The Effect of Social Class, Marital Status, and Education of Parents on the Educational Performance of Participants and Non-participants in the Home-oriented, Pre-school Educational Program

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THE EFFECT OF SOCIAL CLASS, MARITAL STATUS, AND EDUCATION OF PARENTS ON THE EDUCATIONAL PERFORMANCE OF PARTICIPANTS AND NON-PARTICIPANTS IN THE HOME-ORIENTED, PRE-SCHOOL EDUCATIONAL PROGRAM

BY

W. RICHARD GOE

A thesis submitted in partial fulfillment of the requirements for the degree of MASTER OF ARTS in the DEPARTMENT OF SOCIOLOGY

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as meeting the research requirement for the master's degree.

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CHAPTER 1

STATEMENT OF THE PROBLEM

Our educational system has been a very important institution within our society during the twentieth century. This educational institution is viewed as being a primary agent of socialization during an individual's childhood years through adolescence.¹ Education is, for the most part, a necessity to become a successful and productive member of our American society. In the past, our educational system has served as a model for other countries to copy in developing their own educational systems. However, recent trends in our educational system appear to indicate that public education is on the decline. In many parts of the nation there are dropping enrollments, tax revolts and deep public concern over issues like discipline in schools, test scores, violence and vandalism, drug use, teacher strikes and conflict between educational interest groups.² Also, there appears to be a continual decline in academic standards that has pervaded all levels of education. During the past fourteen years, scores on the National Scholastic Aptitude Test, achievement tests and college board exams


have been declining. National achievement test scores have not only fallen, but have fallen simultaneously with scores dropping further and further behind old achievement norms as students progress through the grades. In lieu of this evidence, there appears to be an overall drop in academic achievement throughout our educational system. Thus, we must ask the question, "What can be done to improve academic achievement in our country?" There have been many different theories and programs designed to deal with this problem. My thesis focuses on one such program that has been tested in West Virginia.

The Home-Oriented, Pre-School Education (HOPE) Experimental Program was tested in West Virginia in 1968-71. The program was designed by members of the Appalachian Educational Laboratory in Charleston, West Virginia. The program was concerned with childhood education and was a home-oriented program for pre-school children. The program focused on rural Appalachian families. As will be described later, those children who participated in the program significantly outperformed children who did not participate in terms of pre-school educational development. A follow-up study was started by the Appalachian Educational Laboratory in 1975. Its purpose was to locate the children who had participated in the HOPE program and study them to see how they had performed throughout their academic careers as compared to children who were non-participants in the HOPE program. This was to determine if the HOPE program had a

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3 Handelman, Charles. "Decline in Academic Standards," Education. 100 (Fall, 1979): p. 49.


lasting significance in helping children who were HOPE participants and whether they significantly outperformed those children who were non-participants. As will be described later, the follow-up study data showed that HOPE participants (HOPE children) significantly outperformed non-participants (non-HOPE children) in such areas as national achievement tests, standard ability tests, school attendance, and promotion or retention in grade. This evidence seems to indicate that the HOPE program is beneficial in helping children raise their level of academic performance in these areas.

The follow-up study contained a direct interview that was administered to the parents of HOPE and non-HOPE children. A section of this interview contained questions regarding family demographic variables such as social class, education of parents and marital status of parents. The main focus of my thesis asks the question, "Do any of these demographic variables have a significant relationship with the educational performance of HOPE and non-HOPE children?" In other words, do these family demographic characteristics have an affect on the educational performance of HOPE and non-HOPE participants. Perhaps these demographic characteristics will have a stronger relationship with educational performance than participation in the HOPE program. Thus, the basic problem is determining the significance or non-significance of the relationships between these family demographic characteristics and HOPE or non-HOPE participation with child educational performance.

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6 Ibid., p. 232.
The original HOPE study was conducted from 1968 - 1971 by members of the Appalachian Educational Laboratory (AEL) of Charleston, West Virginia. The AEL had developed an educational program aimed at supplementing the public education of Appalachian children. The AEL received federal funds from the Office of Education (DHEW) to administer and investigate the effects of this educational program on the educational development of Appalachian children. The educational program designed by the AEL was originally titled the "Early Childhood Educational Program."

In order to gain an understanding of why the original HOPE study was conducted, we must understand the problem the AEL was investigating. Also, we must understand the reasoning of why and how they developed an early childhood educational program designed to serve Appalachian children.

The development of the "Early Childhood Educational Program" by the AEL was based on three assumptions:

a. The well-being and development of the individual during infancy and early childhood years is recognized by an increasing number of psychologists and educators as crucial.

b. The importance of training in the formative years is predicated on the assumption that there is a high positive correlation
between formalized pre-school training and later performance in school and society.

c. The widespread acceptance of this hypothesis is clearly demonstrated by the nation's investment in the Head Start Program during this time period.

The traditional way for meeting this need in the past has been to establish public kindergartens. These have generally been limited to urban and suburban areas; however, no state in the United States had provided an adequate program of pre-school education to rural children during the 1968-71 time period. Thus, the AEL felt that a program of this nature needed to be developed. Thus, the "Early Childhood Educational Program" was designed as an alternative to conventional kindergarten and was aimed specifically at three, four and five year old Appalachian children.

The program was aimed at Appalachia because publicly supported kindergartens were not available for most part during the 1968-71 time period. Also, the AEL felt that poverty and cultural deprivation strike deep in Appalachia and children experiencing this have been doomed to lifelong separation from the opportunities the "outside" world of America values as the right of every child. The AEL felt that the adults in the life of the average Appalachian child could not provide sufficient means of escape of this poverty and cultural deprivation because they themselves are victims. This assumption appears to be in support of the culture of poverty theory. Thus, the "Early Childhood

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Education Program was designed to affect the behavior of participant children by providing them with experiences that will counteract negative environmental influences and increase their potential to profit from later educational opportunities. The outcome of the program was proposed to be an alternative three year program of pre-school education which would prepare children at the age of six to perform those tasks expected of the average child of the first grade level in language, cognition, motor skills, orientation, and attendance skills.

