The accepted use of the term minority is in reference to ethnicity but in this study minority will refer to children who are different not only ethnically but culturally and socially from the majority of White American middle class people. Some White children will be included as minority children due to their socio-economic status. Oscar Lewis (1959) best defined the "culture of poverty" as the social, economic and cultural system of a person having a low level of social and economic attainment within a given society. He also emphasized that there is a low level not only of achievement but of expectation also. Children in families receiving

Aid to Dependent Children monies might well be considered as in a minority even though ethnically they are viewed as in the majority.

Minority children as they function in the school are under the influence of "significant others." The "significant others" perception of themselves, in turn, could be either that they are externally directed or internally directed. In conjunction with this perception there is also the way in which the "significant others" will perceive the minority children as being internally directed or externally directed. In reference to internal control and external control of reinforcement, Henry Weitz (1965:3) states:

> The individual's behavior, his acts, his thoughts, his feelings, are inextricably fused with the acts, thoughts, and attitudes of the culture which shaped him and which he in turn determines. Nor are these influences bounded by the temporal limits of the life of an individual.

The expression "whatever will be, will be" (Que sera, sera), seems many times like a huge cloud covering the aspirations and dreams of many minority children. In a deeper soliloquy, the mind wonders about the future. Is this future already determined by the social position, the specific culture and the economic status of the individual? This attitude toward internal and external control could determine whether the minority children's aspirations could possibly be fulfilled and if there is in reality a possibility to overcome the present status quo.

As used in this study, internal control refers to the perception of positive and/or negative events as being a consequence of one's own actions and thereby under one's personal control. External control refers to the perception of positive and/or negative events as being unrelated to one's own behavior in certain situations and, therefore, beyond personal control.

Educators and non-educators alike are now facing the reality of minority people who have the strong desire to succeed guided by internal control, but who face struggles because the external control is perceived as so powerful by these minority children.

In reference to internal control and external control of reinforcement, Herbert M. Lefcourt (1966:204) states:

> Under various rubrics, and from diverse orientations, investigators have concerned themselves repeatedly with man's ability to control his personal environment. Concepts such as competence, helplessness, hopelessness, mastery, and alienation have all been utilized in one way or another to describe the degree to which an individual is able to control important events occurring in his life space.

In Rotter's social learning theory (1954), the potential for any behavior to occur in a given situation is a function of the person's expectancy that the given behavior will secure the available reinforcement and the value of the available reinforcements for that person. In a particular situation, the individual, though

desirous of an available goal, may believe that there is no behavior in his repertoire that will allow him to be effective in securing his goal. Within this specific situation, the person may be described as anticipating no contingency between any effort on his part and the end results in the situation. In Rotter's theory, the control construct is considered to be a generalized expectancy operating across a large number of situations which relate to whether or not the individual possesses or lacks power over what happens to him.

Thus, locus of control is an expectancy variable that describes the perception of personal control that one has over the reinforcements that follow his behavior. According to Rotter's (1963) theoretical formulation, an "internal person perceives that he is in control of his fate and that effort and reward will be positively correlated." An external person perceives that powerful others or "the system" determines how well he can do and that rewards are distributed by such powerful others in a random fashion. Investigators using the I-E (internal-external scale) indicate that internal people are: (1) more likely to make typical or rational shifts in their level of aspirations (Battle & Rotter, 1965; Feather, 1968; Rotter & Mulry, 1965); (2) take intermediate rather than extreme risks (DuCette & Wolk, 1972; Julian & Katz, 1961; Liverant & Scodel, 1960); (3) are more confident in

their abilities (Lao, 1970); (4) make better use of environmental feedback (Phares, 1963; Ude & Vogler, 1971); and (5) are more likely to be social activists (Forward & William, 1970; Gore & Rotter, 1963).

The general conclusion from this research is that in most cases "internality" is an adaptive and positive personality characteristic--whereas "externality" is not. While it is clear that Rotter's statement must be qualified since current research indicates that this construct is more complex than originally thought, the above conclusion that internality is more adaptive would generally hold.

It is evident, however, that a distinction must be made between different types of internality, especially for minority groups and that no simple or linear relationship exists between internality and adaptive behavior (DuCette, Wolk & Saucar, 1972). While research using the locus of control in predicting the type of educationally relevant variables (e.g., levels of aspiration, personal confidence, use of environmental information, etc.), has been extensive, the moderating effect of different social environments upon these predictor-criterion relationships has not been substantial. The question then becomes: Is there an interaction between locus of control and environment in predicting such educationally relevant variables as levels of aspiration and control of the environment?

The Problem

Educators are beginning to realize the implications of elementary school minority children functioning in a majority White society. These implications could be studied under three aspects: (a) locus of control; (b) the background of the minority child; and (c) the environment in which he/she functions. First, in relationship to the locus of control, some questions come to mind. How much control does a person perceive he/she has to guide his/her own life? Is the school system in the elementary phase so strong that it is impossible to have individual direction? Do schools and educators so influence the lives of the minorities that it is impossible for the minorities to have control over their own lives?

Second, in relationship to the background of the minorities, there is the factor of the Mexican-Americans who traditionally organize as an economic unit in communities, not as an individual; but, they are placed in a society in which individuals are very important.

The following quote from Farmer (1968:49) is descriptive of the background of the Chicanos and the situation in which they find themselves when they enter school:

> Many Mexican-American students are the descendents of an agrarian folk culture and, as such, have developed in a home where the parents have a reluctance to change. . . . Mexican-Americans are generally non-competitive. Competition is not in keeping with traditional folk values. The individual is all-important. . . . These students question not only their identity but also their adequacy, for they are relegated to the position of second-class citizens by many members of the dominant society. . . . The large number of Mexican-American students who are monolingual when they enter school are taught English by teachers who have no awareness of the student's native language or the principles involved in teaching them English as a second language. . . . The teacher should not criticize or minimize, should not place value judgment(s) on these students' means of seeking status, whether they be language, dress, mannerisms . . . .

In comparison with the Blacks and Mexican-Americans, the Native Americans (Indians) have a different problem. The Indians were here first; they possessed the land in general, and now numbers of them live on reservations in the United States and Canada. These segregated reservations provide a way of life that the majority society has dictated to the Indian. The Indian is now opposed to that way of life.

The third area is the environment. The Mexican-American may come from a family which has lived under the tradition of Spanish culture without being influenced by other cultures. Also, in many families, the third or fourth generations of Mexican-Americans may become more able to function in a White majority society.

The Blacks, who because of ghetto or low-income environment, may be removed or isolated from the mainstream

of American culture. Conversely, their environment is in more recent years bi-cultural--that is, both Black and American.

The Indian, who because of reservation dwellings or very low-income environment, is also isolated from the mainstream of American culture. One of the major problems is that many of the Native Americans are still living and developing in the reservation, and are not being exposed to the trends of the cities, suburbs, and general development of the American culture, or are living off reservations in depressed communities.

Different cultural backgrounds give birth to different beliefs of children concerning their own control of reinforcement in intellectual-academic achievement situations. One of the assumptions held by many is that an ethnic minority when reared in his/her own culture and environment is assumed to be inadequate to function in a White majority society.

The Chicano in the Midwest is under the handicap of being the "second minority" since vast numbers of Blacks are settled there. As a result, Midwest school districts have focalized their energies on helping the Blacks (Soriano & McClafferty, 1969). The Blacks' plight is also well documented with many Black and Anglo spokesmen working to upgrade their educational, economic, and social position. In contrast, the Midwest Chicanos have

few Anglo, Black, or Chicano spokesmen to present their case.

While the Spanish-American population in the Southwest is almost completely Chicano, the Spanish-American population of the Midwest, in addition to Chicanos, has large numbers of persons of Cuban and Puerto Rican extraction.

Some educators believe that the educational experiences of Chicanos are minimal due to the parents alienation from the Anglo culture which leads them to discourage their children from learning English. The Spanish-American home is often devoid of educational materials and, most of all, that because they speak another language and only that language, they must be at a disadvantage in functioning within the other culture or society. Their experiences are said to be meager. Their homes lack books, so it is thought that they must lack communication and other valuable qualities. Since Chicanos speak "only" the native language, they are assumed to lack the "important language"--that of the ethnic majority.

A person's actions within a given culture (the basic social habits, emotions and values of any group of people) usually will conform to a norm set for that culture although there is likely to be some deviation in behavior from the norms of that particular culture. Often patterns

based on one culture will be insufficient when trying to apply those patterns to another culture. Each has developed a way of life which is relatively independent of the other and has survived to be acknowledged as a culture. Cultural deprivation has been a vehicle used to justify one culture's imposition of its system upon another culture.

The attitude of a minority toward the dominant culture is not standardized, but varies with the historical situation. Erasmus (1968) argues that Mexicans in America strongly tend to reject Anglo goals, penalizing their fellows who adopt Anglo methods even if they thereby attain high status. In contrast, Erasmus (1968) argues that the Japanese in America tend to respect the Japanese-Americans who do succeed, even if they do so by adopting Anglo standards.

Henry G. Burger, in his book entitled Ethno-Pedagogy Cross-Cultural Teaching Techniques (1967), suggests that there seems to be a Mexican-American belief that one person cannot control his/her environment. This attitude is often labeled as fatalism. Hispanic culture is alleged to say, "Que sera, sera," whatever will be, will be. Hispanic persons often see themselves as the hopeless objects to whom things happen, rather than masters of their own fate. The frequent use of passive voice reflects this inability to act upon the environment. Preventive medicine

and life insurance are slighted. Attempts to avoid death are not made. Indeed, a familiar topic of conversation is death. Hispanic culture emphasizes duty and loyalty to the group rather than motivation, ambition, and success for the individual. This syndrome probably gives rise to the concept of postponed action, manana (tomorrow) as a dominating Hispanic culture trait. Manana (tomorrow) is the belief that nature will take its course, that the required matters of life will somehow get done tomorrow or thereabouts.

Burger (1971:57) states the decision on melting pot or polyethnicity greatly affects the type of schooling that should be given. What degree of commonality should the school provide? The answer is uncertain, but one would expect that within the United States there would generally supervene a common language and a common market. Mass communication and transportation will not be rolled back. Rather, the encouragement of ethnic diversity in such areas as vocation would, we believe, provide greater security for the single national government than the present procrustean fester.

That the school educational system must broaden its view from mere facts of curriculum to social climate is foreseen in the 1967 report of the U.S. Commission on Civil Rights, Racial Isolation in the Public Schools (discussed by Orr & Pulsipher, 1967c:56-58). It finds

that equal achievement is obtained only by sociocultural integration, and not merely by compensatory education held as a sort of special "hothouse."

For example, the report mentioned in the preceding paragraph finds that "Negro children in predominantly White schools usually score higher on achievement tests than the children in majority Negro schools, even when the children in majority Negro schools are receiving compensatory education."

The reasons are social:

> When disadvantaged children are racially isolated in the schools, they are deprived of one of the more significant ingredients of quality education: exposure to other children with strong educational backgrounds. . . . Another strong influence on achievement derives from the tendency of school administrators, teachers, parents, and the students themselves to regard ghetto schools as inferior. Reflecting this attitude, students attending such schools lose confidence in their ability to shape their future (U.S. Civil Disorders, 1968:238).

Anthropology doubts that socialization alone would cure the complex problem. The melting pot succeeds only in some sectors. One more alternative is to build on rather than suppress ethnic cultures, groups, and communities.

The solutions may have to vary with the ecological situation. For example, it is easy to understand that the Rough Rock Demonstration School (Chinle Post Office, Arizona), a center of Navajo revitalism, has arisen near the center of the remote Navajo reservation. At the same

time, the Navajos going to an all-tribal school in a relatively large city (Albuquerque, New Mexico, Indian School) receive proportionately less training in cultural pluralism.

According to Burger (1971:58), the trend is toward polyethnicity, or cultural pluralism. Members of each ethnic minority must realize that they cannot fully attain the core of the Anglo "style of life" (including all of its material benefits). Instead, they should proudly elaborate their own ethnic heritage, not a reactionary "back-to-the-blanket" retreat, but a reconciliation that enables their tradition to interweave with the complex mid-20th Century life.

Consequently, the evidence is strongly suggestive, although not conclusive, that education should train people for their ethnic speciality providing that those specialities are likely to continue in the future and that the individuals are willing to study them and do not wish to change from their traditional kin network or occupation.

