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THE RELATIONSHIP BETWEEN LOCUS OF CONTROL, ACHIEVEMENT, AND DEMOGRAPHIC VARIABLES AMONG BLACKS IN A PERSONALIZED INSTRUCTIONAL PROGRAM

By

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ABSTRACT

THE RELATIONSHIP BETWEEN LOCUS OF CONTROL, ACHIEVEMENT, AND DEMOGRAPHIC VARIABLES AMONG BLACKS IN A PERSONALIZED INSTRUCTIONAL PROGRAM

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The primary purpose of this study was to determine the relationship between perceived locus of control beliefs, achievement, age, sex, and birth order among blacks in a program of personalized instruction. A secondary objective was to explore the relationship between achievement, age, sex, and birth order.

Locus of control research is derived from the work of Julian Rotter and is couched in his social learning theory which postulates that individuals differ in the way they view their world. According to this construct, at one extreme are internal persons who believe that events take place as the result of their own behavior. At the other end of the continuum are external persons who perceive that they have little or no control over occurrences in their lives. External persons feel that fate, luck, chance, or "powerful others" control their lives.

The 50 subjects participating in this study were black students from low socio-economic backgrounds. All attended a program of personalized instruction in a Midwestern urban industrial city.

A questionnaire consisting of several demographic questions and a 13-item, forced-choice locus of control scale developed for this study was administered to all subjects. Achievement data were obtained from scores received by students on a standardized achievement test.

The statistical tests used to analyze the data were analysis of variance and the chi square technique. All hypotheses were analyzed using an alpha level of .05 to reject the null hypothesis. Since this was a correlational study, no causal inferences could be drawn from its findings.

Some of the major conclusions resulting from this research are as follows:

1. No significant relationship could be found between these black students' perceived locus of control over their environment and their achievement as measured by reading ability

2. Firstborn subjects demonstrated a much higher internality than later-borns on the locus of control measure, and a significant relationship was found to

exist between birth order and the personal beliefs of the subjects

3. Students' ages and their beliefs about personal control did not correlate significantly. However, it was noted that 43 percent of the younger subjects compared to 36 percent of the older subjects did score in the internal direction

4. A greater percentage of males, 45 percent, scored in the internal direction, as compared to 33 percent of the females. No significant correlation between sex and locus of control beliefs was found, however, among these subjects

5. In the area of achievement as measured by reading ability level, no significant relationship was found to exist between birth order and the ability measure. However, contrary to previous studies, it was noted that last-borns were higher in reading ability levels than were the firstborns

6. There was a significant relationship found between the age of subjects and their achievement ability as measured by reading ability level. Furthermore, it was noted that younger students tended to manifest reading abilities considerably higher than older students

7. No significant relationship could be found between the sex of subjects and their achievement as

measured by reading ability. Females in this group did have a slightly higher reading ability level than males.

DEDICATION

To my parents, Mr. and Mrs. John E. May, Jr., for their love, support, encouragement, and most of all their understanding; and to my sister, Sharon Ellen May, for being the best sister a person could ask for; and to the loving memory of my maternal grandmother, Mrs. Sallie Mae Daniels.

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CHAPTER I

THE PROBLEM

Coleman (1966) conducted a national survey which revealed that academic achievement correlated highly with locus of control, especially among black students.

> A pupil attitude factor, which appears to have a stronger relationship to achievement than do all the "school" factors together, is the extent to which an individual feels that he has some control over his own destiny. . . . The responses . . . show that minority pupils, except for Orientals, have far less conviction than whites that they can affect their own environment and futures (Coleman, et al., 1966, p. 23).

Need for the Study

During the past decade, several new teaching methods have been introduced in schools in an attempt to improve student learning. One such innovation is personalized systems of instruction (PSI) (Keller, 1967, 1968) which uses behavior principles. Although the initial testing ground for the PSI methods originated on college campuses, public schools are rapidly incorporating the technique into their delivery systems. Simply put, PSI includes, with possible modifications, the following: (1) individual student pacing; (2) mastery of material

prior to proceeding to the next unit; (3) the use of tutors (both professional and/or student); (4) use of study guides to pass along critical information; and (5) lectures or "rap sessions" for motivation and stimulation rather than for general criticism (Kulik, Kulik, & Carmichael, 1974).

Since Coleman's investigation was focused on students who attended traditional school programs, this present study is undertaken to explore the locus of control beliefs of black students who attend a PSI-designed high school program (see Appendix A for program description).

Purpose of the Study

The purpose of this study is to determine the relationship between perceived locus of control and achievement, age, birth order, and sex. The focus of the study is upon black high school students in a program designed as personalized instruction.

Research Hypothesis

The following research hypothesis was tested:

> Perceived locus of control among black students in a personalized instructional high school program will have a significant relationship to achievement, sex, birth order, and age.

Also explored was the relationship between achievement and sex, age, and birth order.

Theory

The locus of control concept originated in the research of Rotter (1954) and his associates in their efforts to discover the effects of reinforcement in complex learning. According to Rotter, individuals can be defined as externals, possessing external locus of control, if they believe that rewards occur due to luck, fate, chance, or powerful others, and not as the result of their own behavior. In contrast, individuals who see rewards as contingent upon their own behavior are referred to as internals, having an internal locus of control.

Rotter's Social Learning Theory (SLT) provides the theoretical framework for the concept of environment and the effects of reinforcement. SLT focuses on individual behavior by investigating the conditions that affect it. Furthermore, the theory presents a way of discovering what influences behavior, and then focuses upon the relationship of stimuli which might interact with behavior to yield certain consequences.

Individuals respond to their environment according to their past learning and previous experience. For example, attitudes, values, and expectations are the result of learning. Most essential is the interaction of the behavior to the meaningful environment. No clear-cut dichotomy exists between the general and situational cues

(reinforcements) received by persons. Rather than acting independently, the cues (reinforcements) function as a mixture of determinants on the final behavior exhibited.

According to this concept, behavior is viewed as persons either going toward a goal or seeking to avoid certain outcomes in their environment. Thus, any event or outcome can be defined as either a positive or negative reinforcement if it can be shown that the event changes the occurrence potentiality of a given behavior.

Whatever the individual anticipates or expects determines the behavior that occurs. Rotter sees these expectancies as prime determinants of behavior. He defines expectancy as a subjective probability held by an individual that a certain outcome will result from a given behavior. It logically follows that if persons experience success from a past behavior, then it is conceivable that similar behavior will be repeated in the future. Only a change in either the expectancy or the introduction of new successful experiences can alter the behavior pattern.

Locus of control beliefs refer to the way individuals view their successes or failures. This personality dimension has subjective qualities which Rotter calls generalized expectancies because individuals interpret the probabilities of success of failure across related situations.

Of particular interest to this study is the way blacks view their successes or failures in the school environment. Achievement is a complex learning situation, and past learning is a prime determinant for success in this environment.