The program was especially designed to be within the financial capabilities of Appalachian states.  

The program consisted of three components:

a. Television broadcasts.

b. Home visits by trained paraprofessionals.

c. Mobile classroom experiences.

Television Broadcasts

The Appalachian Educational Laboratory designed a series of educational television programs designed for children. Guides were also distributed to parents to help them understand what the child was learning from the television programs and to help them follow up the program with related activities at home. The television series and the guide were entitled Around the Bend. The television program was based on behavioral objectives which were developed by West Virginia University from a nationwide study of pre-school education programs and an  

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8 Ibid., p. 24.

9 Gots., p. 228.
assessment of three, four and five year old Appalachian children. A materials development team was employed to translate these objectives into television lessons, materials for home use by parents and children, and materials and exercises for use in group instruction in the mobile classroom. Positive factors that influenced the selection of television programs as a strategy were: (a) a television set is present in over ninety percent of homes in Appalachia, (b) most preschool children in these homes watch television several hours a day (80% watch two hours or more a day). The Appalachian Educational Laboratory assumed that children could be guided into viewing and participating in these instructional broadcasts. Also, they assumed that parents, even those with low aspiration levels, usually want their children to have better opportunities than they themselves have experienced.

The television programs were recorded on video-tape in Charleston, West Virginia. They then were sent to Oak Hill, West Virginia where they were broadcast by a commercial television station over an eight county area of southern West Virginia. The eight counties falling within this area were Fayette, McDowell, Mercer, Monroe, Nicholas, Raleigh, Summers, and Wyoming. However, the children who

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12 Appalachian Educational Laboratory., p. 4.
received the different components of the program lived in the counties of Fayette, Mercer, Raleigh, and Summers (See Appendix A). Broadcasts were one-half hour long, five days per week, for a total of 150 broadcasts a year.

**Home Visitation**

The home visitation component consisted of weekly visits to the home by a local trained paraprofessional who demonstrated to the parent how to teach the child and provide learning activities and materials. Also, they listened to parents, got their reactions to the program, counselled them, helped them solve problems, and helped put parents in contact with needed community resources relative to family health and social issues. The home visitation component operated out of the field test headquarters at Beckley, West Virginia. Eight paraprofessionals were employed to perform home visitation services. The trained paraprofessionals visited the homes one time a week for approximately one-half hour. This lasted the duration of the study.

**Mobile Classroom**

The mobile classroom consisted of a weekly one-half day group experience for the child with other children under the supervision of

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14 Gotts., p. 228.

a professionally certified teacher and an aide, thereby allowing parent and child to adjust to the gradual movement of the child away from home and into an institutional setting such as school.\textsuperscript{16} The mobile classroom provided a setting for group activities and the social development of children. Activities within the mobile classroom setting involved specific planned lessons with the program curriculum that were correlated with the lessons of \textit{Around the Bend} and the home visitation components. Each mobile classroom session served approximately ten to fifteen children.\textsuperscript{17} The mobile classroom operated out of the field test headquarters in Beckley, West Virginia, where it traveled to a specific location each day for a mobile classroom session. The mobile classroom was a fully equipped eight by twenty-two foot classroom mounted on a two and one-half ton truck chassis. It contained the complete facilities of a school classroom.\textsuperscript{18} A unique contribution of the mobile classroom was the opportunity it provided for children to learn from other children in an educationally provocative environment.\textsuperscript{19}

\textbf{Experimental Design and Sampling Procedure}

The experimental design used by the Appalachian Educational

\begin{itemize}
\item \textsuperscript{16}Gotts., p. 228.
\item \textsuperscript{17}Appalachian Educational Laboratory., p. 9
\item \textsuperscript{18}Bertram. \textit{Evaluation Report.} p. 2.
\end{itemize}
Laboratory utilized three treatment groups. The first treatment group received all three components of the program. That is, they received visits from the mobile classroom, visits from the paraprofessional home visitor, and watched the television program **Around the Bend** (TV-HV-MC). The second treatment group received home visits from the paraprofessional and watched the television program (TV-HV). The third treatment group watched only the television program (TV only).

The initial sample was selected in 1968 by randomly assigning treatments to three, four and five year old children living within randomly selected geographic grids in the rural areas of Raleigh, Fayette, Mercer, and Summers Counties. These areas were defined as rural according to the United States Bureau of Census definition. According to this definition, 84% of the TV-HV-MC group, 67% of the TV-HV group and 100% of the TV only group lived in rural areas. Additional children were added each year as some of the samples became old enough to enter the public schools. During the third year (September, 1970 - June, 1971), 291 children were enrolled in the program. The number of boys and girls enrolled were about equal. There were 95 children in the TV-HV-MC treatment group and 66 children in the TV only group (see Appendix B).

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In September, 1970, a control group of 103 children was identified in Monongalia and Upshur counties in north-central West Virginia. This group was beyond the range of the television signal and therefore did not receive any components of the program. This sample consisted of equal numbers of boys and girls who were three, four and five years of age as of that month. An additional 43 children were added to the sample. This control group did not receive components of the HOPE program. The data received from this group was then compared to that of the different treatment groups. Selection and testing of the control sample was done by the West Virginia University Human Resources Research Institute. The control group was selected from an area that was demographically similar to the areas in Raleigh, Fayette, Summers and Mercer Counties. Prior to the third year of field testing (1970-71), school personnel in the Beckley, West Virginia, field test area requested that achievement of children in kindergarten program be compared with that of children in the Appalachian Pre-School Education Program. Sixty-six children in two public school kindergartens were tested during the third field test year only.  