In accordance with the concept of specialization, it may well be possible to teach a common core of subject matter, such as language, and then to go on and teach an ethnic speciality. This speciality need not be degrading, but may simply be traditional. It is not mere handiwork, but a cultural heritage including great literature, human relations and so on. Such an approach suggests that

domination of the educational establishment within the ethnic geographical areas will increasingly pass to the most competent leaders of minorities.

In summary, the locus of control, the background and the environment of the minority child are factors which could be considered by significant others, especially those involved in the school situation with the minority child, in the developing of education of minority children.

Purpose

It was the author's purpose in this study to examine the perceptions of minority children concerning whether their intellectual-achievement development is internally controlled or externally controlled. To achieve this purpose the Intellectual Achievement Responsibility (IAR) Questionnaire and the I-E (internal-external) Scale were used.[1]

The IAR assesses the beliefs (see Chapter III) that the children themselves, rather than other people, are responsible for their intellectual-academic successes and failures. I-E refers to the effects of reward or reinforcement on subsequent behavior which depends in part on whether the person perceives the reward as being contingent on his behavior or independent of it (see Chapter III).

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[1] I-E (internal-external scale) will be known as I-E Scale.

On first examination, the two instruments appear to have some points in common; but they serve different groups. They have different immediate goals. I-E is considered to be a measure of general expectancy toward the internal-external control of reinforcement. The other, IAR, is in reference to internal-external control of reinforcement with special interest in children.

A further purpose of this investigation is to examine whether some independent variables such as ethnicity, gender, grade in school, could be measured by both the I-E and the IAR with comparable results.

The children included in this study are: Black, Mexican-American and White in a Midwest elementary school, grades 4, 5 and 6, in the school year 1974-1975.

Significance of the Study

The possibility that there are differences in the way minority children perceive the teacher, and perceive themselves, will make an impact on the way children relate to other minority children, and to the teachers in the school. If the children determine that the teacher is a representative of an internal control mode of reinforcement and the children are functioning in the external control mode of reinforcement, there will be conflicting attitudes. These conflicting attitudes affect what the children perceive as a learning situation since

the children are not functioning in the same frame of reference (internal-internal), or (external-external). As Burger (1971:57) says:

> When the teacher has acquired knowledge of the control of reinforcement that helps the children learn better, then the teacher can examine and determine his/her approach and methodology of teaching in order to communicate and improve relationships with the minority children.

This change could avoid the perpetuation of the present system of education in which minority children find themselves in constant turmoil and defeat. Turmoil and defeat are manifested in the forms of: dropping out, absenteeism, tardiness, low achievement, etc.

This study is also significant because it takes into consideration not only the culture and grade level of the minority children but other independent variables which could determine the type of reinforcement which the children need in order to succeed.

These independent variables include: the number of children in the family, the ordinal position in the family, the times the child has visited the counselor, and the teachers' race. Another important factor could be whether the minority children live with both parents or with a single parent; the household form.

Methodology

The design of this study, which was comparative and descriptive in nature, sought to analyze the responses

given to the IAR and I-E Scale by the 4th, 5th and 6th graders at a Midwestern elementary school located in a low socioeconomic area. The school is composed of about 33 percent Black children, 25 percent Mexican-American children and 39 percent White children. The three groups were found to be equal in terms of socioeconomic background, in terms of Title I children. The intent of Title I is to assist students who are academically low achieving, who live in school attendance areas where there is a high incidence of poverty.

The students answered the Intellectual Achievement Responsibility Questionnaire. The children's IAR scale is composed of 34 forced-choice items. Each item stem describes either a positive or a negative achievement experience which routinely occurs in children's daily lives. This stem is followed by one alternative stating that the event was caused by the child and another stating that the event occurred because of the behavior of someone else in the child's immediate environment. Internal alternatives are designated by an "I". Positive-event items are indicated by a plus sign, and negative events by a minus sign following the "I". The child's I+ score is obtained by summing all positive events for which he/she assumes credit, and his/her I- score is the total of all negative events for which he/she assumes blame. The total I score is the sum of the I+ and the I- subscores.

The Intellectual-Achievement Responsibility (IAR) Questionnaire, employed in the present investigation, attempts to measure beliefs in internal versus external reinforcement responsibility. It differs from other measures, however, in several respects. First, the techniques discussed so far contain items describing reinforcements in a number of motivational and behavioral areas such as affiliation, dominance, achievement, and dependency. However, there has been no demonstration so far that such beliefs are consistent across all areas of experience. The IAR, on the other hand, was developed within the context of a larger research program dealing with children's achievement development. Thus, it is aimed at assessing children's beliefs of reinforcement responsibility exclusively in intellectual-academic achievement situations.

The IAR also differs from the other assessment methods in the external environmental forces described. While previous scales include a variety of sources and agents such as luck, fate, impersonal social forces, more personal "significant others," etc., the IAR limits the source of external control to those persons who most often come in face-to-face contact with a child: parents, teachers, and peers. This restriction was based on two considerations. The first had to do with the possibility that a child may attribute different amounts of power or

control to various external agents. For example, he/she attributes a great deal of control to adults, but discounts the influence of luck or fate on experiences, or vice versa. There is no information yet available to determine whether children have any generality in their belief in the power of various kinds of external forces, although there is some evidence of such generality in adults' beliefs (Rotter et al., 1962). Consequently, at this early stage of investigation, it was thought advisable to restrict the scale to one type of external control (the source of support is in the hands of significant others). A second reason was that it seemed important from a developmental point of view to focus particularly on children's beliefs in the instrumentality of their own actions compared with that of other people in their immediate environment. The dependence of young children upon others for instrumental help and emotional support is, of course, a necessary condition of early development. However, the resolution of dependence on such caretakers and the concomitant acquisition of independent problem-solving techniques are equally important requisites of normal personality development. It would not be surprising, then, to find that infants and preschool children--if they could report such beliefs--would ascribe reinforcement responsibility to the powerful others in their environment.

Unlike the other I-E scales, the scale used in this research was constructed to sample an equal number of positive and negative events. It was felt that the dynamics operative in assuming credit for causing good things to happen might be very different from those operative in accepting blame for unpleasant consequences. It is possible that belief in personal responsibility for the two kinds of events may develop at differential rates, or that this may be so for some children but not others. Thus, the IAR was so constructed that, in addition to a total "I" (internal or self) responsibility score, separate subscores could be obtained for beliefs in internal responsibility for successes (I+ score) and for failures (I- score).

Administrative Procedures

One aim of this study was to investigate children's beliefs in intellectual-academic reinforcement responsibility throughout as broad an age range as possible. Ideally, it would have been desirable to examine these beliefs from the time children enter elementary school until they graduate from high school. However, preliminary research (Crandall, 1965) indicated that children of average intelligence in the first two elementary grades often had difficulty in responding to the questionnaire, primarily because they could not keep an item and its two

alternatives in mind long enough to make meaningful responses. Since some of the 4th, 5th and 6th grades were not able to read well enough to take the test in written form, it was decided that individual oral presentation would be desirable. The questions were tape recorded, so that each child was presented verbal stimuli which had the same inflections, tone, and rate. The responses were marked on an answer sheet which had I+ and I- choices. The instructions presented in the oral administration requested the students to pick the answer "that best describes what happens to you or how you feel." The child was told that there were no right or wrong answers and was assured that the responses would not be revealed to anyone else.

Definition of Terms

Culture.--The basic social habits and values of any group of people. Culture is social, not individual. Culture is historical, not universal. Culture is conceptual, not immediate. Culture is repeated, not unique.

Ethnic.--Possessing continuity through descent whereby one shares in a distinctive social, race, linguistic and cultural tradition.

External Locus of Control.--The perception which persons have that the reinforcements they obtain are primarily determined by factors beyond their control and are due to chance, fate, or powerful others.

Internal Locus of Control.--The perception which persons have that the reinforcements they obtain are primarily the consequences of their own efforts.

Minorities.--Those individuals who are of Black descent; Mexican-American: Person of Mexican extraction (both parents must be of Mexican extraction; Spanish-American: Person of Mexican, Cuban, or Puerto Rican extraction. White: one whose socioeconomic level excludes him/her from the majority of the middle class American people.

Risk Taking.--Degree to which an individual chooses an option which has a high reward but a low probability of payoff.

Social System.--A social system is a group of persons in which the action of one affects the actions of others.

Society.--A group of people who have lived together long enough to organize themselves and to think of themselves as a social unit.

Value.--An enduring belief that dictates a specific mode of behavior or end-state of existence.

Variables of Interest.--Those independent variables used in this study by which the results determine if they influence the internality or externality of the minority child.

Basic Assumptions

1. If individuals see themselves as having responsibility for successes or failures, then they perceive themselves as possessing an internal locus of control.

2. If individuals see themselves not responsible for their own successes or failures, then they perceive themselves as possessing an external locus of control.

Hypotheses

The hypotheses are stated in the null form.

Hypothesis I:
There will be no differences between the mean scores on measuring varying aspects of the internal-external control of reinforcement given by Blacks, Mexican-Americans and Whites.

Hypothesis II:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement given by students of the 4th, 5th and 6th grades.

Hypothesis III:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement among boys and girls.

Hypothesis IV:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement in relationship to the number of members in the family.

Hypothesis V:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the ordinal position of the child in the family.

Hypothesis VI:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of times the student has visited the counselor.

Hypothesis VII:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to whether or not the student had any Black teachers since Kindergarten.

Hypothesis VIII:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to whether or not the student had any Mexican-American teachers since Kindergarten.

Hypothesis IX:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to whether or not the student had any White teachers since Kindergarten.

Hypothesis X:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the fact that the student lives with both parents or with a single parent.

Summary

Chapter I included the background and significance of the problem, a description of the population and the basic assumptions of the study. The hypotheses, and the definition of terms were included.

Pertinent literature dealing with the locus of internal-external control of reinforcement will be reviewed in Chapter II.

The population, instrumentation, testable hypotheses, dependent and independent variables and statistical analysis will be described in Chapter III.

In Chapter IV each of the hypotheses will be presented and analyzed in detail. The thesis will conclude in Chapter V with a summary, interpretation of the findings, and educational implications of the findings.

CHAPTER II

REVIEW OF THE LITERATURE

The review of the literature will be divided into three distinct areas: first, in the area of reinforcement; second, in the area of internal versus external control; and third, in the area of culture in reference to minority children, including Black children, Mexican-American children and White children. Each of these areas will also contain some observations made by the author through participation in the school and community. These participant observations are related to the fact that the author is working as a counselor at a midwestern elementary school located in a low socioeconomic area which has about equal numbers of different minority student groups.

Studies were found which related to reinforcement, minorities and culture. Also, studies have been done relating to internal-external control applied to different topics, such as social influence, self-perception theory, decision making, anxiety, etc. In this literature review special attention will be given to the work done by Virginia C. Crandall, Walter Katkovsky and Vaughn J. Crandall (1965) in their article entitled "Children's

Beliefs in Their Own Control of Reinforcements in Intellectual-Academic Achievement Situations." The other work to which special attention will be paid is, "Generalized Expectancies for Internal Versus External Control of Reinforcement" by Julian B. Rotter (1966). These studies have been chosen because many studies have been done by others based on them; Julian Rotter due to his study on generalized expectancies for every age bracket, and Virginia Crandall for her work done especially with children's beliefs on their own control of reinforcement.

Reinforcement

Glaser and Cooley (1973) suggest that reinforcement has long been considered a key variable in the instructional process. The principle of reinforcement stems from the observation that environmental consequences can increase or decrease the probability with which future behavior will occur. Furthermore, the particular kind of behavior that an individual learns or the kind of performance that he/she exhibits often depends on the details of these environmental consequences. A reinforcing consequence is defined as an event or state of affairs that changes subsequent behavior when it temporarily follows an instance of that behavior. Throughout all the various theoretical interpretations of how the mechanisms of

reinforcement work, the operational description of reinforcing situations is clear. Behavior is acquired and its occurrence regulated as a result of a contingent relationship between the response of an individual and a consequent event. The pervasiveness of the influence of reinforcement in our daily lives leaves little doubt of the significance of the management of reinforcing operations for educational and instructional practice.

Principles of reinforcement have been applied with increasing frequency in the context of clinical psychology and in education in the classroom (Bandura, 1969; Wolf & Risley, 1971). A number of guidebooks for teachers interested in applying behavior modification techniques have appeared (Buckley & Walker, 1970; Homme, Csanyi, Gonzales & Rechs, 1969), as well as some recent collections of readings on behavioral modification in education (Fargo, Behrna & Nolen, 1970; Roden, Klein & Hapkiewicz, 1971). The effective application and scheduling of reinforcing events, such as the results of one's work, praise, social approval, attention or leadership have been established as important variables to be considered in the design of educational environments.