Studies investigating this theory involving black subjects have suggested that blacks are externals (have an external locus of control), and that for them achievement is correlated to their locus of control beliefs (Battle & Rotter, 1963; Gore & Rotter, 1963; Lefcourt, 1966; Rotter, 1966).

Limitations of the Study

Since the samples used in this study are taken from a single personalized instructional high school program having all black low socio-economic participants, the results cannot be generalized beyond this population. Results generated from this study are subject to the limitations associated with self-report instruments. Finally, this is a correlational study; therefore, no causal inferences should be drawn from the findings.

Overview

The need, purpose, research hypotheses, theory, and limitations were given in Chapter I. In Chapter II a review of pertinent literature will be presented.

Chapter III details the procedures and methodology, the subjects, the instrumentation, the hypotheses tested, and the method of analysis. In Chapter IV a complete analysis of the data is detailed. Finally, Chapter V will present a summary of the study, conclusions, implications, and suggestions for further research.

CHAPTER II

REVIEW OF RELATED LITERATURE

The purpose of Chapter II is to examine the pertinent literature related to the present research. Although much material has been written regarding locus of control and its correlation with achievement, this review is concerned with studies that involved black students. The first section, therefore, will present a general review of findings pertaining to achievement and black students' perceptions of locus of control. Socio-economic status (SES), race, ethnicity, and their relationship to personal beliefs will be discussed in the second section. In the third section, related research dealing with sex differences, age differences, and birth order and locus of control are presented. White and black subjects are included here because of the limited studies available on blacks alone.

In order to give a broader perspective of the notions that have evolved about black perceptions in the educational setting, elementary, as well as high school age populations are covered in this review.

Locus of Control and Achievement

Battle and Rotter (1963) conducted a study using elementary subjects in a rural-urban community school in Ohio. They administered a children's scale to detect the personal sense of control, and reported that lower-class black children were significantly more external in their locus of control than middle-class blacks or whites. Their results also indicated that lower-class blacks with high I.Q.'s were more external than middle-class whites with lower I.Q.'s. These findings suggest that blacks did not perceive the events that occurred as contingent upon their own behavior. Investigating predictor variables among black elementary children, Cellura (1963) found that achievement significantly correlated with internal locus of control. That is to say, black students who felt that their own behavior influenced outcomes were higher achievers than their counterparts who exhibited externality.

Coleman (1966) did one of the largest survey studies ever attempted during the late sixties, using a national sample of school children. Both elementary and high school age populations were included. His study tested over 100 variables as predictors of school achievement. Results showed that low socio-economic status (SES) students who perceived that they had a sense of

control over the environment had a higher achievement level than those who did not. The researcher pointed out that this was most apparent among black students in the sixth, ninth, and twelfth grades.

Brookover (1973) and his associates questioned Coleman's failure to investigate the relationship between socio-psychological factors and achievement among elementary school children. An analysis of his data revealed some low SES schools with high mean achievement levels, and comparably some high SES schools with low mean achievement levels. These findings lent support to Brookover's original premise that variables other than SES might be responsible for mean achievement level differences between the schools under study.

Consequently, Brookover tested the hypothesis that academic variables other than SES accounted for the variance in mean school achievement among elementary students. "Student sense of control," sometimes called "student sense of futility," accounted for 45 percent of the variance. Again student perception was an important factor in achievement, not just for blacks, but whites as well.

Roberts (1971), while researching self-esteem among disadvantaged third and seventh graders, did find significant correlations between internal locus of

control and reading achievement for both sexes. However, there was no significant relationship between locus of control and achievement among minority children. In a related study, Hjelle (1970) reported no relationship between personal beliefs and grades among elementary children.

Buck and Austrin (1970) and Solomon et al., (1971) reported significant correlations between achievement and internals, whereas DuCette, Wolk and Friedman (1972) tested equal random samples of lower-class males, ranging in age from 9 to 11 years, and reported that internal-external scores correlated with the measure of creativity but not with race.

In a comparative study which included both white and black second graders, Shaw and Uhl (1971) found internality of control to be related to reading achievement in white middle-class and lower-class children, but not in black children. These findings are consistent with those reported by Katz (1967), which revealed no correlation between sense of control and achievement among minority group children.

A recent study by Guttentag and Klein (1976) involving black middle school children as subjects reported that locus of control accounted for a large proportion of the variance in the achievement of fifth and eighth graders.

In general, most research studies have shown that race, ethnicity, and SES are significantly correlated with locus of control beliefs for blacks. Thus the notion persists that in complex learning situations this fact should be considered when designing curricula to meet the needs of black students.

SES, Ethnicity, Race, and Locus of Control

There is an abundance of research which reported that locus of control beliefs, social class, and ethnicity correlated significantly. Furthermore, blacks generally scored in the external direction on the locus of control scale, whereas whites scored internally. Members of lower SES backgrounds usually are considered to be externally oriented. Battle and Rotter (1963) reported that low SES children more often than not scored externally. Although it generated much controversy, Coleman (1966) supplemented these earlier research studies when his findings concurred by showing that middle-class children demonstrated internality and that low SES children again tended to be externals. In a related study using third grade elementary school children as subjects, Gruen and Ottinger (1969) found that internality was more often associated with middle-class children than with their lower SES counterparts. These researchers commented that neither group was highly internal.

Lefcourt and Ladwig (1965, 1966) did extensive research on black prisoners in a major correctional institution and reported that blacks were more external in their beliefs than whites. In a similar investigative study, Kiehlbauch (1967) could find no significant differences between blacks and whites, but he noted that blacks showed a tendency to be external in personal beliefs.

Others have reported similar results when comparing blacks to whites (Lessing, 1969; Shaw & Uhl, 1971; Zytkoskee, et al., 1971; and Strickland, 1972). But contradictions do exist in the research. For instance, no racial differences in locus of control beliefs could be found among elementary children by Katz (1967), or Solomon, Houlihan, and Parelius (1969). However, a few years later Pedhazur and Wheeler (1971) noted the black, Puerto Rican, and Jewish children they investigated did differ significantly in their beliefs. Their results indicated that Jewish children were more internal than both the blacks and Puerto Ricans even though all subjects resided in the same city and were in identical grades.

Most of the research data available supports the hypothesis that a strong relationship exists among locus of control beliefs, SES, race, and personal beliefs. The reason such correlation exists could be attributed to

several factors. Upward mobility is somewhat limited for certain groups in the society. Even though studies show blacks and other minorities to be externally oriented in their beliefs, caution should be used in using these results for stereotypes. Furthermore, much of the work done in this area is correlational to design and therefore fails to give causes for this phenomenon.

Birth Order, Sex, Age, and Locus of Control

The following discussion is intended to help the reader understand the relevance of birth order, sex, age, and their relationship to the present research involving locus of control.

Birth Order

Adler (1928) wrote that firstborns tended to be more aggressive and were more likely to attain eminence than later-borns. More recently, Altus (1965) concluded after reviewing the test results of students at the University of California that (a) firstborns attend college in greater numbers than would be predicted on theoretical grounds, and (b) firstborns may be superior to later borns in verbal ability. Rosenberg and Sutton-Smith (1964) found that firstborn males compared to later-born males possessed better language skills, and Eisenman (1966) discovered that firstborn patients

receiving therapy in a mental hospital engaged in more verbalizations than later-born patients.