Program Performance

The main purpose of the program was to provide children with a learning experience that would counteract the negative environmental influence that the children faced living in Appalachia, as well as to increase their potential to profit from later educational opportunities. Thus, "learning" or increasing knowledge was the main objective of the

program. Program performance was operationally defined as learning which occurred in the target population (three, four and five year old children) as a result of the Appalachia Pre-School Education Program. The concept of learning was broken down into five main categories: cognition, language, psychomotor (motor coordination and perceptual learning), social skills and affective and interest categories.

The following instruments were used to measure child performance in the six categories. Language was operationally defined as responses to the *Illinois Test of Psycholinguistic Abilities (ITPA)*. Cognition was defined operationally as responses to the *Peabody Picture Vocabulary Test (PPVT)*, and responses to the *Appalachia Pre-School Test*, which is a picture test similar in format to the PPVT and ITPA. Intelligence was included in the cognition category. Psychomotor development was measured by scores on the *Marianne Frostig Developmental Test of Visual Perception*, and the social skills achievement of children was measured by a specially designed intersection analysis technique. Interest was defined operationally as responses to attitude checklists developed by the Appalachian Educational Laboratory. During the three years of the study, this battery of tests were given to all children participating in the different components of the program. Also, the battery of tests was given to the control group for the last two years and to the public kindergarten group the last year.\(^{23}\) The following summarizes the overall three year results of child performance in each category.

\(^{23}\textit{Ibid.}, \text{ p. 18.}\)
Cognition

Cognition was defined as the ability of a child to recognize numbers and symbols correctly and to make associations. During the first year of the program (1968-69), the Appalachia Pre-School Test (APT) was designed to measure the cognitive objectives of the Appalachian Pre-School Educational Program. Additional objectives were emphasized during the second and third year of the program and the Appalachian Pre-School Test was revised in certain areas to make sure these additional objectives were measured. The APT measured whether or not the child was learning the objectives of the program and also measured such areas as logical reasoning, sensory discrimination, and letter recognition. The items on the APT were derived from program objectives. These program objectives were taken from a study of Appalachian pre-school children as well as an examination of pre-school intervention programs which were available before the HOPE study was conducted (Hooper and Marshall, 1968). Thus, the results of the APT were considered most important to the evaluation of the program success in the cognitive category.\(^{24}\)

Overall scores on the APT showed that the TV-HV and TV only treatment groups had significantly higher scores than the control group. The TV-HV-MC group also had significantly higher scores but it was found that this was due to the paraprofessional home visitor while the mobile classroom had little effect on the cognitive objectives achieved by the children. Thus, only the TV-HV and TV only treatment groups were considered to have significantly higher scores on the APT.

\(^{24}\) Ibid., pp. 22-24.
The conclusion based on the analysis of APT data was that the television program provides the basic information for the children while the home visitors working with the parents and children effectively reinforce the program's cognitive objectives.

Cognition was also defined as the response to the Peabody Picture Vocabulary Test (PPVT). The Peabody Picture Vocabulary Test consists of a series of 150 plates, each containing four illustrations. One of the four illustrations on each plate corresponds to a key word chosen from Webster's New Collegiate Dictionary. The test examiner pronounces the proper word and the child responds by pointing out the illustration that corresponds to the word. There are different levels of the test according to the age of the child. Thus, children of different ages are started on different levels. Children are assigned raw scores on the basis of the number of correct responses. Raw scores and the chronological age of the child are used to compute a deviation IQ score with a mean of 100 and a standard deviation of 15.25

The three treatment groups and the control group were tested two times and the different IQ scores were compared to see if there was any improvement. The largest gain could be seen in the TV-HV treatment group which had an IQ score of 93.98 on the pre-test and a score of 101.87 on the post-test. This was a gain of 7.89 on the IQ score. However, this was very closely related to the TV-HV-MC treatment group which had a pre-test score of 96.34 and a post-test score of 104.20 or

\[ \text{Post-test score} = \text{Pre-test score} + \text{Gain} \]

or a gain of 7.86 on the IQ score (see Appendix C). Thus, the overall final scores were ranked by treatment with the TV-HV-MC having the highest score of 104.20; the TV-HV was second with 101.87; the TV only group was third with 96.51 and the control group was last with a score of 96.05. Thus, the treatment was considered significant in terms of cognitive objectives based on the Peabody Picture Vocabulary Test. However, it is interesting to note that on the pre-test scores, the control group outscored the TV-HV and TV only groups but showed relatively little improvement.  

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Language

The second category of objectives for the Appalachia Pre-School Education Program was language development. Language was defined operationally as responses to the Illinois Test of Psycholinguistic Abilities (ITPA). The ITPA is a nationally normed test. Thus, test scores of the treatment groups and the control group were compared to a national norm. Based on the content of the program, the Appalachian Educational Laboratory hoped that the child would model his language behavior on the example provided by the paraprofessional home visitor, the teacher in the mobile classroom and the television teacher, as the program stresses nonverbal communication, listening skills and vocabulary.

The ITPA's major function is the identification of individual deficiencies in receptive or expressive language abilities. Ten subjects are involved, each of which attempts to measure a different aspect of language skills and those cognitive abilities which are related to

26 Ibid., pp. 13-14.
language. A total score for the test gives an overall picture of the individual's psycholinguistic functioning. The following is a brief description of the content of each subtest:

**ITPA Subtest 1 (Auditory Reception)**--measures the ability of a child to derive meaning from verbally presented material.