Julian Rotter (1966:1) has said of reinforcement:

> The role of reinforcement, reward, or gratification is universally recognized by students of human nature as a crucial one in the acquisition and performance of skills and knowledge. However, an event regarded by some persons as a reward or

> reinforcement may be differently perceived and reacted to by others. One of the determinants of this reaction is the degree to which the individual perceives that the reward follows from, or is contingent upon, his own behavior or attributes versus the degree to which he feels the reward is controlled by forces outside of himself and may occur independently of his own actions. The effect of a reinforcement following some behavior on the part of a human subject, in other words, is not a simple stamping-in process but depends upon whether or not the person perceives a causal relationship between his own behavior and the reward. A perception of causal relationship need not be all or none but can vary in degree. When a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate, as under the control of the powerful others, or as unpredictable because of the great complexity of the forces surrounding him. When the event is interpreted in this way by an individual, we have labeled this a belief in external control. If the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics, we have termed this a belief in internal control.

V. C. Crandall, Katkovsky and V. J. Crandall (1965) suggest that individuals have been found to differ in the degree to which they believe that they are usually able to influence the outcome of situations. They may believe that their actions produce the reinforcements which follow their efforts, or they may feel that the rewards and punishments meted out to them are at the discretion of powerful others or are in the hands of luck or fate. In fact, the same reinforcement in the same situation may be perceived by one individual as within his/her own control and by another as outside his/her own influence. The

personal beliefs could be important determinants of the reinforcing effects of many experiences. If, for example, individuals are convinced that they have little control over the rewards and punishments they receive, then they have little reason to modify their behavior in an attempt to alter the probability that those events will occur. Rewards and punishments, then, will have lost much of their reinforcing value and effectiveness in strengthening or weakening the child's response.

Internal Versus External Control

There have been a number of studies demonstrating differences in behavior as a function of internal-external control. In one series of investigations, acquisition and extinction of expectancies has been shown to vary depending on whether the individual perceives task performance as determined by skill as opposed to chance or luck factors (James & Rotter, 1958; Phares, 1957, 1962; Rotter, Liverant & Crowne, 1961). Concurrent with studies manipulating skill and chance in a situational context has been the development of a scale to measure individual differences in a generalized expectancy regarding the nature of causal relationships between behavior and the occurrence of reinforcement (Rotter, 1966).

Rotter (1954) has suggested that individuals behave not only in accordance with the relative value of

goals and the nature of the reinforcement they receive, but also with the degree of expectation they have of achieving those goals.

Phares (1957) suggests that students who feel they have little control over the situations are less likely to exhibit the behavior that will enable them to cope more successfully with potentially threatening situations (referred to as external students) than those who feel they have substantial control over the situation (referred to as internal students).

Herbert Lefcourt (1966) suggests that the "control of reinforcement" construct is a dimension of belief or expectancy about the locus of reinforcing consequences for behavior. This belief is presumed to represent a generalized or transituational disposition to ascribe behavior-reinforcement contingencies either to "external," and hence uncontrollable, factors (such as chance, fate, powerful others, or an enigmatic world, and so on), or to "internal" sources (in which case the individuals perceive themselves as the effective determinants of reinforcing events).

Lefcourt (1966:206), has said of control of reinforcement:

> Under various rubrics, and from diverse orientations, investigators have concerned themselves repeatedly with man's ability to control his personal environment. Concepts such as competence, helplessness, hopelessness, mastery, and

> alienation have all been utilized in one way or another to describe the degree to which an individual is able to control the important events occurring in his life space.

Rotter (1954) states, on the basis of the construct properties and empirically determined behavioral correlates of I-E Scale scores, differential predictions can be made about responsiveness of internal and external subjects and about the effectiveness of internal and external experimenters as agents of social reinforcement in the verbal conditioning situation. There is evidence, for example, that if "suggestions or manipulations are not to (the internal's) benefit or if he perceives them as subtle attempts to influence him without his awareness, he reacts resistively." In subtle behavior-shaping situations, such as verbal conditioning, internals would be expected to be less responsive to experimenter's attempts to influence than externals who presumably base their performance on cues from an experimenter and would thereby evidence performance gains.

Another study somewhat related to internality-externality and personal control is one described by Ryckman and Sherman (1973). These experimenters asked internal and external subjects to select partners or opponents with superior, equal, or inferior abilities for cooperative or competitive tasks. Results indicated that internals were willing to relinquish much of their personal control over the outcome by selecting superior

partners for cooperative ventures but only after they had become thoroughly convinced of their own lack of ability on the task. When they perceived themselves as having good ability, internals selected partners of equal ability for cooperative activities. Externals tended to select inferior-ability partners under the same conditions, thus virtually ensuring defeat for their teams.

If internal locus of control is related to perceived power and external beliefs to powerlessness, as Ryckman and Seeman suggested as early as 1959, then further investigation considering how internals and externals use power, particularly in relation to other people, may open new doors of understanding cooperative and competitive behavior both in inter-personal and group situations. Feelings of personal power or helplessness in conjunction with externality have been demonstrated to be influential in achievement situations. Dweck and Repucci (1973) had children persist in tasks after prolonged noncontingent failure and found externals, who took less personal responsibility for outcomes, to exhibit a worsening of performance in contrast to internal children.

One significant reason for looking at locus of control is that there appears to be a relationship between internal-external control and school success or achievement. Several studies have suggested this relationship to achievement. In one such study by McGhee and Crandall (1968)

using the students in both elementary and high school grades, an Intellectual Achievement Responsibility scale was administered to each child. The researchers then compared the IAR scores with mean scores. They also found I-E to be a better predictor of course grades than the achievement test scores. They found gender differences with high achieving girls consistently more accepting of both success and failure situations while high achieving boys were more accepting of failure situations.

W. B. Brookover and associates (1973:4,5) in their research and writing, conscientiously try to explain the effect of significant others on the child's academic behavior and expectations.

> Clearly under the heading of symbolic interaction and of great importance to the present research is expectation theory and the relationship between academic behavior and the student perceived academic expectations held by "others" who may be significant to his beliefs. Rosenthal and Jacobson (1968) call this phenomenon a "self-fulfilling prophecy" as coined by Merton (1957), and referred to by Myrdal (1944), as the "theory of vicious cycle." When such significant others as parents, school officials, teachers, and peers, are perceived by the individual as viewing his failure as an imminent reality, and he accepts those views, the chances are greatly enhanced that failure will follow. If any "significant other" is perceived by that individual as having more positive beliefs about the chances of academic success, the prospects of failure become diminished. Although Rosenthal and Jacobson do not identify this study of expectation effects in the interactionist frame of reference, it may be appropriately classified in this context.

> Expectation theory becomes extremely informative when we discuss the complementary construct of "aspirations." Individuals who experience consistent negative reinforcement within a particular area will also develop limited aspirations concerning their future plans within the area of endeavor. For example, a student who is expected by "others" to be a failure and experiences some difficulty early in his education will rarely attain a high "self-concept of academic ability." His level of future educational aspirations will remain quite low.

Culture

Dwayne Huebner (1975) says that his intention behind his original choice to be a teacher was to help individual children be more self-fulfilling, more powerful, more capable of recognizing and realizing their own possibilities as human beings. Huebner assumed that the possibilities of the young were native to them, and that the school merely developed these possibilities. The 60's destroyed that illusion. They are disadvantaged because human possibility is not fairly nor even randomly distributed.

Mercer (1973) in her analysis of the processes by which institutions such as schools label individuals as, say, "mentally retarded," confirms this picture. Children with "non-modal" sociocultural backgrounds and from minority groups predominate to a disproportionate degree in being so labeled. This is primarily due to diagnostic procedures in schools that were drawn almost totally from what she has called the dominance of "Anglocentrism" in

schools, a form of ethnocentrism that causes school people to act as if their own group's life style, language, history, and value and normative structure were the "proper" guidelines against which all other people's activity should be measured. One of the basic needs common to all children is the need to achieve, to accomplish, to experience success. Failure deprives them of the satisfaction of that need. Then some pupils fight back with patterns of violent aggression. Others withdraw; they stop trying and become non-learners. Some get physically sick. Success to the school child means, "I got it right!" All children need to get something right every day, to learn something and to know that their teacher is pleased with them. Success and praise are profoundly motivating. They turn children on. They free the energy needed to make an effort. They convince pupils that they can learn. Once a child perceives himself as able to learn, and knows the teacher cares, he usually does learn.

Thomas P. Carter in his book Mexican Americans in School, A History of Educational Neglect (1970:208), suggests that:

> One not-so-startling conclusion can be drawn from analysis of the kind of children who succeed in schools: those who do so tend to be children who are culturally and personally similar to what the school expects. They are almost invariably the "normal" children from "normal" homes, average middle-class American youngsters. The "different"

> child, whether he be Anglo, Negro, lower class, or whatever, rarely measures up at school entrance or exit to the normal or "standard" child. It is easy to conclude that the cultural, social-class, or personality differences of "different" children, faced with an undifferentiated or standard middle-class-oriented school, cause them to fail in school. Most educators, with the support of the vocal elements within the middle class, assume that the school is adequate and validly represents the core values and content of American culture. Therefore, it is not difficult to understand why school people, when given a choice between seeing Mexican-Americans' poor school performance as attributable to either their home or the nature of the school, readily opt to blame the "deficient" home.

Susan S. Stodolsky and Gerald Lesser (1967:546) suggest that the data on general intelligence, mental abilities and school achievement all give indications that general learning, first in the home and community and later within the school as well, is clearly associated with socioeconomic status. The level of such learning is generally lower for children of most minority groups and children in low socioeconomic status. Important variations in patterning of such learnings have yet to be studied systematically, with a few notable exceptions. Even in the school achievement area, data regarding progress in school subjects other than reading and mathematics are not readily available. It can perhaps be safely assumed that achievement in social studies, science, and other academic areas will be highly correlated with achievement in reading and arithmetic. Nevertheless,

studies of performance of disadvantaged children in these areas should be carried out.

Culturally different students are special only in that they are different, and like all students possess unique interests, talents, and feelings. Teachers should be encouraged to make possible a larger variety of achievements, and develop a system to reward and reinforce each.

The picture of educational disadvantage which emerges with examination of achievement data is a clear indication of the failure of the school systems. When intelligence test data and early achievement data are combined, we have a predictor's paradise, but an abysmal prognosis for most children who enter the school system from disadvantaged backgrounds. At the very least, this ability to predict school failure should be better exploited by the schools in an effort to remedy the situation.

Kenneth T. Henson (1975) states that to overcome these barriers we must find ways of making school more personal to culturally different students. Schools must create more success channels, whereby these students can earn recognition for their achievements. Schools must provide tasks which will permit them to reveal their knowledge and express their feelings. Since these goals are not likely to occur for many in a keenly competitive environment, we must tone down classroom competition and

tune in classroom cooperation. The fact that multicultural classes have built-in problems is as obvious as is the fact that multicultural classes possess unique opportunities for young people to learn how to become modern Americans. However, until teachers take the initiative necessary to capitalize on this uniqueness, the potentials will remain hidden and the problems will remain the dominating characteristics of multicultural classes.

Summary

In this chapter, important points have been highlighted in three distinct areas--the area of reinforcement, the area of internal versus external control, and the area of culture as it refers to minority children as used in this study. Different behavior patterns and success and failure of minority children have been viewed as a result of the study in these three areas. It is evident that more study and research should be done in relation to the learning process of minority children as it relates to reinforcement, internal versus external control and cultural background.

Reinforcement presumably is provided to the minority children by significant others and not by the children themselves. The literature also shows that many social and cultural factors which minority children

bring with them to school bear a great importance in the beliefs of their academic success. Variations in these beliefs could be attributed to different practices of family socialization and different patterns and values in the culture of the minority child. Some evidence was also presented that the minority children see themselves as more externally controlled and less capable of determining their own destiny.

CHAPTER III

METHODS OF STUDY

This chapter contains a description of the population represented in the study, instruments used for data gathering, the testable hypotheses, and statistical analysis.

The Sample

The sample from which this study was made consisted of 4th, 5th and 6th grade students from a Midwestern elementary school located in a low socioeconomic area. This school was chosen because it has almost equal percentages of Black, Mexican-American and White students. Also, the author was an elementary school counselor at the school and had easy access to the students. Thirdly, the principal and teachers at the school were enthusiastic about the study.