In subsequent research, Eisenman (1968) administered Rotter's (1966) Internal-External (I-E) control scale to 131 college students at the University of Georgia. Included in the sample were 75 males and 56 females, all freshmen from middle-class backgrounds. His findings revealed that females made much better grades than males regardless of birth order, although the results were more noticeable for firstborn males and females than later-born subjects. However, there was no relationship found between the I-E scale scores and grades. In addition, firstborn males were significantly more external than internal on the I-E measure.

While engaged in a study involving some correlates of personal beliefs of control, Marks (1973) found birth order provided a significant source of variance. Chance (1965), a former associate and student of Rotter, reported male and female firstborn children to be more internal compared to later-borns.

MacDonald (1971) reported that later-borns from two-child families tended to be more external than later-borns from larger families. Later-borns from two-child families, however, were more external than only children or firstborns from two-child families.

Family antecedents such as ordinal position have historically provided interest for research. Locus of control also has extended its investigation into this area. As the studies suggest, there seem to be differences in the behavior of firstborns compared to later borns. This study, therefore, seeks to explore the relationship of ordinal position to sense of personal control.

Sex Differences

Chance (1965) in a study investigating the relationship between locus of control, reading skills, arithmetic performance, spelling, and I.Q. among white elementary students found no sex differences. On the other hand, Feather (1967, 1968) reported significant sex differences in the internal-external scores between males and females, and Nowicki's (1973) research suggested that females are more externally oriented than males particularly in achievement situations. Hochreich (1975) concluded that females are externals due to stereotyping in child-rearing practices.

The differences which exist between males and females need to be addressed in terms of beliefs about locus of control. The research generally supports the supposition that differences may exist, but no clear pattern can

be established. The lack of reported research in such studies involving I-E scores may be the reason.

Age Differences

The literature regarding age differences and the personality dimension locus of control is quite limited. This is due mainly to a lack of longitudinal studies in the research. Crandall, Katkovsky, and Crandall (1965) found in their studies involving students that first to third graders were relatively external in their beliefs with internality increasing to its maximum in eighth to tenth grades, and a noticeable reversion to externality occurring about the twelfth grade. The explanation for the changes in beliefs about locus of control focuses on the fact that seniors are somewhat apprehensive due to impending graduation and an uncertain future. Penk (1969) saw the changes in beliefs as the result of more responsibility and the realization that limitations are imposed on one's behavior.

Blacks in particular are subjects who have historically been limited in social as well as economic mobility. Perhaps the externality manifested in the older students in Coleman's study is indicative of those limitations.

Summation of Literature Review

Several generalities emerge in the review of literature. It was mentioned that achievement generally correlated with a person's sense of personal control. Overall, blacks seem to manifest greater externality than whites, and low SES groups tend to be more external than their middle-class counterparts. It is, therefore, reasonable to assume that the low SES is associated with externality.

Birth order studies revealed support for the hypothesis that firstborns tend to be more internal than later-borns. The research fails to yield conclusive evidence that sexual differences are apparent on the locus of control measure. There does seem to be a tendency among researchers to feel that females should be more external in their beliefs due to child-rearing practices in this society. And, finally, most of the data indicate that age is significantly related to personal beliefs, although some feel that children tend to become more internal and less external as they grow older.

Summary

This chapter presented a review of literature pertinent to this study. It covered discussions on achievement; SES, race, ethnicity; birth order, sex, and age as they relate to blacks and their locus of control beliefs.

In the following chapter, the procedures and methodology of this study will be discussed.

CHAPTER III

PROCEDURES AND METHODOLOGY

In this chapter, the procedures used to collect the data and the methods of statistical analysis are presented.

Sample

The sample used for this study consisted of black students attending a personalized instructional high school program. Twenty-nine males and 21 females, ranging in age from 16 to 21 years of age made up the group. Socio-economic (SES) information from student records revealed that they were from low income backgrounds. SES determination was based on the fact that the majority of students involved qualified for a special job training program using federal income guidelines. Upon entry into the program, most of these students were achieving below grade level in the basic skills. Therefore, this group does not represent the general public school population. Thus, the reader is cautioned to interpret the results with this in mind.

This public school program was located in an urban Midwestern city with a population of about 170,000.

Instrumentation

The instrument used in this study was a questionnaire consisting of two parts. The first part contained questions designed to obtain demographic information about the subjects. Several questions irrelevant to the direct purposes of this study were included to somewhat disguise its intended purpose. Therefore, only data germane to this research were analyzed. The second part of the questionnaire contained a scale to elicit the personal beliefs or perceptions of subjects, and to ascertain how they perceived their ability to control the events in the school environment.

Originally, the Rotter (1966) Internal-External Control Scale was selected for gathering the locus of control data needed for this study. It contained 29 items, with six fillers. Assessment of how persons perceive their ability to control events or outcomes in their environment is determined by the total score. The instrument is forced-choice in design. Persons are identified as either having an external or internal sense of control. Scores can range from 0 to 23, with each response counting one point. According to Rotter (1966) internal consistency estimates are between

.65 and .79, and retest reliability is reported to vary from .49 to .83 depending on the type of sample and the time interval involved. Some others (Hersch & Scheibe 1967; Harrow & Ferrante, 1969) found reliabilities ranging from .48 to .84.

When this study was first attempted by the researcher, Rotter's Internal-External Scale was administered to two samples of high school students in a moderate size industrial city. Analysis of the data revealed an internal consistency of less than .30 in each sample. Realizing that the subjects had experienced great difficulty with the generality of the questions, the decision was made to develop a more appropriate instrument for this type of population. Another consideration was the fact that Rotter normed his scale using college students and not high school age subjects. Feedback from the subjects also indicated that questions needed more specificity.

The instrument used to measure the sense of personal control dimension for this study was developed using a panel of knowledgeable professionals. An educational researcher, a curriculum specialist, a guidance and counseling specialist, and a reading specialist made up the membership of the panel. Sixty situation specific items were constructed for their review. Thirty items

were eliminated by a consensus of the panel in its initial review of the items. The reason for removing the items was primarily based on their failing to meet a test of fact validity.

In order to determine if the remaining 30 statements discriminated between subjects, it was necessary to administer the items to 20 subjects at a different site but attending a similar program as the intended population. An analysis of the findings revealed that 12 items failed to discriminate between subjects. All items where a great majority or all subjects had selected the same response were deleted. In addition, it was pointed out to the panel that five items were identified as either misunderstood or confusing to the subjects causing them difficulty in responding. Therefore, the panel recommended that these five items also be removed from the instrument. As a consequence of the procedures described, a 13-item scale was developed.

A Hoyt ANOVA reliability coefficient of .71 was obtained when the final scale was administered to the intended subjects. The reliability was acceptable and consistent with previous research studies utilizing similar instruments.