**Subtest 2 (Visual Decoding)**--measures the child's ability to gain meaning from visual symbols.

**Subtest 3 (Auditory-Vocal Association)**--measures the child's ability to relate concepts presented orally.

**Subtest 4 (Visual Motor Association)**--is a picture association test which measures the child's ability to relate concepts presented visually.

**Subtest 5 (Verbal Expression)**--measures the child's ability to express his own concept verbally.

**Subtest 6 (Manual Expressions)**--measures the child's ability to express ideas manually.

**Subtest 7 (Grammatic Closure)**--assesses the child's ability to follow the conventional rules of grammar.

**Subtest 8 (Visual Closure)**--measures the child's ability to identify a common object from an incomplete visual presentation.

**Subtest 9 (Auditory Sequential Memory)**--assesses the child's ability to reproduce memory sequences of digits increasing in length from two to eight digits.

**Subtest 10 (Visual Sequential Memory)**--assesses the child's ability to reproduce sequences of nonmeaningful figures from memory.

The three treatment groups plus the control group were given the total test two times, once as a pre-test and once as a post-test.
All treatment groups and the control group showed improvement when comparing the mean pre-test scores to the mean post-test scores. The amount of improvement was ranked by the order of the treatment groups. The TV-HV-MC group had an improvement of 47.30; the TV-HV group had an improvement of 42.56; the TV only group had an improvement of 26.02 in overall test scores (see Appendix D). When comparing post-test scores to national normative totals, it was found that the TV-HV-MC group, the TV-HV group, and the control group had mean scores above the national norm (see Appendix E.) An analysis of a variance showed that the differences between these overall means were not significant.

The overall mean test scores indicated that there was not a significant difference between the language performance of treatment groups as compared to the control group. However, when making a breakdown of ITPA by subtests, it can be noted that there were significant differences on three of the subtests. They were Subtest Number 5, Subtest Number 6 and Subtest Number 10. This would seem to indicate that the treatments did have a significant effect on verbal and manual expression and visual sequential memory. However, it is interesting to note that the mean scores of all treatment groups and the control group on Subtest Number 5 were below national norms. Also, the TV only group scored below national norms on seven of the remaining nine subtests. This seems to support the idea that the Appalachian area faces general impoverishment in the psycholinguistic area. Thus, the results of this aspect of the overall program are inconclusive. Overall, it was found that the Appalachian Pre-School Education Program did not have a
significant effect on language development. 27

Psychomotor Skills

The psychomotor skills of a child was operationally defined as the child's response to the Marianne Frostig Test of Visual Perception. Psychomotor skills include the areas of motor coordination and perceptual learning tasks. The Frostig test was considered by the AEL to be a valid and reliable measure of the perceptual development of preschool age children. Also, it provides a national norm that can be compared with the three treatment groups and control group. The Frostig test consists of five subtests that are designed primarily as a method of assessing perceptual development, hand-eye coordination and overall motor skills. Each subtest measures a specific area and are as follows:

Subtest 1 (Eye-Motor Coordination)--the child is asked to draw continuous straight, curved, or angled lines as a test of eye-motor coordination.

Subtest 2 (Figure-Ground)--is correlated highly with reading readiness in that it measures the child's ability to discriminate shapes and configurations which is necessary in the recognition of letters and numbers in written material. The child is asked to perceive changes in figures against increasingly complex grounds.

Subtest 3 (Constancy of Shape)--this test is designed to measure recognition of certain geometric figures presented in a variety of sizes, shadings, textures, positions in spaces and their discrimination from

similar geometric figures.

Subtest 4 (Position in Space)--this test measures the child's ability to follow directions and the ability to comprehend the meaning of same and different.

Subtest 5 (Spatial Relationships)--this test measures motor coordination and short term memory. A child is shown a pattern and then draws the pattern by connecting lines onto a set of dots.

As a total instrument, the Frostig test measures the child's overall perceptual level as well as the ability to recall and transform visual configurations. Motor development is reflected by hand-eye coordination. When comparing the overall test scores to national norms, the TV-HV-MC group had higher overall test scores than the national norm while the TV only and control groups had scores below the national norm (see Appendix E*). Also, when comparing treatment groups with the control group, all treatment groups had significantly higher scores. However, when comparing the three treatment groups with each other, there were no significant differences between them. This indicates the overall effectiveness of the television program in promoting visual motor development.

The AEL came to these conclusions about the effectiveness of the three treatments on the development of psychomotor skills as measured by the Marianne Frostig Test of Visual Perception:

Mobile classroom--no effects.
Paraprofessional home visitor--had a significant contribution in the area of same-different discrimination (Subtest Number 4).
Television programs--had a major effect on eye-motor coordination, shape, constancy and the ability to conserve patterns after spatial
rotation.

The television program seemed to have a broad effect on children's perceptual motor development. The perceptual learning was hypothesized as coming from viewing the television program while the motor learning was hypothesized as coming from active involvement in drawing, cutting and other manual tasks taught on Around the Bend. Overall, the treatment had a significant effect on the development of psychomotor skills.  

Social Skills

One of the underlying objectives of the AEL Early Childhood Education Program is that there are certain social skills such as asking a question, responding to peers and initiating statements which should be an integral part of early childhood education.  

A method of measuring social skills needed to be developed. Thus, a system for observing, recording and analyzing the behavior of pre-school children was developed by the AEL. In order to permit systematic observation of social skills, it was necessary to devise a standardized situation in which children would have an opportunity to demonstrate these skills. Also, it was necessary that the situation be one in which the children would encounter little or no teacher involvement.