There is a total of 39 students in the 4th grade, consisting of 11 Black students, 8 Mexican-Americans and 20 White students. There are 6 Black boys, 3 Mexican-American boys, and 13 White boys. The female population is composed of 5 Black girls, 5 Mexican-American girls

and 7 White girls. Thus there are 22 boys and 17 girls in the 4th grade.

There is a total of 32 students in the 5th grade, consisting of 8 Black students, 11 Mexican-American students and 13 White students. There are 3 Black boys, 5 Mexican-American boys and 6 White boys. The female population is composed of 5 Black girls, 6 Mexican-American girls, and 7 White girls. Thus, there are 14 boys and 18 girls in the 5th grade.

There is a total of 41 students in the 6th grade consisting of 19 Black students, 9 Mexican-American and 13 White students. The male population is composed of 11 Black boys, 7 Mexican-American boys and 9 White boys. The female population is composed of 8 Black girls, 2 Mexican-American girls, and 4 White girls. Thus, there are 27 boys and 14 girls in the 6th grade.

In summary, there is a total of 112 students in the 4th, 5th and 6th grades in this Midwestern elementary school. This figure consists of 38 Black students, 28 Mexican-American students, and 46 White students which, when broken down, shows 20 Black boys, 15 Mexican-American boys and 28 White boys. The female population is broken down in the following manner: 18 Black girls, 13 Mexican-American girls, and 18 White girls, with a total of 63 boys, and 49 girls. The percentage of the 112 students which is Black is 33.9 percent; Mexican-American

25 percent; and White, 41.0 percent. Combining the Black and Mexican-American percentages, the percentage of the three grades which are minority described ethnically, is 61 percent.

Instrumentation

Two instruments were used to measure the internal-external control of reinforcement: The Intellectual Achievement Responsibility Questionnaire (IAR), and the Internal versus External control of reinforcement (the I-E Scale).

The Intellectual Achievement Responsibility Questionnaire (IAR)

The Intellectual Achievement Responsibility Questionnaire (IAR), developed by Crandall, Katkovsky and Crandall (1965) was designed to measure the degree of control an individual receives regarding the reinforcement responsibility in academic situations. In essence the IAR assesses whether or not an individual perceives himself/herself as the controlling agent of reinforcement. This perception makes him/her feel responsible for successes as well as failures. In the IAR this assumption is called internal control of reinforcement. If the individuals perceive that a system or another person is responsible for successes and failures then they possess external control of reinforcement.

The IAR scale is composed of 34 forced-choice items. Seventeen items describe positive achievement experiences and seventeen items describe negative achievement experiences. The experiences are supposed to represent routine occurrences for a child. The stem of each item is followed by two alternatives--one stating that the event occurred because of the behavior of someone else in the child's immediate environment, the other indicating the child as responsible for the event. Positive event items are indicated by a plus sign (+) and negative event items by a minus sign (-). The higher the internal score, the greater the indication that the child believes in personal control of reinforcement in an intellectual-academic achievement situation (Crandall, Katkovsky & Crandall, 1965).

The following are two examples of positive and negative event items from the 34 forced choice item IAR scale:

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

____a. Because she liked you, or

____b. Because of the work you did?

When you have trouble understanding something in school, is it usually

____a. Because the teacher didn't explain clearly

____b. Because you didn't listen carefully

Internal-External Scale

A careful reading of the items will make it clear that the items deal exclusively with the subject's belief about the nature of the world. That is, they are concerned with the subjects' expectations about how reinforcement is controlled. Consequently, the test is considered to be a measure of a generalized expectancy. Such a generalized expectancy may correlate with the value the subject places on internal control but none of the items is directly addressed to the preference for internal or external control.

The I-E Scale (Rotter, 1966) is composed of 29 forced-choice items. Included in this scale are 6 filler items intended to make somewhat more ambiguous the purpose of the test. The letter preceding the external choice in every item is italicized. The score is the total number of external choices.

Instructions for Rotter's internal-external scale (1966:80) are:

> This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you are concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief; obviously, there are no right or wrong answers.

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*Rotters Scale is the I-E Scale.

Dependent and Independent Variables

The variables related to the hypotheses which might affect the amount of responses to the dependent variables [The Intellectual Achievement Responsibility Questionnaire (IAR) and the Internal-External Scale (I-E)] are:

1. Intellectual Achievement Responsibility Internal (IARI).
    a. Intellectual Achievement Responsibility Internal Positive (IARIP).
    b. Intellectual Achievement Responsibility Internal Minus or Negative (IARIM).
2. Rotter's Scale Internal (ROTE I), (I-E Scale).*

The following are the independent variables:

1. Students race:
    a. Black
    b. Mexican-American
    c. White
2. Grade level:
    a. 4th
    b. 5th
    c. 6th
3. Gender
    a. Female
    b. Male
4. How many children in the family?
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5 or more

*ROTE I is used here to indicate only the Internal section of the I-E Scale.

5. Ordinal position in the family?

   a. 1st
   b. 2nd
   c. 3rd
   d. 4th
   e. 5th or more in the family

6. How many times have you visited the counselor at your school?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

7. How many Black teachers have you had since Kindergarten?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

8. How many Mexican-American teachers have you had since Kindergarten?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

9. How many White teachers have you had since Kindergarten?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

10. Do you live with both your father and mother or a single parent?

    a. both
    b. single parent

Testable Hypotheses

The testable hypotheses are stated in null form.

Hypothesis I:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement given by Blacks, Mexican-Americans and Whites.

Hypothesis II:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement given by students of the 4th, 5th and 6th grades.

Hypothesis III:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement between boys and girls.

Hypothesis IV:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement in relationship to the number of members in the family.

Hypothesis V:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the ordinal position in the family.

Hypothesis VI:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of times the student has visited the counselor.

Hypothesis VII:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of Black teachers the student has had since Kindergarten.

Hypothesis VIII:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of Mexican-American teachers the student has had since Kindergarten.

Hypothesis IX:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of White teachers the student has had since Kindergarten.

Hypothesis X:
There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the fact that the student lives with both parents or with a single parent.

Statistical Analyses

The analysis of variance was employed. For any hypothesis concerning an independent variable with more than two levels which is found to be significant, the Scheffe' post hoc procedure for comparison between groups would follow. The probability of a Type I error will be controlled at the .05 level throughout (i.e., alpha equals .05).

Statistical treatment of the data was executed through the facilities of the Computer Laboratory of Michigan State University. The responses IARI, IARIP, IARIM, IARE, ROTE I, ROTE E and independent variables of each individual student were tabulated and placed on IBM cards. The SPSS system was used to produce cross tabulations of various combinations of independent and dependent variables. The SPSS system was also used to produce tests of the hypotheses (using one-way ANOVA program).

To test the general hypotheses of interest in a one-way analysis of variance using the SPSS program the decision was made to compare the chosen alpha level to the P value of the particular test. If the chosen alpha level is less than the value of F probability (also called P value) the test is not significant, i.e., the null hypothesis cannot be rejected. If the chosen alpha level is greater than the value of F probability the test is deemed significant, i.e., the null hypothesis is rejected in favor of the alternate hypothesis. If the alternate hypothesis is favored, and this hypothesis is composed of different groups, then further investigation into the nature of the differences between the groups necessitates the use of Scheffe post-hoc comparison test.

Summary

The purpose of this chapter has been to describe the population represented in this study and the basis for using this population.

The two instruments used in this study were then considered, including uses of the instruments and the reasons why they were used.

The testable hypotheses were stated in null form. Each hypothesis had two subhypotheses for the following dependent variables: IARI, IARIP, IARIM, and ROTE I.

The following chapter will be devoted to the presentation and analysis of the data gathered in this study.

TABLE 3.1.--Fourth, fifth and sixth grade student breakdown by grade, minority status and gender for Blacks, Mexican-Americans and Whites.

Grade	Black	Mex-Am.	White	Total	Black Male	Mex-Am. Male	White Male	Black Fem.	Mex-Am. Fem.	White Fem.	Total Boys	Total Girls
4th	11	8	20	39	6	3	13	5	5	7	22	17
5th	8	11	13	32	3	5	6	5	6	7	14	18
6th	19	9	13	41	11	7	9	8	2	4	27	14
TOTAL (4,5 & 6)	38	28	46	112	20	15	28	18	13	18	63	49

CHAPTER IV

ANALYSIS OF THE DATA

The data collected and analyzed by the procedures described in Chapter III are presented in this chapter. Each of the ten general hypotheses presented in Chapter III is analyzed separately. In order to test these ten general hypotheses, analysis of variance techniques were used on the data. It was decided that the .05 alpha level of significance would be used throughout the analysis.

Null Hypothesis I

> There will be no differences between the mean scores on (a) IARI, (b) IARIP, (c) IARIM, (d) ROTE I,* measuring various aspects of the internal-external control of reinforcement given by Blacks, Mexican-Americans and Whites.

The analysis of variance for IARI indicated that there were no significant differences among the groups (Table 4.1).

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*ROTE I is used here to indicate only the Internal section of the I-E Scale.

TABLE 4.1.--Analysis of variance of Intellectual Achievement Responsibility Internal (IARI) by minority status.

Sources	Degrees of Freedom	Mean Square	F Ratio	F Probability
Between Groups	2	12.3336	.600	.551
Within Groups	109	20.5495		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
Black	38	23.3158	4.2497
Mex-Am	28	22.2500	4.5185
White	46	23.3478	4.7620
TOTAL	112	23.0625	

The analysis of variance for IARIP indicated that there were significant differences among the groups.

TABLE 4.2.--Analysis of variance of Intellectual Achievement Responsibility Internal Positive (IARIP) by minority status.

Sources	Degrees of Freedom	Mean Square	F Ratio	F Probability
Between Groups	2	17.4308	3.273	.042
Within Groups	109	5.3249		(Test is significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
Black	38	12.6316	2.0720
Mex-Am	28	11.4643	2.6032
White	46	12.8261	2.3027
TOTAL	112	12.4196	

Since the F Probability .042 is significant a post-hoc procedure is followed to determine where the differences lie. In this case the Scheffe post-hoc procedure is used.

Three specific contacts ($\hat{\psi}$) were made for the Intellectual Responsibility Internal Positive by minority status. The first was between a contrast of the Mexican and White (Mexican versus White) $(\hat{\psi})_1$ equals $\overline{X}_{sp}-\overline{X}_{wh}$; the second contrast is (Black versus White $(\hat{\psi})_2$ equals $\overline{X}_{bl}-\overline{X}_{wh}$; the third contrast was between (Black versus Mexican) $(\hat{\psi})_3$ equals $\overline{X}_{bl}-\overline{X}_{sp}$.

TABLE 4.3.--Scheffe's confidence interval for the Intellectual Responsibility Internal Positive by minority status.

Contrast	Estimates of Difference	Interval	Decision -.05
$(\psi)_1 = \overline{X}_{sp}-\overline{X}_{wh}$	-1.3618	-1.3618 ± 1.687	not significant
$(\psi)_2 = \overline{X}_{bl}-\overline{X}_{wh}$	- .1945	- .1945 ± 1.543	not significant
$(\psi)_3 = \overline{X}_{bl}-\overline{X}_{sp}$	1.1673	1.1673 ± 1.753	not significant

Minority Status

It is possible to reject the null hypothesis in reference to the control of reinforcement given by Black, Mexican-American and White. The significant F Probability

of .042 in the Intellectual Achievement Responsibility internal positive showed that there is a very small difference which was not possible to determine by Scheffe's post-hoc procedure in the three combinations (a) Mexican-American versus White; (b) Black versus White; and (c) Black versus Mexican-American.

The negative section of the Intellectual Achievement Responsibility showed no significant differences between Black, Mexican-American or Whites in the negative things or failures that happened to the individual.

In the I-E Scale no differences are shown in the internal or external control of reinforcement which the individual experiences regardless of minority status.

The analysis of variance for IARIM indicated that there were no significant differences among the groups (Table 4.4).

The analysis of variance for ROTE I indicated that there were no significant differences among the groups (Table 4.5).

TABLE 4.4.--Analysis of variance of Intellectual Achievement Responsibility Internal Negative (IARIM) minority status.