Scoring for this 13-item instrument is in the internal direction. Each internal response received

one point, which meant that the lowest score possible was 0 and the highest score possible was 13. This means that low scores reflected externality, and high scores indicated an internal locus of control.

A sampling distribution of subject scores determined the classification procedures for grouping subjects. Individuals who scored one standard deviation above the group mean were defined as internals, those who scored one standard deviation below the group mean were defined as externals, and all other subjects were placed in the middle range. This type of classification follows that suggested by Rotter (1966).

Students were brought together in groups of 10, and the Student Survey instrument administered. The data gathering occurred during a regular school day. Total time required to complete the instrument was approximately 20 minutes. Several additional demographic questions were included to disguise the intent of the questionnaire. All subjects were informed that they were participating in a research study. A team of three females, two whites and one black, administered the instrument to the subjects.

Achievement Index

The Test of Adult Basic Education, commonly referred to as the TABE test, was the standardized achievement test used to assess the reading ability levels of students. This test was developed from the California Achievement Test (CAT) for use with young adults and older adults who have not completed high school (Buros, 1972). Scores were reported in percentiles. This particular program administered Level D of the TABE to all its students.

Statistical Hypotheses

The major statistical hypotheses to be tested are as follows:

Hypothesis 1

Null: No relationship will be found between the reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

Alternate: A relationship will be found between the reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

Hypothesis 2

Null: No relationship will be found between the birth order of students who score as internals, externals, or in the middle range on the locus of control scale.

Alternate: A relationship will be found between the birth order of students who score as internals, externals, or in the middle range of the locus of control scale.

Hypothesis 3

Null: No relationship will be found between the age of students who score as internals, externals, or in the middle range on the locus of control scale.

Alternate: A relationship will be found between the age of students who score as internals, externals, or in the middle range of the locus of control scale.

Hypothesis 4

Null: No relationship will be found between the sex of students who score as internals, externals, or in the middle range of the locus of control scale.

Alternate: A relationship will be found between the sex of students who score as internals, externals, or in the middle range on the locus of control scale.

The secondary hypotheses to be tested are as follows:

Hypothesis 5

Null: No relationship will be found between birth order and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

Alternate: A relationship will be found between birth order and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

Hypothesis 6

Null: No relationship will be found between the age and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

Alternate: A relationship will be found between the age and reading ability of students who score as internals, externals, or in the middle range of the locus of control scale.

Hypothesis 7

Null: No relationship will be found between the sex and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

Alternate: A relationship will be found between the sex and reading ability of students who score as internals, externals, or in the middle range of the locus of control scale.

Analysis

This is a correlational study with locus of control scores and achievement, as designated by reading ability level, as the dependent variables, and age, sex, and birth order as the independent variables. Analysis of variance and chi square were the two statistical tests used to analyze the data. All hypothesis testing was done using an a priori .05 alpha level with the appropriate degrees of freedom.

Summary

Black, low SES, high school students attending a personalized instructional program were administered a questionnaire containing several demographic questions and a locus of control scale. Achievement ability of students was determined by scores on a standardized test instrument. The resulting data was analyzed using either analysis of variance or chi square with the appropriate degrees of freedom. All tests were to be conducted using an a priori alpha of .05 to reject the null hypothesis.

In Chapter IV, a complete analysis of the data will be presented.

CHAPTER IV

ANALYSIS OF THE RESULTS

This chapter presents the data generated from the administered instrument and gives an analysis of the results. Each hypothesis is stated, and a discussion follows explaining the findings relative to that hypothesis. Finally, a summary of the findings pertaining to the research is presented.

Instrumentation

To determine the locus of control beliefs of subjects involved in this study, a 13-item scale (see Appendix B) was developed. A Hoyt ANOVA Reliability Coefficient of .71 was obtained for the sample.

Scoring of the 13-item locus of control of the environment scale was in the internal direction. Subjects received a single point for each internal response and no points for each external response. The assumption was that persons who believed that outcomes and/or rewards are contingent on their own behavior would score higher, whereas those who believed outcomes and/or rewards are contingent on the behavior of luck, chance, or powerful

others would score lower. The scale is additive in nature, the total score accumulating across all items.

Seven demographic related questions were included to disguise the true purpose of the test, but only data germane to this study were analyzed.

Employing the procedures recommended by Rotter (1966) for identifying subjects, individuals were classified as internals if their score was one standard deviation above the mean and as externals if their score was one standard deviation below the mean. Groups were arranged as follows: (a) internals scored 13 points and above, (b) externals scored 9 points and below, and (c) all others scored in the middle range between the two extremes. For this sample the mean locus of control score was 11.35 with a standard deviation of 2, the highest score being 13 and the lowest score being 6.

Hypotheses Tests

Two statistical tests were selected to analyze the data and report the statistical findings. These tests were the chi square analysis, and the analysis of variance of means technique, ANOVA. Chi square is a statistical technique that answers questions about data in the form of frequencies, as was the case in the present study.

Subjects were classified according to their responses on an instrument which was forced-choice in format. Ultimately, students were put into three separate groups according to their scoring on the locus of control scale.

The chi square statistic should only be used with frequency data. This statistic assumes that each response is not influenced by previous responses in the instrument. Simply put, each response should be totally independent of all others in the response set. Also, data must be categorized in a logical manner with no frequency smaller than five per cell. Finally, the sum of the expected frequencies and the sum of the observed frequencies should be the same; and the algebraic sum of the differences between the observed and the expected frequencies should be zero (Isaac & Michael, 1974).

In this study, analysis and scoring procedures were used which researchers in previous investigations of this personality variable had used.

Analysis of variance was the technique selected to test hypotheses 1, 5, 6, and 7. This statistic is widely used in educational research because it allows the researcher the opportunity to compare sample means simultaneously across more than two groups. It also offers a more accurate estimate of the population variance since the sample data are taken all at one time. Through the

use of analysis of variance, a determination can be made regarding the statistical difference between groups being tested and it can be determined if they come from the same population. In addition, analysis of variance must satisfy two other requirements: (a) the population distributions must be normal, and (b) the population variances must be equal.

For both statistical tests, the dependent variables were the locus of control measures and the reading ability levels of the subjects. The independent variables used in both tests were age, with two levels (16 to 17 years and 18 years and over); sex, with two levels (males and females); and birth order, with three levels (first-born, middle-born, and last-born).

All hypotheses were tested using the .05 level of significance with the appropriate degrees of freedom.

Hypotheses Test Results

The statistical form of Hypothesis 1 was stated as:

Hypothesis 1

Null: No relationship will be found between the reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

The univariate analysis of variance of means yielded an F-ratio of 1.44 (2 and 47 degrees of freedom), which was not significant at the .05 level (see Table 1). These results are interpreted to mean that the mean reading ability among the three groups was not significantly different on the dependent measure being simultaneously analyzed. Since the difference between the reading levels of the three groups was not significant at the .05 alpha level, the null hypothesis was not rejected.