To demonstrate their social skills, children were divided into groups of four and were required to perform a task which involved social


29 Degelia and Miller., p. 1.
interaction. During the 1970 testing year, the task involved placing model furniture into a model house. However, this task was abandoned because it did not require group cooperation for completion and there wasn't any variation in social interaction. During the 1971 testing year, the task involved the children operating a battery operated model train. Also, the children were furnished plastic models of trees, buildings, people, and animals to place appropriately around the track. Each session was videotaped so the children's behavior could be analyzed, coded, and scored in terms of social skills. The AEL developed a classification system of social skills which consisted of 27 categories of social skills. These 27 categories fell under six major classifications: initiation, question or request for help, giving help, refusing help, group consciousness, and response to peer (see Appendix F). Each videotape session lasted approximately 20 minutes.

A trained observer/coder coded the videotapes according to the 27 categories of social skills. Approximately every three seconds, the coder who was observing the videotape key punched the numberals corresponding to the social skills category that best described the activities of the previous three seconds. This process lasted the entire length of the videotape. The cards on which the categories were punched served as data cards for computer analysis.

Through the data gathered, the AEL found that social skills development in the Appalachia Pre-School Education Program is highlighted by the importance of specialized education in the mobile classroom and the role of paraprofessionals in home visitation. It was found that the television program alone could not produce the desired social skills without the integrating and socializing function of the mobile
classroom and the home visitors. Thus, the mobile classroom and the paraprofessional were seen as significant in developing social skills in three, four and five year old Appalachian children. The AEL concluded that in order to develop social skills in pre-school Appalachian children, it is necessary to provide socialization opportunities through contacts with other children and adults outside the immediate home environment. 30

Affective and Interest Categories

This category deals with the interest of parents and children in the television program Around the Bend. It is not concerned with the behavioral objectives of the program. A questionnaire was mailed to a random sample of 300 parents whose children received different combinations of components of the overall program. Two hundred and ten replies were received for a 70% return rate. The parents were asked to compare Around the Bend with Sesame Street, Mister Rogers, Captain Kangaroo and Romper Room. They were to rate the programs according to those they liked best and least and indicate if their children watched the programs, enjoyed the programs, learned from the programs, and whether they thought the programs were good for their children. Also, the parents were asked if they watched the programs with their children.

Parents of children in AEL's program rated Around the Bend as good or better than the other programs. Around the Bend was ranked

highest by 97% of all parents responding. **Sesame Street** was second with 27% followed by **Captain Kangaroo** with 22%, **Mister Rogers** with 2% and **Romper Room** with 1% of first place ranking. Eighty percent of the parents watched the programs with their children and 90% of the parents thought their children learned from **Around the Bend** and encouraged them to watch it. These results indicate a high degree of parental support for the TV programs. 31 This could be a factor in what the child actually learns from the program. Also, it could effect how responsive the child is to the program and how often he or she watches the program.

**Comparison of treatment groups with kindergarten programs**

During the last testing year, it was decided to compare children enrolled in the Appalachian Pre-School Education Program with children enrolled in a standard kindergarten program in Princeton and Bluefield, West Virginia. The **Appalachian Pre-School Test** and the **Peabody Picture Vocabulary** were administered to the kindergarten children to see what kind of cognitive gains they had made as compared to children participating in the Appalachian Pre-School Education Program. Since the kindergarten group consisted of five year old children, they were compared only to those five year old children enrolled in the Appalachian Pre-School Education Program which were drawn from all three treatment groups. Also, a comparison was made with five year olds from the control group. Overall the TV-HV-MC group and the TV-HV group outscored the kindergarten TV only, and control group on the **Peabody Picture Vocabulary Test** with the kindergarten group being ranked third ahead

of the TV only and the control group. This was also true of the Appalachian Pre-School Test. The TV-HV-MC group and the TV-HV group consistently outscored the kindergarten group on all sections of the APT. It appears as though receiving all three components of the Appalachian Pre-School Education Program is an effective pre-school education program when compared to standard kindergarten programs, while the television program by itself is not as good as receiving the home visitation and mobile classroom experience. The kindergarten program could be viewed as being more effective than watching only the television program. Thus, it appears as though the ability for the child to interact with other children or with a teacher in an educational program is highly correlated with cognitive development.

Summary of Program Performance and Conclusions

Overall, when reviewing the different categories of program objectives, we can note the following:

Cognition—on the Appalachian Pre-School Test, the TV-HV-MC, TV-HV and TV only treatment groups all significantly outperformed the control group. However, when compared with each other, the TV-HV and TV only groups had significantly higher scores than the TV-HV-MC group. It was concluded that the television program provides basic information for the children while the home visitor working with the parents and children effectively reinforce the cognitive objectives of the program. All treatment groups significantly outperformed the control group in

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scores on the Peabody Picture Vocabulary Test. Also, the treatment
groups showed more improvement in test scores.

Language--it was found that there was no significant difference on test
scores of the Illinois Test of Psycholinguistic Abilities between the
treatment group and the control group. Thus, the program did not
appear to have a significant effect on language development. However,
when the test scores were compared to national norms, it was found that
the TV-HV-MC, TV-HV and the control group had scores above the national
norms and seems to negate the assertion that Appalachia is an im-
poverished area in terms of language development.

Psychomotor Skills--all treatment groups had significantly higher scores
on the Marianne Frostig Test of Visual Perception. When the treatment
groups were compared with each other, there was found to be no signifi-
cant difference between any of them. The AEL concluded that the tele-
vision program facilitated the development of psychomotor skills. The
TV-HV-MC group and the TV-HV group had test scores that were above
national norms while the TV only and control group had scores that were
below national norms.

Social Skills--this concerned only the treatment groups and what kind of
effect the different treatments had on the development of social skills
necessary to be successful in the educational system. They found that
the TV-HV-MC group and TV-HV group had significantly better scores in
terms of social skills. The AEL concluded the importance of socialized
education in the mobile classroom and the role of the paraprofessional
in home visitation facilitated the development of social skills.