Sources	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	.6556	.078	.925
Within Groups	109	8.4441		
TOTAL	111			

Group	Count	Mean	Standard Deviation
Black	38	10.6842	2.7618
Mex-Am	28	10.7857	2.6577
White	46	10.5217	3.1534
TOTAL	112		

TABLE 4.5.--Analysis of variance for I-E Scale Internal section by minority status.

Sources	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	.4394	.085	.919
Within Groups	109	5.1714		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
Black	38	12.1316	2.1203
Mex-Am	28	12.1429	1.8800
White	46	11.9565	2.5902
TOTAL	112	12.0625	

TABLE 4.6.--Frequency and percentage results from student responses to the IAR and I-E Scale questionnaires, by minority status, grades and gender.

	Total Number of Students	IAR		IAR		IAR%	I-E%
		Internal	External	Internal	External	Internal	Internal
Minority Status							
Black	38	38	0	27	11	100	71.0
Mex-Am.	28	28	0	14	14	100	50.0
White	46	45	1	29	17	97.8	63.0
Grade							
4th	39	39	0	22	17	100	56.4
5th	32	32	0	16	16	100	50.0
6th	41	41	0	31	10	100	75.6
Gender							
Boys	63	63	0	38	25	100	60.3
Girls	49	49	0	28	21	100	57.1

Null Hypothesis II

There will be no difference between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement given by students of the 4th, 5th, and 6th grades.

The analysis of variance for IARI, IARIP, IARIM, indicated that there were significant differences among the groups. When analyzed by the ROTE I scale, however, the analysis indicated that there were no significant differences among the groups.

TABLE 4.7.--Analysis of variance of Intellectual Achievement Responsibility Internal (IARI), by grade.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	183.7039	10.555	.0001
Within Groups	109	17.4051		(Test is significant)
TOTAL	111			

Grade	Count	Mean	Standard Deviation
4th	39	20.7436	4.1531
5th	32	23.4063	4.9309
6th	41	25.0000	3.4928
TOTAL	112		

TABLE 4.8.--Scheffe's confidence interval for the Intellectual Responsibility Internal by grade.

Contrast	Estimates of Difference	Interval	Decision .05
$\hat{\psi}_1 = \bar{X}_5 - \bar{X}_6$	-1.5937	-1.5937 ± 2.44	not significant
$\hat{\psi}_2 = \bar{X}_4 - \bar{X}_6$	-4.2564	-4.2564 ± 2.314	significant
$\hat{\psi}_3 = \bar{X}_4 - \bar{X}_5$	-2.6630	-2.6630 ± .5910	not significant

TABLE 4.9.--Analysis of variance of Intellectual Achievement Responsibility Internal Positive (IARIP) by grade.

Sources	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	41.2955	8.450	.0001
Within Groups	109	4.8870		Significant
TOTAL	111			

Grade	Count	Mean	Standard Deviations
4th	39	11.3077	2.4296
5th	32	12.6250	2.3383
6th	41	13.3171	1.8633
TOTAL	112		

TABLE 4.10.--Scheffe's confidence interval for the Intellectual Responsibility Internal Positive by grade.

Contrast	Estimates of Difference	Interval	Decision .05
$\hat{\psi}_1 = \overline{X}_5 - \overline{X}_6$	- .6921	- .6921 ± 1.2926	not significant
$\hat{\psi}_2 = \overline{X}_4 - \overline{X}_6$	-2.0094	-2.0094 ± 1.2261	significant
$\hat{\psi}_3 = \overline{X}_4 - \overline{X}_5$	-1.3173	-1.3173 ± 1.3065	significant

TABLE 4.11.--Analysis of variance of Intellectual Achievement Responsibility Internal Negative (IARIM) by grade.

Sources	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	50.8889	6.765	.002
Within Groups	109	7.5224		(Test is significant)
TOTAL	111			

Grade	Count	Mean	Standard Deviation
4th	39	9.4359	2.6437
5th	32	10.7813	3.3092
6th	41	11.6829	2.3177
TOTAL	112		

TABLE 4.12.--Scheffe's confidence interval for the Intellectual Responsibility Internal Negative by grade.

Contrast	Estimates of Difference	Interval	Decision .05
$\hat{\psi}_1 = \overline{X}_5 - \overline{X}_6$	- .9016	- .9016 ± 1.6036	not significant
$\hat{\psi}_2 = \overline{X}_4 - \overline{X}_6$	-2.2470	-2.2470 ± 1.5212	significant
$\hat{\psi}_3 = \overline{X}_4 - \overline{X}_5$	-1.3454	-1.3454 ± 1.6209	not significant

TABLE 4.13.--Analysis of variance for I-E Scale Internal section by grade.

Sources	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	2.3543	.458	.634
Within Groups	109	5.1363		(Test is not significant)
TOTAL	111			

Grade	Count	Mean	Standard Deviation
4th	39	12.0514	2.1515
5th	32	11.7813	2.6118
6th	41	12.2927	2.0766
TOTAL	112		

It was possible to reject the null hypothesis in reference to the control of reinforcement given by the 4th, 5th and 6th grade students of a Midwestern elementary school. The significant F Probability of .0001 in the Intellectual Achievement Responsibility Internal; the .0001 F Probability in the Intellectual Achievement Responsibility Internal Positive; the .002 F Probability in the Intellectual Achievement Responsibility Internal Negative, showed that there is a difference among this group in the number of choices made by the 4th, 5th or 6th graders in the internal-external control of reinforcement scales.

In the I-E Scale no differences are shown in the internal or external control of reinforcement which the individual experiences regardless of 4th, 5th or 6th grade.

Table 4.7 indicates that a 6th grader is more internal than a 4th grader. The question arises then as to whether this internality is positive or negative. To discover the answer to this we used Scheffe's Confidence Interval. Table 4.8 shows that the 6th grader is more internal positive than a 5th grader and the 5th grader is more internal positive than a 4th grader.

Table 4.9 shows that the 6th grader is more internal negative than the 4th grader.

Null Hypothesis III

There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement among males and females.

TABLE 4.14.--Analysis of variance of Internal Achievement Responsibility Internal (IARI), by gender.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	20.7893	1.019	.315
Within Groups	110	20.3979		(Test is not significant)
TOTAL	111			

Gender	Count	Mean	Standard Deviation
Male	63	22.6825	4.4061
Female	49	23.5510	4.6550
TOTAL	112		

TABLE 4.15.--Analysis of variance of Internal Achievement Responsibility Internal Positive (IARIP)

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	1.5035	.269	.605
Within Groups	110	5.5798		(Test is not significant)
TOTAL	111			

Gender	Count	Mean	Standard Deviation
Male	63	12.3174	2.4680
Female	49	12.5510	2.2179
TOTAL	112		

TABLE 4.16.--Analysis of variance of Internal Achievement Responsibility Internal Negative (IARIM), by gender.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	11.1111	1.342	.249
Within Groups	110	8.2782		(Test is not significant)
TOTAL	112			

Gender	Count	Mean	Standard Deviation
Male	63	10.3651	2.5984
Female	49	11.0000	3.2016
TOTAL	112		

TABLE 4.17.--Analysis of variance for I-E Scale Internal section by gender.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	6.1906	1.220	.272
Within Groups	110	5.0761		(Test is not significant)
TOTAL	111			

Gender	Count	Mean	Standard Deviation
Male	63	12.2698	2.4443
Female	49	11.7959	1.9788
TOTAL	112		

The .315 F Probability in the variable IARI, the .605 F Probability in the variable IARIP, the .249 F Probability in the variable IARIM, and the .272 F Probability in the variable ROTE I, were found to be not significant.

It was not possible to reject the null hypothesis in reference to the control of reinforcement given by males and females, among Blacks, Mexican-Americans or Whites in the 4th, 5th or 6th grades. The F Probability of the dependent variable was not significant to determine if being male or female made any difference in the number of choices the student made in the internal-external control of reinforcement scales.

The I-E Scale showed no difference in the internal-external control of reinforcement which the individual experienced based on gender. The number of males included in this study was 63, and the number of females was 49 making a total of 112.

Null Hypothesis IV

There will be no difference between the mean scores on the dependent variables of interest measuring varying aspects of the internal-external control of reinforcement in relationship to the number of members in the family.

TABLE 4.18.--Analysis of variance of Internal Achievement Responsibility Internal (IARI), by number of members in the family.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	3	4.6349	.220	.883
Within Groups	106	21.1138		(Test is not significant)
TOTAL	109			

Group	Count	Mean	Standard Deviation
GRP 1	11	22.7273	4.3839
GRP 2	17	23.7647	4.1008
GRP 3	16	23.2500	4.6901
GRP 4	66	22.8182	4.6901
TOTAL	110		

TABLE 4.19.--Analysis of variance of Internal Achievement Responsibility Internal Positive (IARIP), by number of members in the family.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	3	5.2296	.935	.426
Within Groups	106	5.5916		(Test is not significant)
TOTAL	109			

Group	Count	Mean	Standard Deviation
GRP 1	11	12.1818	2.2724
GRP 2	17	13.1765	1.7405
GRP 3	16	12.6875	2.2426
GRP 4	66	12.1667	2.5334
TOTAL	110		

TABLE 4.20.--Analysis of variance of Internal Achievement Responsibility Internal Negative (IARIM).

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	3	.0655	.008	.000
Within Groups	106	8.5827		(Test is not significant)
TOTAL	109			

Group	Count	Mean	Standard Deviation
GRP 1	11	10.5455	2.8762
GRP 2	17	10.5882	3.0631
GRP 3	16	10.5625	3.0325
GRP 4	66	10.6515	2.8796
TOTAL	110		

TABLE 4.21.--Analysis of variance for I-E Scale Internal section by number of members in the family.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	3	1.1207	.215	.886
Within Groups	106	5.2050		(Test is not significant)
TOTAL	109			

Group	Count	Mean	Standard Deviation
GRP 1	11	12.3636	2.2923
GRP 2	17	12.3529	2.5234
FRP 3	16	12.1875	2.2867
GRP 4	66	11.9545	2.2149
TOTAL	110		

There are four groups included in this study; the first group is composed of 1 or 2 children in the family. It was impossible to form a group of only one child in the family because only three such families existed in the school. The second group was composed of 3 children in the family. The third group was composed of 4 children in the family and the last group was made up of 5 or more children in the family.

The .883 F Probability in the variable IARI, the .426 F Probability in the variable IARIP, the .999 F Probability in the variable IARIM, and the .886 F Probability in the variable ROTE I, were found to be not significant.

It was not possible to reject the null hypothesis in reference to the control of reinforcement given by Blacks, Mexican-American, and Whites based on the number of family members. The F Probability of the dependent variable was not significant to determine if the number of members in the family made any difference in the number of choices the student made in the internal-external control of reinforcement scales.

The I-E Scale showed no difference in the internal-external control of reinforcement which the individual experienced based on the number of members of the family.

Null Hypothesis V

There will be no differences between the mean scores on the dependent variables of interest measuring varying aspects of the internal-external control of reinforcement according to the ordinal position of the family.

TABLE 4.22.--Analysis of variance of Intellectual Achievement Responsibility Internal (IARI), by ordinal position in the family.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	4	8.1922	.393	.813
Within Groups	107	20.8579		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
GRP 0	28	23.1429	4.2314
GRP 1	31	23.5484	4.6176
GRP 2	22	22.0455	3.9818
GRP 3	15	23.4667	5.8660
GRP 4	16	23.0000	4.4272
TOTAL	112		

TABLE 4.23.--Analysis of variance of Internal Achievement Responsibility Internal Positive (IARIP), by ordinal position in the family.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	4	4.4300	.793	.532
Within Groups	107	5.5846		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
GRP 0	38	12.4286	2.1331
GRP 1	31	12.8387	2.2818
GRP 2	22	11.6818	2.0560
GRP 3	15	12.5333	3.1818
GRP 4	16	12.5000	2.4221
TOTAL	112		

TABLE 4.24.--Analysis of variance of Internal Achievement Responsibility Internal Negative (IARIM)

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	4	.8972	.105	.981
Within Groups	107	8.5806		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
GRP 0	28	10.7143	2.9672
GRP 1	31	10.7097	2.8071
GRP 2	22	10.3636	2.6823
GRP 3	15	10.9333	3.3051
GRP 4	16	10.5000	3.0551
TOTAL	112		

TABLE 4.25.--Analysis of variance for I-E Scale Internal section by ordinal position in the family.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	4	3.9806	.776	.543 (Test is not significant)
Within Groups	107	5.1275		
TOTAL	111			

Group	Count	Mean	Standard Deviation
GRP 0	28	11.9643	2.4111
GRP 1	31	12.3226	2.6254
GRP 2	22	11.9091	1.9496
GRP 3	15	12.6667	2.1931
GRP 4	16	11.3750	1.5864
TOTAL	112		

There are five groups included in this study. The first group (GRP 0) is composed of 28 students who were the first born in the family. There were 31 students who were born second in the family (GRP 1). The third group was composed of 22 students who were the third child in the family (GRP 2). The fourth group was composed of 15 students who were the fourth in the family (GRP 3), and lastly, 16 students who were the fifth or last in the family (GRP 4).