TABLE 1.--ANOVA Table for Hypothesis 1 with Locus of Control and Reading Ability Variables

Source of Variation	Sum of Squares	DF	Mean Square	F-Ratio	p Less Than
Betwen Groups	1011.1	2	505.5	1.44	.2472*
Within Groups	16500.5	47	351.1		
Group Total	17511.6	49			

*Not significant at .05 alpha level.

The statistical form of Hypothesis 2 was stated as:

Hypothesis 2

Null: No relationship will be found between the birth order of students who score as internals, externals, or in the middle range on the locus of control scale.

The chi square statistical technique yielded a value of 10.67 (4 degrees of freedom) which was significant at the .05 level. A significant chi square statistic can be interpreted to mean that for the three groups, birth order and locus of control beliefs are significantly related. Since the difference was significant at the .05 alpha level, the null hypothesis was rejected and the alternate hypothesis accepted (see Table 2).

TABLE 2.--Chi Square Analysis of Birth Order and Locus of Control for Hypothesis 2

Locus of Control Group	Firstborn	Middle Born	Last Born	Row Total
Externals				
Frequency	2	6	0	8
Total Pct.	4.0	12.0	0	16.0
Middles				
Frequency	5	10	7	22
Total Pct.	10.0	20.0	14	44.0
Internals				
Frequency	7	13	0	20
Total Pct.	14.0	26.0	0	40.0
Column Total	14	29	7	50
Total Pct.	28.0	58.0	14	100.0

Chi square = 10.67, with 4 degrees of freedom, $p < .0306$, at .05 alpha level, which is significant.

The statistical form of Hypothesis 3 was stated as:

Hypothesis 3

Null: No relationship will be found between the age of students who score as internals, externals, or in the middle range on the locus of control scale.

The chi square statistical test yielded a value of .27 (2 degrees of freedom) which was not significant at the .05 level. A nonsignificant chi square statistic can be interpreted to mean that no relationship exists between the age of students and their locus of control beliefs (see Table 3). Since the chi square statistic was not significant at the .05 alpha level, the null hypothesis was not rejected.

The statistical form of Hypothesis 4 was stated as:

Hypothesis 4

Null: No relationship will be found between the sex of students who score as internals, externals, or in the middle range on the locus of control scale.

The chi square statistical test yielded a value of 4.27 (with 2 degrees of freedom) which was not significant at the .05 level (see Table 4). A nonsignificant chi square statistic can be interpreted to mean that no relationship exists between sex and the locus of control beliefs of students. Since the chi square

TABLE 3.--Chi Square Analysis of Age and Locus of Control for Hypothesis 3

Locus of Control Group	16-17 Year Olds	18 and over	Row Total
Externals			
Frequency	4	4	8
Total Pct.	8.0	8.0	16.0
Middles			
Frequency	12	10	22
Total Pct.	24.0	20.0	44.0
Internals			
Frequency	12	8	20
Total Pct.	24.0	16.0	40.0
Column Total	28	22	50
Pct. Total	56	44.0	100.0

Chi square = .27, with 2 degrees of freedom, $p < .8756$, at the .05 alpha level, which is not significant.

statistic was not significant at the .05 alpha level, the null hypothesis was not rejected.

The statistical form of Hypothesis 5 was stated as:

Hypothesis 5

Null: No relationship will be found between birth order and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

TABLE 4.--Chi Square Analysis for Sex and Locus of Control for Hypothesis 4

Locus of Control Group	Males	Females	Row Total
Externals			
Frequency	2	6	8
Total Pct.	4.0	12.0	16.0
Middles			
Frequency	14	8	22
Total Pct.	28.0	16.0	44.0
Internals			
Frequency	13	7	20
Total Pct.	26.0	14.0	40.0
Column Total	29	21	50
Pct. Total	58.0	42.0	100.0

Chi square = 4.27 with 2 degrees of freedom, $p < .1185$, which is not significant at the .05 alpha level.

A univariate analysis of variance of means yielded an F-ratio of 1.47 (degrees of freedom 2 and 47), which was not significant at the .05 level. A nonsignificant univariate F-ratio can be interpreted to mean that the mean reading ability levels for the three groups were not significantly different from one another (see Table 5). Since the F-ratio was not significant at the .05 alpha level, the null hypothesis was not rejected.

TABLE 5.--ANOVA Table for Hypothesis 5 with Reading Ability and Birth Order Variables

Source of Variation	Sum of Squares	DF	Mean Square	F	p
Between Groups	1009.0	2	504.5	1.44	.2479*
Within Groups	16502.5	47	351.1		
Group Total	17511.5	49			

*$F_{2, 49} = 1.44$; $p < .2479$, at the .05 alpha level, which is not significant.

The statistical form of Hypothesis 6 was stated as:

Hypothesis 6

Null: No relationship will be found between the age and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

A univariate analysis of variance of means yielded an F-ratio of 9.04 (degrees of freedom 1 and 48) which was significant at the .05 level (see Table 6). A significant univariate F-ratio can be interpreted to mean that the mean reading ability levels for the two groups were significantly different from each other. Since the F-ratio statistic was significant at the .05 alpha level, the null hypothesis was rejected and the alternate hypothesis accepted.

TABLE 6.--ANOVA Table for Hypothesis 6 with Reading Ability and Age Variables

Source of Variation	Sum of Squares	DF	Mean Square	F	p
Between Groups	2775.6	1	2775.6	9.04	.0042*
Within Groups	14735.9	48	307.0		
Group Total	17511.5	49			

*$F_{1,48}$ = 9.04; p < .0042, which is significant at the .05 alpha level.

The statistical form of Hypothesis 7 was stated as:

Hypothesis 7

Null: No relationship will be found between the sex and the reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

A univariate analysis of variance of means yielded an F-ratio of 1.28 (degrees of freedom 1 and 48) which was not significant at the .05 level (see Table 7). A nonsignificant univariate F-ratio can be interpreted to mean that the mean reading ability levels for the two groups were not different from each other. Since the F-ratio statistic was not significant at the .05 alpha level, the null hypothesis was not rejected.

TABLE 7.--ANOVA Table for Hypothesis 7 for Variables Sex and Reading Ability

Source of Variation	Sum of Squares	DF	Mean Square	F	p
Between Groups	455.0	1	455.0	1.28	.2635*
Within Groups	17056.6	48	355.4		
Group Total	17511.6				

*$F_{1, 48} = 1.28$; $p < .2635$ is not significant at the .05 alpha level.

Other Findings

Other interesting results were discovered while analyzing the major hypotheses associated with this study. As illustrated in Table 8, 45 percent of the males compared to 33 percent of the females scored in the internal direction. Thus, internality was clearly demonstrated by males and not by female subjects. For the females, no distinct difference existed in locus of control among any of the three classifications. In other words, the females did not group at either end of the two extremes used to define internals or externals. However, a very small percent, a mere 7 percent, of the males exhibited externality.