Affective and Interest--results from a questionnaire showed that there
was a high degree of parental interest and support for the television
program Around the Bend. Most parents watched the program with their children and felt that their children were learning from the program.

Comparison with kindergarten groups--testing results showed that the TV-HV-MC group and the TV-HV group significantly outperformed both kindergarten groups on the Peabody Picture Vocabulary Test and the Appalachian Pre-School Test.

The AEL concluded that receiving all three components of the program is an effective means of pre-school education when compared to standard kindergarten programs.

Based on the study results, the AEL summarized the contributions that each different component made to the overall effectiveness of the program.

Instructural Television Program--the AEL concluded that the television program provides the basic curriculum on which the other components depend. Although it effectively teaches a number of cognitive objectives without further reinforcement, it is most effective in this area when operating in conjunction with the paraprofessional. The television program also significantly aids in perceptual motor development by encouraging manual tasks such as drawing and cutting. Further effects of the television program are evident in reading readiness skills such as the ability to recognize geometric shapes and to conserve relational patterns.

Paraprofessional Home Visitor--the paraprofessional's main function is to reinforce the child's learning from the basic curriculum. This reinforcement is done by working indirectly with the parent and directly with the child. The effectiveness of the home visitor is evident in increased learning of cognitive objectives from the television program.
and in broad areas of increased language growth. The paraprofessional also facilitates perceptual development in terms of shape recognition and reading related skills.

**Mobile Classroom**—the primary function of the mobile classroom is the development of the skills necessary for constructive social interaction. It meets the needs of rural and isolated children for structured group interaction. Data from the third year's program effort indicated that the mobile classroom experience effectively teaches children to cooperate on group tasks and facilitates their social development. Additionally, the mobile facility provides a stimulus to a child's curiosity and his overall urge to learn in rural environments. Finally, the mobile facility encourages the child to express himself freely in a nonverbal manner and to interact more freely in a group situation.\(^33\)

CHAPTER 3

THE HOPE FOLLOW-UP STUDY

The original HOPE program was considered to be a successful pre-school educational program in the Appalachian area. During the years 1971-73, AEL's HOPE experiment moved into another phase. The range of the program was expanded into five Appalachian states. The states involved were Kentucky, Ohio, Tennessee, Virginia and West Virginia. The AEL's three component approach to pre-school education was tried out in both rural and urban settings within these five states. Thus, during this time period, the original used in the original HOPE study disappeared or became part of the general school population. That is, those three, four and five year old children who participated in the original HOPE study became old enough to enter public schools and became part of the general public school population. The HOPE follow-up study began in 1975 when the AEL, supported by institutional funds, began a pilot study to determine whether the sample of children who participated in the original HOPE program could still be located in their respective county school systems. An extensive search was conducted within the Fayette, Mercer, Raleigh and Summers County school systems to see if these children could be located. At this time, more than 50% of the original sample was located. Based on the results of the original HOPE study, the AEL decided to conduct a study which would compare the academic performances of children who had participated in the original HOPE program in terms of grade point average, national
achievement tests, standard ability tests, school attendance and promotion or retention in grades. For reasons as will be described, there was no attempt to locate the outside control sample used in the original HOPE study.\textsuperscript{34}

The AEL did not try to locate the outside control group used in the original HOPE study because:

a. The AEL felt that the control was not evenly "matched" with the original TV-HV-MC, TV-HV, and TV only treatment groups.

b. The control group children had their educational experiences in a county school system which did not closely resemble the school systems in which the three treatment groups were being educated.

Thus, this outside control group was not used in the comparison study of academic performance. Therefore, the HOPE Follow-Up Study was concerned only with the educational performances of those children who were members of the TV-HV-MC, TV-HV and TV only treatment groups in the original HOPE study.

When the AEL reviewed the evaluation results of the original HOPE study, it was found that there were insignificant differences between the program performances of the TV-HV-MC and TV-HV treatment groups. Based on this finding, the AEL combined the TV-HV-MC and TV-HV treatment groups for the purposes of the HOPE Follow-Up Study. This combined group was viewed as a group of families and children who had access to a home visitation treatment during the children's pre-school years. The group was given the label "HOPE children".\textsuperscript{35}

\begin{flushleft}
\textsuperscript{34}Gotts., p. 230  \\
\textsuperscript{35}Ibid., p. 229
\end{flushleft}
The TV only treatment group became the control group for the purposes of the HOPE Follow-Up Study. It was viewed as a within-community control group which did not receive home visitation but which had been through comparable educational systems and experiences at the county level. The TV only group became the control group because prior research shows that limited pre-school educational experiences that are directed only toward the child tend to "wash out" or have little effect once the child enters the school system. Thus, the TV only treatment group became the control group and the group was given the label "non-HOPE" children.

The AEL viewed the home visitation treatment as being directed toward the families as well as the children. They hypothesized that the effects of the treatment might have facilitated the development of skills in the parents which in turn would have an effect on the development of the children. Also, they wanted to find out whether these acquired skills might have continued to be used long after the original HOPE study ended in 1971.

Thus, the HOPE Follow-Up Study is concerned with these following points:

a. The effect that the original HOPE program has on the academic performance of HOPE and non-HOPE children in terms of grade point average, school attendance, achievement test scores, standard ability test scores and promotion or retention in grades.

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37 Gotts., p. 230
b. Whether or not the original HOPE program had an effect on the development in the parents of HOPE and non-HOPE children.

c. Whether or not these acquired skills were actually used by the parents after the original HOPE program ended in 1971.