The .813 F Probability in the variable IARI, the .523 F Probability in the variable IARIP, the .981 F Probability in the variable IARIM, and the .543 F

Probability in the variable ROTE I, were found to be not significant.

It was not possible to reject the null hypothesis in reference to the control of reinforcement given by Blacks, Mexican Americans and Whites, based on the ordinal position in the family. The F Probability of the dependent variable was not significant to determine if the ordinal position in the family made any difference in the number of choices the student made in the internal-external control of reinforcement scales.

The I-E Scale showed no difference in the internal-external control of reinforcement which the individual experienced based on the ordinal position in the family.

Null Hypothesis VI

There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of times the student has visited the elementary school counselor.

TABLE 4.26.--Analysis of variance of Intellectual Achievement Responsibility Internal (IARI), by number of times the student has visited the elementary school counselor.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	4	38.3520	1.944	.108
Within Groups	107	19.7304		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
GRP 0	9	23.6667	3.2016
GRP 1	23	22.3478	4.9691
GRP 2	30	23.3667	3.9522
GRP 3	16	25.5000	4.6619
GRP 4	34	21.9706	4.6285
TOTAL	112		

TABLE 4.27.--Analysis of variance of Internal Achievement Responsibility Internal Positive (IARIP), by the number of times the student has visited the elementary school counselor.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	4	7.7759	1.424	.231
Within Groups	107	5.4596		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
GRP 0	9	12.2222	1.7159
GRP 1	23	11.8696	2.7354
GRP 2	30	12.4000	2.1592
GRP 3	16	13.6250	2.1252
GRP 4	34	12.2941	2.4187
TOTAL	112		

TABLE 4.28.--Analysis of variance of Internal Achievement Responsibility Internal Negative (IARIM).

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	4	16.3988	2.050	.093
Within Groups	107	8.0011		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
GRP 0	9	11.4444	2.3511
GRP 1	23	10.4783	2.8742
GRP 2	30	10.9667	2.8343
GRP 3	16	11.8750	3.0741
GRP 4	34	9.6765	2.7822
TOTAL	112		

TABLE 4.29.--Analysis of variance for I-E Scale Internal section by the number of times the student has visited the elementary school counselor.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	4	9.0019	1.822	.130
Within Groups	107	4.9398		(Test is not significant)
TOTAL	111			

Group	Count	Mean	Standard Deviation
GRP 0	9	11.1111	2.2608
GRP 1	23	11.2609	2.4535
GRP 2	30	12.6333	2.2816
GRP 3	16	12.5000	1.7127
GRP 4	34	12.1471	2.2037
TOTAL	112		

There are five groups in this study. There were 9 students who had never visited the counselor which composed group 0. Group 1 was composed of 23 students who had visited the counselor one time. Group 2 was composed of 30 students who had visited the counselor two times. Group 3 was composed of 16 students who had visited the counselor three times. The last group (4) was composed of 34 students who had visited the counselor four times or more.

The .108 F Probability in the variable IARI, the .231 F Probability in the variable IARIP, the .093 F Probability in the variable IARIM, and the .130 F Probability in the variable ROTE I, were found to be not significant.

It was not possible to reject the null hypothesis in reference to the control of reinforcement given by Blacks, Mexican-Americans and Whites, based on the number of times the student has visited the elementary school counselor. The F Probability of dependent variables was not significant to determine if the number of times the student has visited the elementary school counselor made any difference in the number of choices the student made in the internal-external control of reinforcement scales.

The I-E Scale showed no difference in the internal-external control of reinforcement which the individual experienced based on the number of times he visited the counselor.

Null Hypothesis VII

There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of Black teachers the student has had since Kindergarten.

TABLE 4.30.--Analysis of variance of Intellectual Achievement Responsibility Internal (IARI), by the number of Black teachers the student has had since Kindergarten.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	6.9359	.385	.537 (Test is not significant)
Within Groups	71	18.0343		
TOTAL	72			

Group[a]	Count	Mean	Standard Deviation
5th grade	27	24.7037	3.8612
6th grade	46	24.0652	4.4542
TOTAL	73		

[a]None of the 4th grade students have had a Black teacher since Kindergarten.

TABLE 4.31.--Analysis of variance of Internal Achievement Responsibility Internal Positive (IARIP), by the number of Black teachers the student has had since Kindergarten.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	.3301	.074	.786
Within Groups	71	4.4599		(Test is not significant)
TOTAL	72			

Group	Count	Mean	Standard Deviation
5th grade	27	12.9259	2.0926
6th grade	46	13.0652	2.122

TABLE 4.32.--Analysis of variance of Internal Achievement Responsibility Internal Negative (IARIM).

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	10.2922	1.308	.257
Within Groups	71	7.8685		(Test is not significant)
TOTAL	72			

Group	Count	Mean	Standard Deviation
5th grade	27	11.7778	2.5770
6th grade	46	11.0000	2.9288
TOTAL	73		

TABLE 4.33.--Analysis of variance for I-E Scale Internal section by the number of Black teachers the student has had since Kindergarten.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	13.4917	2.553	.115
Within Groups	71	5.2840		(Test is not significant)
TOTAL	72			

Group	Count	Mean	Standard Deviation
5th grade	27	12.6296	2.0220
6th grade	46	11.7391	2.4444
TOTAL	73		

The .537 F Probability in the variable IARI, the .786 F Probability in the variable IARIP, the .257 F Probability in the variable IARIM, and the .115 F Probability in the ROTE I, were found to be not significant.

It was not possible to reject the null hypothesis in reference to the control of reinforcement given by Blacks, Mexican-Americans and Whites, based on the number of Black teachers the student has had since Kindergarten.

The F Probability of dependent variables was not significant to determine if the number of Black

teachers made any difference in the number of choices the student made in the internal-external control of reinforcement scales.

The I-E Scale showed no difference in the internal-external control of reinforcement which the individual experienced based on the number of Black teachers the student has had.

Null Hypothesis VIII

There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement based on the number of Mexican-American teachers the student has had since Kindergarten.

TABLE 4.34.--Analysis of variance of Intellectual Achievement Responsibility Internal (IARI), by the number of Mexican-American teachers the student has had since Kindergarten.[a]

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	57.5076	2.611	.091
Within Groups	29	22.0243		(Test is not significant)
TOTAL	31			

Group	Count	Mean	Standard Deviation
4th grade	14	24.5714	4.4130
5th grade	10	20.6000	6.4498
6th grade	8	24.8750	4.0156
TOTAL	32		

[a]There are 81 students at the present time who do not have any contact with the visiting Mexican-American teacher.

TABLE 4.35.--Analysis of variance of Internal Achievement Responsibility Internal Positive (IARIP), by the number of Mexican-American teachers the student has had since Kindergarten.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	4.6339	.839	.442
Within Groups	29	5.5252		(Test is not significant)
TOTAL	31			

Group	Count	Mean	Standard Deviation
4th grade	14	13.2143	2.0069
5th grade	10	12.0000	2.5386
6th grade	8	12.3750	2.6693
TOTAL	32		

TABLE 4.36.--Analysis of variance of Internal Achievement Responsibility Internal Negative (IARIM).

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	37.9272	4.172	.026
Within Groups	29	9.0901		(Test is significant)
TOTAL	31			

Group	Count	Mean	Standard Deviation
4th grade	14	11.3571	2.3732
5th grade	10	8.6000	4.1952
6th grade	8	12.5000	2.1381
TOTAL	32		

TABLE 4.37.--Analysis of variance for I-E Scale Internal section by the number of Mexican-American teachers the student has had since Kindergarten.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	2	10.7397	1.639	.212
Within Groups	29	6.5514		(Test is not significant)
TOTAL	31			

Group	Count	Mean	Standard Deviation
4th grade	14	12.1429	2.8516
5th grade	10	10.6000	2.8752
6th grade	8	12.6250	1.1877
TOTAL	32		

Neither the .091 F Probability in the variable IARI, nor the .442 F Probability in the variable IARIP is significant. The .026 F Probability in the variable IARIM is significant. This probability came from the answers of the 10 students in the 5th grade. It is not the purpose of this study to investigate the reasons for this. The .212 F Probability in the ROTE I was found to be not significant.

It was not possible to reject the null hypothesis in reference to the control of reinforcement given by Blacks, Mexican-Americans and Whites, based on the number of Mexican-American teachers the student has had since

Kindergarten. The F Probability of dependent variables was not significant to determine if the number of Mexican-American teachers made any difference in the number of choices the student made in the internal-external control of reinforcement scales.

The I-E Scale showed no difference in the internal-external control of reinforcement which the individual experienced based on the number of Mexican-American teachers the student had.

Null Hypothesis IX

> There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of White teachers the student has had since Kindergarten.

With reference to Table 4.38, the total number of students studied in this sample is 112. These 112 students were from the 4th, 5th and 6th grades, all of whom have had White teachers since Kindergarten. Consequently, there was no opportunity to compare students who have had with those who have not had White teachers. Due to this fact the answers given to the control of reinforcement in reference to White teachers could not be demonstrated for this study.

TABLE 4.38.--Number of Black, Mexican-American and White teachers the minority student has had since Kindergarten.

Grade	Total No. of Students	Students Who Have Had Black Teachers	Students Who Have Had Mex-Am. Teachers	Students Who Have Had White Teachers
4th	39	0	14	39
5th	32	27	10	32
6th	41	46	8	41
TOTALS	112	73	32	112

Null Hypothesis X

There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the fact that the student lives with both parents or a single parent.

TABLE 4.39.--Analysis of variance of Intellectual Achievement Responsibility Internal (IARI), by the fact that the student lives with both parents or a single parent.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	9.7257	.472	.493
Within Groups	109	20.5998		(Test not significant)
TOTAL	110			

Group	Count	Mean	Standard Deviation
Both Parents	79	23.2785	4.6738
Single Parent	33	22.6250	4.1794
TOTAL	112		

TABLE 4.40.--Analysis of variance of Internal Achievement Responsibility Internal Positive (IARIP), by the fact that the student lives with both parents or a single parent.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	1.3523	.240	.625
Within Groups	109	5.6307		(Test is not significant)
TOTAL	110			

Group	Count	Mean	Standard Deviation
Both Parents	79	12.4937	2.3744
Single Parent	33	12.2500	2.3692
TOTAL	112		

TABLE 4.41.--Analysis of variance of Internal Achievement Responsibility Internal Negative (IARIM).

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	3.8249	.458	.500
Within Groups	109	8.3563		(Test is not significant)
TOTAL	110			

Group	Count	Mean	Standard Deviation
Both Parents	79	10.7848	2.9555
Single Parent	33	10.3750	2.7209
TOTAL	112		

TABLE 4.42.--Analysis of variance for I-E Scale Internal section by the fact that the student lives with both parents or a single parent.

Source	Degrees of Freedom	Mean Squares	F Ratio	F Probability
Between Groups	1	.2036	.040	.842
Within Groups	109	4.0977		(Test is not significant)
TOTAL	110			

Group	Count	Mean	Standard Deviation
Both Parents	79	12.0633	2.3553
Single Parent	33	11.9688	1.9917
TOTAL	112		

The .493 F Probability in the variable IARI, the .625 F Probability in the variable IARIP, the .500 F Probability in the variable IARIM, and the .842 F Probability in the ROTE I, were found to be not significant.

It was not possible to reject the null hypothesis in reference to the control of reinforcement given by students living with both parents or a single parent among the Blacks, Mexican-Americans or Whites in the 4th, 5th or 6th grades of Midwestern elementary school. The F Probability of the dependent variable was not significant to determine if living with both parents or a single parent had any influence on the number of choices the student

made in the internal-external control of reinforcement scales.

The I-E Scale showed no difference in the internal-external control of reinforcement which the individuals experienced based on whether or not they lived with both parents or a single parent. The number of students living with both parents was 79, and the number of students living with mother only was 32, and with father only was 1, making a total of 112.

CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

This final chapter will be devoted to a summary of the study, a report and discussion of the findings, conclusions and recommendations for further research.

Summary

Purposes of the Study

1. The major purpose of this study was to examine the perceptions of minority children concerning whether their intellectual achievement development is internally controlled or externally controlled. To achieve this purpose the Intellectual Achievement Responsibility (IAR) Questionnaire and the I-E (internal-external) Scale were used.

2. The second purpose of this investigation was to examine whether some independent variables such as ethnicity, gender, or grade in school, could be measured by both the I-E and the IAR with comparable results.

3. An additional purpose was to determine if any of the following variables were related to internal-external control of reinforcement:

a. student's minority status
b. grade level
c. gender
d. number of children and ordinal position
e. counselor influence
f. teacher's minority status
g. whether the student lives with both parents or with a single parent.

In order to explore these related purposes, ten hypotheses were developed. These will be discussed later in this chapter under Conclusions.

Limitations of the Study

1. This study was limited to the 4th, 5th and 6th grades of a Midwestern elementary school. Students in grades K-3 were not considered for this study due to their inability to read and understand the questions and directions demanded by the instruments used.

2. The study does consider the socioeconomic status of the student since the area in which the school is located is classified as a lower income area.

Review of Literature

The review of literature in the area of reinforcement indicated that reinforcement is usually of external nature. This external nature is provided by significant others, usually teachers, parents, adults and peers. The review of literature in the area of internal versus external control indicated that whoever controls the reinforcement has influence over the

internality or externality of the student. The review of literature in the area of culture indicated that at this stage of development there is not a marked difference between the 4th, 5th and 6th graders.

Design of the Study

The Sample.--The sample from which this study was made consisted of 4th, 5th and 6th grade students from a Midwestern elementary school located in a low socio-economic area.

Instrumentation.--Two instruments were used to measure the internal-external control of reinforcement: the Intellectual Achievement Responsibility Questionnaire (IAR), and the Internal versus External control of reinforcement (the I-E Scale). The Intellectual Achievement Responsibility Questionnaire (IAR) assesses whether or not an individual perceives himself as the controlling agent of reinforcement. The IAR was developed especially to assess children's beliefs that they, rather than other people, are responsible for their intellectual-academic successes and failures. The Internal versus External control of reinforcement (the I-E Scale) assesses the effects of reward or reinforcement on preceding behavior that depend in part on whether persons perceive the reward as a contingent on their own behavior or independent of it.

Procedure.--The questions were tape recorded so that each child was presented verbal stimuli which had the same inflections, tone, and rate. The responses were marked on an answer sheet which had I+ and I- choices. The instructions presented in the oral administration requested the students to pick the answer "that best describes what happens to how you feel." The child was told that there were no right or wrong answers and was assured that the responses would not be revealed to anyone else.

Analysis.--The ten statistical hypotheses were tested by analysis of variance and appropriate Scheffe' comparisons.

Findings

The following findings have been generated from analysis of the data:

Hypothesis I:
There will be no difference between the mean scores on measuring varying aspects of the internal-external control of reinforcement given by Blacks, Mexican-Americans and Whites.

Findings

The first hypothesis deals with the relationship the minority status has upon internal versus external control of reinforcement. The analysis of variance of the aforementioned groups showed a small difference which

could not be proven significant by the Scheffe' method. Making a comparison in the percent of questions answered on the IAR there is no marked difference, but the I-E Scale shows some differences among the groups (see Table 4.6).

Discussion

Standards and level of achievement situations are thought to be lower in schools attended by minority children of low socioeconomic level. It is necessary to improve not just the educational level of Black children, but that of all underprivileged Mexican-American and White children. Ethnicity does not appear to be related to achievement motivation in minority children.

What is apparently necessary is to provide minority children with confidence (which is one of the characteristics of the internal person), to stimulate their interest, and provide them with educational and vocational goals that, to them, seem possible to attain.

Hypothesis II:

There will be no difference between the mean scores on the independent variables of interest measuring varying aspects of internal-external control of reinforcement given by students of the 4th, 5th and 6th grades.

Findings

In the analysis of the data it was found that the 6th grader is more internal than the 5th grader, but the 5th grader is less internal than the 4th grader, but in the I-E Scale only. The question arises then as to whether this internality is positive or negative. To discover the answer to this question the Scheffe's Confidence Internal method was used. This method showed that the 6th grader is more internal positive than the 5th grader and the 5th grader is less internal positive than the 4th grader.

Discussion

The disconfirmation of Hypothesis II indicates that the grade in which the student is has influence on the way he/she will answer the questions of internal or external control. The trend is actually for the 6th grader to be more internal than the students of 4th and 5th grades. The interesting point is that the 5th grader is supposed to be more internal than the 4th grader, but that is not the case in this study. The 5th grader is less internal than the 4th grader. Consequently, it is not a sequence of internality that follows a pattern of 4th, 5th and 6th grades. Perhaps the origin of self-responsibility for intellectual activities occurs even earlier than 4th grade and might indicate that parents

and teachers attempt to promote and encourage a belief in personal responsibility for intellectual academic success in spite of the grade.

Hypothesis III:

There will be no differences between the mean scores on the independent variables of interest measuring varying aspects of the internal-external control of reinforcement among boys and girls.

Findings

There was not a marked difference in the way boys and girls responded to the IAR questionnaire and the I-E Scale. In the IAR scale both boys and girls answered in identical form; the only perceived differences in percentage was in the I-E Scale. This difference was minimal: 60% of the boys were internal and 57% of the girls were internal.

Discussion

This finding suggests that the approach to the achievement situation was not directly related to the gender of the student, but implied internality or externality was a personal characteristic. There are certain roles established by culture which result in the expectation that the male will be more aggressive than the female. Sometimes the same society expects the male child to be as obedient and passive as the female child. This is a cultural paradox. What a boy can do in

internal development toward achievement the girl is also able to do, not only able but with equal capabilities of decision making, confidence and self-responsibility as the boy. It must be accepted then as a conclusion in this study that when boys and girls are compared they are equally positive and confident about themselves and that gender is not the determinant factor in internality or externality. These findings agree with Crandall et al. who revealed in their studies that there is no significant change in internality in general from 3rd grade to 6th grade for either of the sexes nor for boys and girls together.

Hypothesis IV

There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement in relationship to the number of members in the family.

Findings

The answers given to the IAR and I-E Scale by students who belong to a family composed of 1 or 2 children and those families with 5 or more children were not distinguishably different. In the analysis of variance of these groups there was a small difference which could not be proven significant. The number of students who belong to 1 or 2 children families is 11, the students who belong to 5 or more children families is 66.

Discussion

This finding indicates that the number of members in the family was not related to the number of choices the student made in the internal-external control of reinforcement. In the study done in this school the majority of families had 5 or more children which could be a factor in not being able to assume that the number of members in the family is a determinant variable in the internality or externality of the child.

Hypothesis V

There will be no differences between the mean scores on the independent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the ordinal position of the child in the family.

Findings

In this study it was attempted to discover if the first born child was more internal than the later-born. It is often believed that the first born accepts responsibility for the younger children, which in turn will make the oldest child more internal. This assumption could not be demonstrated with the instruments used. There were 28 students who were first born and 16 were the last born, with a total of 68 students between these two groups.

Discussion

Not only were first-born children more often placed in positions of responsibility for household affairs and for their own conduct, they were often put in charge of younger siblings as well. Thus, eldest children come to observe both the consequences of their actions upon the welfare of their young siblings and of the total family unit. In contrast, later-born children were often told that their older brother or sister "will take care of you," allowing them to assume that they were less responsible for their own actions. From most personality theories and from common observations it is believed that the older child presumably is more internal than the younger children, yet this could not be demonstrated by this study.

Hypothesis VI:

There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of times the student has visited the elementary school counselor.

Findings

This hypothesis deals with the number of times the student visited the counselor. There were five groups in this study. There were 9 students who had never visited the counselor which composed Group 0. Group 1 was

composed of 23 students who had visited the counselor one time. Group 2 was composed of 30 students who had visited the counselor two times. Group 3 was composed of 16 students who had visited the counselor three times. The last group was composed of 34 students who had visited the counselor four times. The I-E Scale of internal-external control of reinforcement showed no difference in the individuals' responses based on the number of times they had visited the counselor. The highest number of times a student visited a counselor was four times and each consultation was 30 minutes, which makes a total of two hours. The F Probability of dependent variables was not significant to determine if the number of times the student had visited the elementary school counselor made any difference in the number of choices the student made in the internal-external control of reinforcement scales. The I-E Scale showed no difference in the internal-external control of reinforcement which the individual experienced based on the number of times he visited the counselor.

Discussion

From the results of this study one would conclude that how many times the student visited the counselor was not related as far as internal-external control of reinforcement was concerned. The relationship between

the counselor and the minority child was on a one-to-one basis in which apparently the student was developing toward internality (self-confidence, positive attitude). The crucial point was when the student returned to the classroom he apparently regressed to the point of externality. To remedy this situation or to direct the student toward internality on a more permanent basis a new program was developed in which the student and the counselor will interact not only on a one-to-one basis, small group interaction, but also in classroom performance.

The next three hypotheses will be discussed together since they refer to the teacher minority status.

Hypothesis VII:
There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of Black teachers the student has had since Kindergarten.

Hypothesis VIII:
There will be no difference between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of Mexican-American teachers the student has had since Kindergarten.

Hypothesis IX:
There will be no differences between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the number of White teachers the student has had since Kindergarten.

Findings

The above three hypotheses deal with the number of Black, Mexican-American and White teachers the student has had since Kindergarten. The analysis of variance in the internal versus external control of reinforcement and the Intellectual Achievement Responsibility (pp. 77, 80, 83) show that there was no relationship between the number of choices the student made in the internal-external control of reinforcement scales and the minority status of the teacher.

Discussion

From the results of this study one would conclude that it made no difference how many teachers of different minority status the student has had as far as internal-external control of reinforcement was concerned. Apparently one crucial point of this study could be that the student does not identify with the color of the skin of the teacher but perhaps with the interest, attitude and concern that this teacher presents toward the development of the ability of the student. Students are not looking toward matching or comparing colors, but of primary importance would be that the teacher be internally motivated so he can project and transmit this characteristic to his students. The teacher's degree does not specify for "White Only," "Black Only" or "Mexican-American Only."

Hypothesis X

There will be no difference between the mean scores on the dependent variable of interest measuring varying aspects of the internal-external control of reinforcement according to the fact that the student lives with both parents or a single parent.

Findings

The number of students living with both parents was 79, and the number of students living with a single parent only was 33, making a total of 112. The F Probability of the dependent variable was not significant to determine if living with both parents or a single parent only made any difference in the number of choices the student made in the internal-external control of reinforcement scales.

Discussion

It would be a difficult assumption to correlate that because the student lived with a single parent or with both parents it is a predominant factor in determining the internal-external control of reinforcement. It could be that living with both parents make the student more secure as far as home environment is concerned, but the fact that he lives with both parents does not automatically determine that the student is self-directed, responsible or that he is responsible for his own successes and failures, which are the marks of an internally directed person.

Conclusions

1. Children from low socioeconomic positions and subjects from different ethnic groups did not differ significantly with regard to their overall level of internal or external control of reinforcement.

2. When boys and girls were compared the boys did not reflect a higher percentage of internality than the girls.

3. Ethnic distributions appear to be less useful than the cross-ethnic descriptor such as socioeconomic status.

4. The answers given by the minority students to the I-E Scale have a wider range of scores between external and internal control of reinforcement than the answers given to the IAR.

5. Whether the student lives with both parents or a single one was not related to externality or internality.

Limitations and Suggestions for Further Research

Technically, the results of this investigation are limited to the 112 students who made up the sample used. Careful generalization may be made, however, to any population of subjects in similar social conditions to those tested in this investigation. This limits

generalizability to low socioeconomic 4th, 5th and 6th grade students of elementary school.

This is an exploratory study which raised questions regarding differences in school which might influence the internal or external control of reinforcement. Some of these questions are: (1) Can the school teach young children to make reasonably complex judgments concerning their performance in order to determine their own self-reinforcement? (2) Can our achievement-oriented culture prepare the child for self-reinforcement? (3) Can the "significant others" influence the child's self-reinforcement following both success ("self-congratulations") and failure ("self-therapy")? Despite certain limitations, it hopefully can add to the growing body of knowledge on the achievement and motivation of minority students. It also is hoped these results will show that the low socioeconomic White should not be automatically considered to be more internal than minority students in various ethnic groups, and thus have his educational needs not be given the emphasis given other minorities.