TABLE 8.--Frequencies for Sex and Locus of Control Groups

Locus of Control Group	Males	Pct.	Females	Pct.
Externals	2	7	6	29
Middle	14	48	8	38
Internals	13	45	7	33
Total	29	100	21	100

N = 50

A greater number of younger students demonstrated internality on the scale than did older students as shown in Table 9. Of the 16 to 17 year olds, 43 percent were internal in their perceived locus of control compared to 36 percent of the older students in the 18 and older category.

TABLE 9.--Frequencies for Age and Locus of Control Groups

Locus of Control Group	16-17	Pct.	18 and over	Pct.
Externals	4	14	4	18
Middle	12	43	10	46
Internals	12	43	8	36
Total	28	100	22	100

N = 50

Ordinal position and locus of control showed some clear distinctions in the manner firstborns, middle-borns, and last-borns grouped on the personal variable. Of the firstborns, 50 percent were internally oriented which 45 percent of the middle-borns were internally oriented (see Table 10).

TABLE 10.--Frequencies for Birth Order and Locus of Control Groups

Locus of Control Group	First born	Pct.	Middle born	Pct.	Last born	Pct.
Externals	2	14	6	21	0	0
Middle	5	36	10	34	7	100
Internals	7	50	13	45	0	0
Total	14	100	29	100	7	100

The results for the frequencies of groups and their reading ability also provided some interesting data. In Table 11, a summary of locus of control, age, sex, and birth order data is given. From the figures, it can be noted that internals had higher reading ability levels than externals. Also, apparent is the higher reading ability of younger students compared to their older counterparts. Another finding is the difference in reading ability between the male and female subjects,

TABLE 11.--A Summary of Reading Ability Levels for Students According to Age, Sex, Birth Order, and Locus of Control

Variable Group	Reading Ability Level	Standard Deviation	N
Locus of Control			
Externals	60.6	21.1	8
Middle	70.7	20.4	22
Internals	73.9	15.7	20
Total Group Mean	70.4	18.9	50
Age			
16-17	77.0	18.0	28
18 and over	61.9	16.9	22
Total Group Mean	70.4	18.9	50
Sex			
Males	67.8	18.5	29
Females	73.9	19.4	21
Total Group Mean	70.4	18.9	50
Birth Order			
Firstborn	72.9	17.5	7
Middle-born	66.9	18.3	29
Last-born	79.4	22.8	14
Total Group Mean	70.4	18.9	50

which shows females with higher levels than males. Finally, the birth order results reveal that contrary to what is generally expected according to prior studies, the last-borns scored higher in reading ability than either middle-borns or firstborns. In fact, the middle-borns scored higher than the firstborns.

Summary

In the present research, seven statistical hypotheses were tested. A 2 x 3 chi square analysis technique was used to analyze hypotheses 3 and 4, whereas, a 2 x 2 chi square was used for hypothesis 2.

The analysis of variance between sample means provided the statistical procedure for hypotheses 1, 5, 6, and 7. To analyze hypotheses 1 and 7, a 2 x 3 ANOVA was used, and for hypotheses 5 and 6, a 2 x 2 was used. These hypotheses were formulated to determine if a relationship existed between student locus of control beliefs and sex, age, birth order, and reading ability. All hypotheses were tested at the .05 alpha level of confidence.

In Chapter V, a summary, conclusions, implications, and suggestions for further research will be given.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Summary

The purpose of this study was to determine the relationship of the locus of control over the environment of black high school students in a personalized instructional program to achievement (reading ability level), age, birth order, and sex. In addition, the study also examined the relationships that might exist between the age, birth order, sex, and achievement of individuals based on their classification on the locus of control scale. The independent variables were sex, age, and birth order. Dependent variables were scores on the locus of control scale and reading ability levels according to student records.

Ascertaining what perceptions blacks have relative to their own ability to influence the outcomes and/or events that occur in the environment was the major concern of this research. Some questions of central interest to this study were as follows: Do blacks attending a personalized instructional program feel that they have some

control over what events occur in their lives? Is there a relationship between the achievement performance, sex, age, or birth order of these students and their sense of personal control? Is there a relationship between the age, sex, and birth order of students in such a program and their sense of personal control?

The sample used in the research consisted of black subjects who were attending a personalized instructional high school program. All had histories of academic failures and/or truancy problems in their former high schools. The program was located in the inner city of an urban school district of a Midwestern city with a population of about 170,000. Fifty students made up the sample, 29 males, and 21 females ranging from 16 to 21 years of age. The mean age for the group was 18 years.

Subjects were categorized into three distinct groups according to their scores on the locus of control scale. This scale contained 13 forced-choice items. Subjects were referred to as internals if they scored 13 points, as externals if they scored nine points or below, and they were placed in the middle range if they fell between these extremes. The mean score for all subjects was 11.53 with a standard deviation of 2. Eight subjects were classified as internals (two males and six

females), 22 as externals (14 males and eight females), and 20 fell into the middle range (13 males and 7 females). Externals were defined as being one standard deviation below the group mean, and internals as one standard deviation above the group mean.

The scale (see Appendix B) used to determine locus of control beliefs was developed for the purpose of this research study. Thirteen items made up the scale, and seven demographic questions were included, but only those pertinent to this study were analyzed.

A Hoyt ANOVA Reliability Coefficient of .71 was obtained at the .05 alpha level for the locus of control scale.

Each internal response received a single point, and each external response none. The format of the instrument was forced-choice, with selections of agree or disagree. Thus, the highest score possible was 13 and the lowest was 0. Scoring was done in the internal direction with the assumption being that higher scores manifested a sense of personal control, conversely, low scores indicated a lack of sense over personal control of the environment. Responses were additive across all items, and all analyses were conducted on the total score.

The null hypotheses were tested using a chi square test statistic and analysis of variance. Locus of control

scores and reading ability levels were used as dependent measures. A .05 alpha level with appropriate degrees of freedom was used to test the significance of all hypotheses.

In Chapter II selected pertinent literature was discussed which included locus of control research and achievement as it relates to blacks, birth order, sex, age, SES, race, and ethnicity. In Chapter III the procedures used to collect the data resulting from the study were discussed. Also discussed were the statistical procedures used to analyze the data and a rationale for these analyses. In Chapter IV an analysis of each hypothesis was stated followed by an explanation of the statistical test of significance and the decision reached relative to the null hypothesis.

Major Findings

Hypothesis 1

Null: No relationship will be found between the reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

No significant difference or relationship was found in the mean scores of the three groups on the dependent measures being simultaneously tested. The null hypothesis was not rejected since no difference or

relationship was apparent among the scores of the three groups at the .05 alpha level.

Hypothesis 2

> Null: No relationship will be found between the birth order of students who score as internals, externals, or in the middle range on the locus of control scale.

With respect to Hypothesis 2, it was found that a significant relationship did exist, at the .05 alpha level, between birth order and the three groups who scored as internals, externals, or in the middle range on the locus of control scale. Since the relationship was significant at the .05 alpha level, the null hypothesis was rejected.