Relocation Process

During the pilot study in 1975, approximately 50% of the original HOPE sample was relocated. At that time, the children were typically in grades three through seven. The county school systems and the AEL then collaborated in assembling these children's school records from the time they entered school up to the 1974-75 school year. An analysis of the school records revealed that the HOPE children significantly outperformed the non-HOPE children in percentage of school attendance, grade point average and in total basic skills scores on a standardized test given to all children as they passed through third grade. Based on these results which showed apparent differences between the educational performances of children who were randomly assigned to the TV only or home visitation conditions, the AEL decided to seek federal assistance in conducting an in-depth, long term, follow-up study on both these children and their families. The National Institute of Education issued grants to the AEL in 1977 and 1978.

In the school year of 1977-78, the AEL made an additional effort to locate more children who were part of the original HOPE sample. Overall, 342 children were located out of approximately 600 children who participated in the original HOPE program from 1968-71. School records were further searched until all available subject grades, school attendance records and standardized achievement and ability testing
results (grades three and six) had been compiled. At this point, the youngest children had completed grade five and the oldest children grade nine. The children were in more than 100 different classrooms in the four county school systems.

These children were located through a special search process. The children's school records showed no trace of them ever having participated in the original HOPE program. Thus, they were not viewed or treated differently in their respective schools as a result of their participation in the HOPE program. Research has shown that children who have on their school records that they participated in a pre-school educational program such as Head Start, tend to be viewed and treated differently in school than those who didn't participate. The AEI reasoned that the children's school records were not biased by particular "teacher expectancy" effects. Children who were labeled as "Head Start children" or "disadvantaged children" may have special expectations which may influence how children are viewed, treated and graded. Thus, the children's school records were judged to be free of bias. 38

Sample Size

Out of the 342 children who were relocated, 48 were younger / siblings of children within the overall sample. Thus, some families had more than one child that had participated in the original HOPE program. However, in no instance were children of the same family assigned to different treatment groups in the original HOPE program. This means that there were 294 family units potentially available to

38 Ibid., pp. 229-230.
participate in the Follow-Up Study. Out of these 294 families, 215 voluntarily participated in the HOPE Follow-Up Study. Therefore, 79 families did not participate. Out of the 79 families, 33 simply refused to participate. The remaining 46 families did not participate because of the death of a parent, removal to another location out of state and other logistical reasons. Thus, the total sample for the HOPE Follow-Up Study consisted of 215 families. They consisted of 163 experimental families (HOPE families), and 52 control group families (non-HOPE families). The ratio of the experimental group to the control group was approximately three to one.\(^\text{39}\)

<table>
<thead>
<tr>
<th>Experimental group</th>
<th>163</th>
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<tbody>
<tr>
<td>Control group</td>
<td>52</td>
</tr>
<tr>
<td>Total sample size</td>
<td>215</td>
</tr>
<tr>
<td>Ratio</td>
<td>3 to 1</td>
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**Program Methodology**

The HOPE Follow-Up Study focused on three main areas: (a) the children who had participated in the original HOPE program; (b) the parents of these children; (c) the overall family unit of the children and parents and how it facilitates educational development. In each area, data was gathered through the use of different research instruments.

**Children**--the study of the educational development of the sampled children as the result of HOPE participation or non-participation involved

four basic processes. They are:

1. As described before, the gathering and comparison of school data of both HOPE and non-HOPE children consisted of grade point average, school attendance, standardized achievement test scores (grades three and six), standardized ability test scores (grades three and six) and promotion or retention in grade. My thesis primarily deals with the results of the comparison of this data.

2. The child's school teacher was asked to complete the School Behavior Checklist. This checklist revealed how the teacher viewed the behavioral development of the child. It revealed scores for coping and non-coping styles of dealing with the interpersonal environment of the school plus symptoms of personal disorganization, depression and anxiety which effect educational performance and development.

3. The children completed a "direct interview" which was administered by a local person who was specially trained by the AEL for this task. This interview consisted of questions which measured the child's educational and vocational aspirations, feelings of personal control, attitudes toward family life and associations with various persons and groups inside and outside the home.

4. The children completed an "indirect interview" which consisted of taking the Tasks of Emotional Development Test (TED). In this test, the child is asked to solve developmental problems presented in picture form. This test measures the child's orientation

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toward and success in dealing with major developmental tasks and challenges such as peer socialization, trust and conscience.

Parents—the parents of the sampled children were viewed by the AEL as possibly having an effect on the educational, sociological and psychological development of the children. The parents were studied using two basic processes:

1. The parents completed a direct, self-report interview. This instrument measured parental values, the overall home environment of the family, health, and parental view of the child's personality. Also, it contained an extensive demographic section which measured the demographic characteristics of the family such as marital status, education of the parents, and social class. My thesis primarily deals with these demographic characteristics of the family and how they correlate with the educational performance of the HOPE and non-HOPE children.

2. The parents were interviewed in their home by a local person who was specially trained by the AEL. This interview used an indirect measure of parenting skills. Parents were presented a series of pictures; each picture contained a situation that was related to child development from infancy to adolescence. The parents were asked to tell a story about a picture and in the process were asked a series of standard questions by the interviewer. Through this process, the parents revealed how they would react and handle child development challenges in the different stages of child development. Thus, the interview measured parental skills in child rearing. 41

Family Case Studies—in this aspect of the study, the family unit as a whole was studied. Its purpose was to study family interaction patterns, communication and styles of child rearing in the home. It also studied the younger siblings of children who had participated in the original HOPE study to see if the effects of the program had been extended by the parents to them as well as to the HOPE children. This section of the study did not involve the whole relocated sample. Rather, it involved only a subsample consisting of 28 experimental families and 12 control families.\textsuperscript{42} The process consisted of a single interviewer going to a home and interviewing and observing the family. The interviewer rated the family in terms of child temperament, problem solving techniques in child rearing, inter-generational influences on parents from their parents, styles of family communication, levels of moral reasoning, characteristics of younger siblings if present in the family, conditions of the home, rituals that are important to the family, how family members pass the time of day, family interaction at mealtime, openness of family members during the visit, living arrangements and nonverbal aspects of communication.