Variations of this investigation might include the following actions:

1. Conduct studies of Black, Mexican-American and White students in different school communities to test

what influence socioeconomic status has on the student's internal-external control.

2. Use different grade levels to see if grade level has an effect on the student's school internal-external control, continuing through junior high and senior high school.

3. Compare schools with varying proportions of Black, Mexican-American and White students in the total school population to determine what effect ethnic group school distribution has on the student's control of reinforcement.

4. Replicate this study to investigate belief systems (internal or external) or teachers and pupils in relation to feelings and perception of school work, if it's for the teacher's benefit or the student's internal development.

5. Construct a test of belief systems for primary school children in order to study influence of belief systems on cognitive functioning through the elementary grades. Probably, the lower the grade level, the more critical the teacher's beliefs.

6. Other variables could be considered than the ones made in this study to find different factors which effect internal or external control of reinforcement.

7. A higher number of students in the sample would be useful to run an analysis of interaction among the different groups.

Even though suggested curricular change was not an aim of this study, it appears that special programs should also be implemented for low socioeconomic White, Mexican-Americans and Blacks that would take into account their cultural and language handicaps. The achievement results of Stanford Achievement Tests given last May in the elementary school show that minority students as groups Blacks, Mexican-Americans and Whites are achieving substantially below their grade level.

Reflections

Every individual is born into a community already organized in some such way with specific, positive laws and customs which have grown out of its own peculiar history and circumstances. Children are individuals with their own bodies and own peculiar traits, occupying a unique division of space and time, and subject to divergent influences from surrounding sources. It is inevitable that they will develop ideas of their own, both true and false, and specific tendencies of their own, both sound and unsound, due to differences in sociological or environmental influence.

Children live, study, and play in an environment with a multitude of sources of expectation, some consistent with one another, and some conflicting. To the extent that their own behavior is a response to these expectations, the youngsters are selecting, integrating, and reacting to those aspects of particular significance to them. The sources of expectation may have a direct influence upon their behavior, as when the teacher provides a given learning experience, or a parent provides the children with money. Or they may operate indirectly, when the children consider the expectations which others hold for them, in forming their own self-expectations, and acting accordingly.

The children's self-expectations may reflect both a realistic knowledge of their own abilities, interests, and past achievement, and certain distortions of these. Factors leading to systematic distortion include the reaction of the individual to the environment--that is, to the expectations and reactions of other people--and the individual's level of self-esteem in a particular situation.

One final thought that comes to mind is that the personal judgment of every act that the individual performs is guided by internal or external control. If the person decides it was external, the answer would be in the hands of others. On the other hand, if the decision

was made which was internally directed, then one is responsible for one's own acts. The answer would be more obtainable because it lies within one's self.

Hallowell postulates that:

> . . . no culture frees the infant from the fundamental conflict arising from the biologically rooted impulses on the one hand, and the demands of parents or surrogate parents on the other. But the demands of the parents and the manner in which children are handled are not identical in all societies; hence the crucial importance of the socialization process in relation to the differential strains and stress that account for the personality structure under one set of conditions as compared with another.[1]

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[1]A. Irving Hallowell, Culture and Experience (New York: Schecken Book, 1967), p. 13.

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APPENDIX

APPENDIX

NAME_____

SCHOOL_____

GRADE_____

THE INTELLECTUAL ACADEMIC ACHIEVEMENT RESPONSIBILITY QUESTIONNAIRE

(IAR)

1. If a teacher passes you to the next grade, would it probably be
   ___ a. because she liked you, or
   1+ b. because of the work you did?

2. When you do well on a test at school, is it more likely to be
   1+ a. because you studied for it, or
   ___ b. because the test was especially easy?

3. When you have trouble understanding something in school, is it usually
   ___ a. because the teacher didn't explain it clearly, or
   1- b. because you didn't listen carefully?

4. When you read a story and can't remember much of it, is it usually
   ___ a. because the story wasn't well written, or
   1- b. because you weren't interested in the story?

5. Suppose your parents say you are doing well in school. Is this likely to happen
   1+ a. because your school work is good, or
   ___ b. because they are in a good mood?

6. Suppose you did better than usual in a subject at school. Would it probably happen
   1+ a. because you tried harder, or
   ___ b. because someone helped you?

7. When you lose at a game of cards or checkers, does it usually happen
   ___ a. because the other player is good at the game, or
   1- b. because you don't play well?

8. Suppose a person doesn't think you are very bright or clever.
   1- a. can you make him change his mind if you try to, or
   ___ b. are there some people who will think you're not very 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
   1+ b. because you worked on it carefully?

10. If a boy or girl tells you that you are dumb, is it more likely that they say that
   ___ a. because they are mad at you, or
   1- b. because what you did really wasn't very bright?

11. Suppose you study to become a teacher, scientist, or doctor and you fail. Do you think this would happen
   1- 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 usually
    1+ 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
    1+ b. because you did a good job?

14. When you find it hard to work arithmetic or math problems at school, is it
    1- 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
    1- b. because you didn't try very 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 likely to happen
    ___ a. because she wasn't as particular as usual, or
    1+ b. because you gave the best answer you could think of?

17. When you read a story and remember most of it, is it usually
    ___ 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 more likely to be
    1+ a. because of something you did, or
    ___ b. because they happen to be feeling cranky?

19. When you don't do well on a test at school, is it
    1- a. because the test was especially hard, or
    ___ b. because you didn't study for it?

20. When you win at a game of cards or checkers, does it happen
    1+ a. because you play real well, or
    ___ b. because the other person doesn't play well?

21. If people think you're bright or clever, is it
    ___ a. because they happen to like you, or
    1+ b. because you usually act that way?

22. If a teacher didn't pass you to the next grade, would it probably be
    ___ a. because she "had it in for you," or
    1- b. because your school work wasn't good enough?

23. Suppose you don't do as well as usual in a subject at school. Would this probably happen
I- 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 bright, is it usually
I+ 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
I+ b. because you worked very hard?

26. Suppose your parents say you aren't doing well in your school work. Is this likely to happen more
I- a. because your work isn't very good, or
____ b. because they are feeling cranky?

27. Suppose you are showing a friend how to play a game and he has trouble with it. Would that happen
____ a. because he wasn't able to understand how to play, or
I- b. because you couldn't explain it well?

28. When you find it easy to work arithmetic or math problems at school, is it usually
____ a. because the teacher gave you especially easy problems, or
I+ b. because you studied your book well before you tried them?

29. When you remember something you heard in class, is it usually
I+ 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 more likely to happen
I- a. because you are not especially good at working puzzles, or
____ b. because the instructions weren't written clearly enough?

31. If your parents tell you that you are bright or clever, is it more likely
____ a. because they are feeling good, or
I+ b. because of something you did?

32. Suppose you are explaining how to play a game to a friend and he learns quickly. Would that happen more often
I+ a. because you explained it well, or
____ b. because he was able to understand it?

33. Suppose you'r not sure about the answer to a question your teacher asks you and the answer you give turns out to be wrong. Is it likely to happen

___a. because she was more particular than usual, or

1- b. because you answered too quickly?

34. If a teacher says to you, "Try to do better," would it be

___a. because this is something she might say to get pupils to try harder, or

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

TABLE 1

The I-E Scale with Correlations of Each Item with Total Score, Excluding That Item

Item	Biserial item correlations		
	200 M	200 F	400 M + F
1.a. Children get into trouble because their parents punish them too much.		(Filler)	
b. The trouble with most children nowadays is that their parents are too easy with them.			
2.a. Many of the unhappy things in people's lives are partly due to bad luck.	.265	.250	.260
b. People's misfortunes result from the mistakes they make.			
3.a. One of the major reasons why we have wars is because people don't take enough interest in politics.			
b. There will always be wars, no matter how hard people try to prevent them.	.214	.147	.182
4.a. In the long run people get the respect they deserve in this world.			
b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.	.238	.344	.289
5.a. The idea that teachers are unfair to students is nonsense.			
b. Most students don't realize the extent to which their grades are influenced by accidental happenings.	.230	.131	.179
6.a. Without the right breaks one cannot be an effective leader.	.345	.299	.319
b. Capable people who fail to become leaders have not taken advantage of their opportunities.			
7.a. No matter how hard you try some people just don't like you.	.200	.262	.229
b. People who can't get others to like them don't understand how to get along with others.			
8.a. Heredity plays the major role in determining one's personality.		(Filler)	
b. It is one's experiences in life which determine what they're like.			

TABLE 1-Continued

Item	Biserial item correlations		
	200 M	200 F	400 M + F
9.a. I have often found that what is going to happen will happen.	.152	.172	.164
b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.			
10.a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.			
b. Many times exam questions tend to be so unrelated to course work that studying is really useless.	.227	.252	.238
11.a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.			
b. Getting a good job depends mainly on being in the right place at the right time.	.391	.215	.301
12.a. The average citizen can have an influence in government decisions.			
b. This world is run by the few people in power, and there is not much the little guy can do about it.	.313	.222	.265
13.a. When I make plans, I am almost certain that I can make them work.			
b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.	.252	.285	.271
14.a. There are certain people who are just no good.		(Filler)	
b. There is some good in everybody.			
15.a. In my case getting what I want has little or nothing to do with luck.			
b. Many times we might just as well decide what to do by flipping a coin.	.369	.209	.288
16.a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.	.295	.318	.307
b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.			
17.a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.	.313	.407	.357

TABLE 1-Continued

Item	Biserial item correlations		
	200 M	200 F	400 M + F
b. By taking an active part in political and social affairs the people can control world events.			
18.a. Most people don't realize the extent to which their lives are controlled by accidental happenings.	.258	.362	.310
b. There really is no such thing as "luck."			
19.a. One should always be willing to admit mistakes.		(Filler)	
b. It is usually best to cover up one's mistakes.			
20.a. It is hard to know whether or not a person really likes you.	.255	.307	.271
b. How many friends you have depends upon how nice a person you are.			
21.a. In the long run the bad things that happen to us are balanced by the good ones.	.108	.197	.152
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.			
22.a. With enough effort we can wipe out political corruption.			
b. It is difficult for people to have much control over the things politicians do in office.	.226	.224	.227
23.a. Sometimes I can't understand how teachers arrive at the grades they give.	.275	.248	.255
b. There is a direct connection between how hard I study and the grades I get.			
24.a. A good leader expects people to decide for themselves what they should do.		(Filler)	
b. A good leader makes it clear to everybody what their jobs are.			
25.a. Many times I feel that I have little influence over the things that happen to me.	.521	.440	.480
b. It is impossible for me to believe that chance or luck plays an important role in my life.			
26.a. People are lonely because they don't try to be friendly.			

TABLE 1-Continued

Item	Biserial item correlations		
	200 M	200 F	400 M + F
b. There's not much use in trying too hard to please people, if they like you, they like you.	.179	.227	.195
27.a. There is too much emphasis on athletics in high school.		(Filler)	
b. Team sports are an excellent way to build character.			
28.a. What happens to me is my own doing.			
b. Sometimes I feel that I don't have enough control over the direction my life is taking.	.331	.149	.238
29.a. Most of the time I can't understand why politicians behave the way they do.	.004	.211	.109
b. In the long run the people are responsible for bad government on a national as well as on a local level.			

Note.--Score is number of underlined items.

APPENDIX

CIRCLE YOUR ANSWER

Name: _____ _____ _____
Last First Middle

1. Student's race
   a. Black; b. Mexican-American; c. White
2. Grade level
   a. 4th; b. 5th; c. 6th
3. Sex
   a. Male; b. Female
4. How many children in the family?
   a. 1; b. 2; c. 3; d. 4; e. 5 or more
5. Ordinal position in the family?
   a. 1st; b. 2nd; c. 3rd; d. 4th; e. 5th
6. How many times have you visited the counselor at your school?
   a. 0; b. 1; c. 2; d. 3; e. 4 or more
7. How many Black teachers have you had since Kindergarten?
   a. 0; b. 1; c. 2; d. 3; e. 4 or more
8. How many Mexican-American teachers have you had since Kindergarten?
   a. 0; b. 1; c. 2; d. 3; e. 4 or more
9. How many White teachers have you had since Kindergarten?
   a. 0; b. 1; c. 2; d. 3; e. 4 or more
10. Do you live with both your father and mother or a single parent only?
    a. both; b. a single parent