Hypothesis 3

> Null: No relationship will be found between the age of students who score as internals, externals, or in the middle range on the locus of control scale.

With respect to Hypothesis 3, there was not a significant relationship found between the age of students and locus of control beliefs, at the .05 alpha level. Consequently, the null hypothesis was not rejected.

Hypothesis 4

> Null: No relationship will be found between the sex of students who score as internals, externals, or in the middle range on the locus of control scale.

With respect to Hypothesis 4, it was found that no significant relationship existed between the age of students and their scoring as internals, externals, or in the middle range on the locus of control scale. Since there was no significant relationship at the .05 alpha level, the null hypothesis was not rejected.

Hypothesis 5

> Null: No relationship will be found between birth order and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

With respect to Hypothesis 5, there was found to be no significant difference or relationship between the mean scores of the three groups as they related to reading ability. Since no significance was found at the .05 alpha level, the null hypothesis was not rejected.

Hypothesis 6

> Null: No relationship will be found between the age and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

For Hypothesis 6, a significant difference or relationship was found to exist between the mean scores for the two groups as they relate to reading ability. Since there was significance found at the .05 alpha level, the null hypothesis was rejected.

Hypothesis 7

Null: No relationship will be found between the sex and reading ability of students who score as internals, externals, or in the middle range on the locus of control scale.

With respect to Hypothesis 7, no significant relationship or difference was found between the mean scores of the two groups as they related to reading ability. Since no significance was found at the .05 alpha level, the null hypothesis was not rejected.

Other Findings

Subjects in this study scored predominantly in the internal direction, that is, showing an internal sense of personal control of their environment. As the review of literature suggested, minorities usually tend to score in the external direction which is contrary to these findings. The type of educational program that these students attended might have been responsible for these results. Such a personalized instructional program was designed to give students with prior academic failures an opportunity for successful experiences in the academic setting.

Another finding relevant to this study was the fact that males tended to be more internal than females in their sense of control perceptions. Over 40 percent of the males were identified as internals compared to

33 percent of the females. It is generally accepted that black males, compared to black females, are more likely to lack a sense of personal control over the environment. Subjects in the present study, however, do not support this notion.

One reason for the contradictions might be due to the fact that this group of males and females entered the program at their own volition. This alone demonstrates some assertiveness on their part. Whatever the motives were that prompted their seeking alternatives in completing high school, they represent a group which has set goals and which wants some of the benefits learning can bring. These black males and females are controlling their destiny and that is what internality is all about.

Most disturbing was the fact that older students tended to have lower reading ability levels than younger students. Since the older students had been exposed to the traditional educational system longer than the younger students, it would seem logical for older students to possess greater ability. Hopefully, the potential to improve is not entirely lacking in older students who have such learning deficits. Minorities, particularly blacks, need the mastery of basic skills if they are to successfully compete in society at large.

This particular program has operated for approximately three years, but the majority of these students were new enrollees. Perhaps if this type of program had been available earlier to some, their school experiences might have been more productive and rewarding.

Conclusions

Some of the major conclusions resulting from this study were as follows:

1. No significant relationship could be found between these black students' perceived locus of control over their school environment and their achievement as measured by reading ability level.

2. Firstborn students demonstrated a much higher internality than did later-borns on the locus of control measure, and a significant relationship was found to exist between birth order and the personal beliefs of the students.

3. Students' ages and their beliefs about personal control did not show a significant correlation. However, it was noted that 43 percent of the younger subjects compared to 36 percent of the older subjects did score in the internal direction.

4. A greater percentage of males, 45 percent, scored in the internal direction, as compared to 33 percent of the females. However, no significant correlation

between sex and locus of control beliefs was found among these students.

5. In respect to the relationship of achievement, as measured by reading ability level and birth order, no significant correlation was found. Although contrary to results reported in previous studies, last-born subjects had higher reading levels than did firstborn subjects.

6. There was a significant relationship found between the age of subjects and their achievement ability as measured by reading ability level. It was noted that younger students tended to manifest reading abilities considerably higher than older students.

7. No significant relationship could be found between the sex of subjects and their achievement as measured by reading ability level. Females in this sample did have a slightly higher reading ability level than did the males.

Implications and Explanations

In Hypothesis 1, the results indicated that student perceptions about their locus of control were not significantly related to their achievement. The fact that these students all had histories of poor academic performance might have contributed to this finding. Many students were below grade level in basic skill areas, such as reading ability, which was the dependent measure of

the study. It logically follows then that after 11 or 12 years of repeated failure in the classroom these students could hardly be expected to do well on a standardized reading test. Even their brief exposure to the new teaching approaches in the personalized instructional program failed to improve their reading ability in such a short period. Other indications were that these students had been truant in behavior prior to enrolling in the program, which certainly suggests an avoidance behavior pattern to learning situations.

Perhaps a replication of this study might consider looking at the academic growth patterns of students who attend such a program thus testing the effectiveness of the approaches used to alleviate the reading ability deficits. Meanwhile, school systems should strive to do all in their power to find solutions to prevent the academic failures that continue to plague minority youth.

Hypothesis 2 indicated that a significant relationship does exist between students' birth order and their perceived locus of control. These findings support earlier studies which have shown differences relative to birth order. Such findings have implications for future research into the reasons why birth order is a factor in learning for blacks. Perhaps families should be investigated to see what child-rearing practices influence the learning behavior of blacks also.

Historically, black families have placed much responsibility on the first-born child. Many times low income families need the added income which children can bring in to make ends meet. Today, more than ever, with the severe economic conditions apparent in the society, young people are seeking jobs to aid their families. In fact, some even leave school before receiving their high school diplomas in order to secure full-time employment.

Even more disturbing is the incidence of poor achievers who drop out of school because of their lack of motivation and dissatisfaction with poor academic performance.

In Hypothesis 3, age had no significant relationship to perceived locus of control. Earlier studies suggested that minorities, and blacks in particular, are more likely to feel a lack of personal control as they become older. These findings fail to support this premise. Since the group represented only two age groups, 18 and over, and 16 to 17 year olds, it can only be suggested that for these groups no difference was found. Longitudinal studies in the future are needed to ascertain more definitive results.

Sex differences relative to perceived locus of control could not be found. No significant relationship is indicated that young blacks brought up during the last

decade exhibit any of the sex differences attributed to the recent womens' rights movement. This might be due to the philosophical teaching promoted under the "black is beautiful" slogan of the late sixties and early seventies. Thus, both black males and females are encouraged to work cooperatively to assert black pride.

In Hypothesis 6, students' ages, relative to their locus of control, had a significant relationship to reading ability. This is not too unexpected, especially in light of other findings which indicated younger students had much higher reading abilities compared to older students in this study. Coleman (1966) stated that when students continually fail, they they may cease to try at all. Therefore, older students who have been exposed to more academic failures for long periods of time quite naturally may seek to avoid the same experience by giving up altogether. Those who do not drop out of school, then, must be motivated to remain. Unfortunately, the solution is found too late for many and a good mind is lost in the process.

The future appears somewhat brighter for the underachievers. More and more school districts are developing and implementing experimental individualized programs to help students with special needs. This action is certainly a step in the right direction, but much more

needs to be done. Other implications might be the incorporation of special counseling programs to assist students who have become frustrated with their plight. Only through motivating individuals who may have given up on the education system can these future citizens be adequately prepared to meet tomorrow's challenges.

Thomas Gunnings (1971), a psychologist at Michigan State University, advocates training counselors in the use of this "systemic approach," which helps clients regain their self-concept. His technique makes the counselor a student advocate who becomes a partner in the solution of problems which are assumed to originate in the system, rather than in the student, who is only the victim of such problems. As the United Negro College Fund motto states, "A mind is a terrible thing to waste."

Recommendations for Future Research

The following are suggested for future research:

1. A longitudinal study should be conducted to examine changes in student perceptions over time.
2. A study should be conducted to investigate the perceptions of teachers and students in personalized instructional programs.
3. A longitudinal study should be conducted to compare the perceptions of students in

traditional programs to those of students in personalized instructional programs.

4. A study should be conducted to investigate the reasons that students differ in their perceptions relative to birth order.
5. A comparative study should be conducted looking at socio-economic status, race, sex, and locus of control beliefs using subjects from traditional high schools and individualized instructional programs.

Findings generated from such research would give educators much-needed information to enhance their efforts in creating quality education programs for all students.

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APPENDICES

APPENDIX A

A DESCRIPTION OF THE PERSONALIZED INSTRUCTIONAL PROGRAM

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A DESCRIPTION OF THE PERSONALIZED INSTRUCTIONAL PROGRAM

This is an alternative vehicle for "dropouts" and "potential dropouts" to continue their high school education and earn a high school diploma. The program is located in the heart of the black community of a fairly large industrial city in the Midwest with a total population of approximately 170,000. The present site of the program is a former elementary school, complete with a gymnasium, lunch room, and playing field.

Students between the ages of 16 and 19 voluntarily elect to attend. All the responsibility for attending is theirs. The local school district operates the program under the same state guidelines it uses for its traditional high schools. This means that students must meet the same attendance requirements and course requirements in order to graduate.

The curriculum for the individualized program is especially designed to emphasize the basics, although a diversified listing of additional courses is offered. For example, all students enroll in mathematics, language arts, general science, and social science, but they can elect to take such courses as biology, sculpturing, art,

music, algebra, physical science, creative writing, and choir. Independent study is also an option if a student desires. In addition, mini-courses are available which may have prorated credit allowances, which means that several mini-courses can be combined to equal one full course credit thus giving variety to the course selections.

Since many students enter with a need for remedial assistance in verbal, writing, and math areas, programmed learning materials, tutors, and reading machines are an integral part of the classroom experience. There is also a library and media center which helps students to improve their academic achievement. Staff members attempt to find reading materials which will capture the interest of students in order to stimulate their reading habits.

The counseling component is very developed and an essential part of the program. As previously mentioned these students tend to have poor self-concepts due to their failures and frustrations in the traditional high school. For this reason, the total staff is trained in behavior modification techniques so that they can continually reinforce new behaviors thus promoting positive self-concepts. Individual and group sessions, sometimes referred to as "rap sessions," are an ongoing occurrence. All staff participates in the group sessions.

Unlike the large classroom sizes found in the traditional high school, the program maintains small class sizes. Usually the student/teacher ratio is 15 to one. This affords the teacher more time to work individually with each student.

Students are permitted to participate in a work-study job program also. A job coordinator sees to it that students are given job readiness orientation and monitors their progress. Career education courses are provided which earn credits toward graduation and gives students interviewing techniques, practice in filling out applications, and information about prerequisites for occupations.

Vocational interest batteries and aptitude batteries are given to students during their matriculation in the program. The supportive services are crucial for these young people to insure their continuation in the educational area since many come from poor families.

Students and staff help formulate the curriculum. They also help evaluate the program. By working with staff, these students are able to help make decisions about their educational experience. They learn how to make changes and also must accept responsibility for bringing about their own personal development both affectively and cognitively.

APPENDIX B

STUDENT QUESTIONNAIRE

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STUDENT QUESTIONNAIRE

This is not a test, and there are no right or wrong answers. This survey is asking for your honest opinions and feelings about different things. Your answers will be kept confidential.

Please mark the answer which best describes your true feelings regardless of whether or not you think it's what anyone else wants or would like for you to say.

Thank you for your cooperation.

PART I

1. SEX: a. Male _____ b. Female _____

2. AGE: a. 16 to 17 years _____ b. 18 years and over _____

3. If you numbered the children in your family from the oldest to the youngest, what number would you be. Answer _____

   Are you the oldest, youngest, or do you fall in the middle somewhere?

   a. Youngest _____ b. Middle _____ c. Oldest _____

4. How are in school did your mother go?

   a. Grade school only _____ (Means up to the 8th grade)

   b. Some high school but didn't finish _____

   c. Finished high school _____

   d. Attended college but didn't graduate _____

   e. Graduated from college _____

   f. I don't know _____

5. How far in school did your father go?

   a. Grade school only _____

   b. Some high school but didn't finish _____

   c. Finished high school _____

   d. Attended college but didn't graduate _____

   e. Graduated from college _____

   f. I don't know _____

6. How would your parent(s) feel about you wanting to drop out of school?

   a. Would want me to drop out _____

   b. Would not want me to drop out _____

   c. Would not care if I dropped out _____

7. How far in school do your parent(s) want you to go?

   a. Finish high school _____

   b. Finish a community or junior college _____

   c. Graduate college with a bachelor's degree _____

   d. Get some vocational training _____

   e. I don't know _____

PART II

INSTRUCTIONS: Please read each of the following questions carefully, and circle the answer that best describes your feelings. Do not skip any questions. Circle only one answer for each question.

8.	I can do well in my school work if I want to.	Agree	Disagree
9.	People who are like me will never do well in this school even though we try hard	Agree	Disagree
10.	You have to be lucky to get good grades in this school.	Agree	Disagree
11.	I can do well in this school if I work hard.	Agree	Disagree
12.	In this school, students who are like me do not have any luck.	Agree	Disagree
13.	I would do better in this school if the teachers didn't go so fast.	Agree	Disagree

14.	I think that this school is a real chance for me because it can make a real difference in my life.	Agree	Disagree
15.	Even if I could get a very good job, I'd still want to stay in school and get my education.	Agree	Disagree
16.	A high school diploma is one way to get ahead in life.	Agree	Disagree
17.	If I could get the job I wanted I'd quit school tomorrow.	Agree	Disagree
18.	Everyone should at least have a high school diploma.	Agree	Disagree
19.	I am in school in order to get a job, I don't need the education and training.	Agree	Disagree
20.	I feel that I can learn more from a very good job than I can here at school.	Agree	Disagree

NOTE: The total score is the number of underlined choices.