HOPE Follow-Up Study Results

Children—an analysis of grade point average shows that the HOPE children significantly outperformed the non-HOPE children in grade 1 (p. = .025) and grade 2 (p. = .017). For grades 3 and following, school grades were not significantly different between the two groups. Over the first six grades, HOPE children had significantly better

\textsuperscript{42} Ibid., pp. 27-29.
attendance than non-HOPE children (p. less than .01). On standardized achievement tests, HOPE children significantly outperformed non-HOPE children in basic skills areas (p. is less than .01). On standardized achievement tests, HOPE children significantly outperformed non-HOPE children in basic skills areas (p. is less than .01). Also, the HOPE children scored above national norms while the non-HOPE children did not. The HOPE children also significantly outscored the non-HOPE children on standard ability tests (p. is less than .01). Also, the HOPE children again scored above national norms while the non-HOPE children scored below national norms. When comparing promotion or retention in grades, subsamples were drawn consisting of 80 HOPE children and 90 non-HOPE children. Between grades 1 and 9, only four of the 80 HOPE children repeated a grade while ten of the non-HOPE children repeated a grade. Thus, approximately 25% of the non-HOPE subsample repeated a grade while only 5% of the HOPE children were retained. This evidence shows that the home visitation component of the HOPE program appears to reduce retention in grades.

In terms of the School Behavior Checklist, HOPE children were found to show less disorganization in classroom behavior, show less symptoms of depression, less aggressive behavior and more responsible behavior than non-HOPE children. Only 28% of the HOPE children were shown to have significant behavior problems while 40% of the non-HOPE children did. On the basis of total scores, 72% of the HOPE children were classified as coping while only 50% of the non-HOPE children had this classification; 28% of the HOPE children were classified as non-coping while 40% of the non-HOPE children were non-coping. Thus, it appears as if the home visitation treatment helps a child cope
significantly better with the educational environment of the school system. It also appears to reduce mild behavioral disorders by about 12%.

Results on the indirect interview and the *Tasks of Emotional Development* Test are inconclusive. The AEL encountered methodological problems in scoring these two interviews. Thus, the comparative data is not available at this point in time and will not be available until the end of 1981.43

In summary, the HOPE program appears to have some lasting effects and helped the HOPE children significantly outperform non-HOPE children in school attendance, standardized achievement tests, standard ability tests and promotion or retention in grade. Also, it appears to help children "cope" more efficiently with the school environment.

Parents--since my thesis does not deal with the study results found on parents, I feel it is adequate to describe the study findings in a brief form. The results of the direct interview found that the academic orientation of HOPE mothers was highly different from the academic orientation of non-HOPE mothers. Also, HOPE mothers had higher levels of aspirations, higher expectations and greater satisfaction with their children's academic achievement. It was found that there was no significant difference in parenting styles between the two groups. However, HOPE mothers had a greater tendency to provide support for learning at home.

The results of the indirect interview were categorized into three categories:

1. Perceptiveness--perceptiveness of the parents regarding child development issues.

2. Outcome--whether parents had a more positive and long range outcome in regards to child development situations versus more negative short range outcomes.

3. Teaching-learning--whether parents had an understanding of the teaching or learning involved in a child development situation.

Study results show that HOPE parents were significantly more perceptive of child development issues than non-HOPE parents. HOPE parents consistently viewed the outcomes of child development more positively and in larger term perspectives than did non-HOPE parents. Finally, HOPE parents had a significantly better understanding of the teaching and learning potentials in child development situations than non-HOPE parents. In summary, it appears as though the HOPE program had an enduring effect upon the parents who received the home visitation component (HOPE) as compared to those parents who received only the television broadcast (non-HOPE).^44

Family Case Studies--the basic purpose of the family case studies was to gather additional information that was not gathered by the interviews of both children and parents. This area of investigation has not been fully completed yet. Preliminary findings suggest that there are differences between HOPE children and non-HOPE children in their general style of adaptation to the educational environment. HOPE parents were found to be more "firmly directive" in parental authority more traditional, and showed more affection and responsiveness toward

^44 Ibid., pp. 23-27.
their children. There were no significant differences between HOPE and non-HOPE parents in parental control, clarity of parental role expectations, intellectual stimulation in child rearing and supportiveness and encouragement of maturity.45

The entire HOPE Follow-Up Study has not been totally completed. However, study results indicate that the HOPE program does have an effect on the academic performance of those children who were originally in the TV-HV-MC and TV-HV treatment groups. Also, the HOPE program appears to help children adapt and "cope" better with the educational environment of the school system and the HOPE program appears to have lasting effects on the parents of HOPE children in how they facilitate the educational development of their children.

45Ibid., pp. 31-33.
CHAPTER 4

REVIEW OF LITERATURE

The AEL was concerned with investigating the lasting effects of the HOPE program on the actual educational performance of participants during their primary education. My investigation concerns the possible significant effects of family demographic characteristics (social class, education of parents and marital status of parents) as well as the HOPE program on the educational performance of the participants and non-HOPE participants during their primary education. Thus, I am asking the question, "What kind of effects do these family demographic characteristics have on child educational performance?"

In investigating this question, I am assuming that the home environment and family characteristics do have an effect on child educational performance. Therefore, I want to compare the significance of these demographic characteristics with that of the HOPE program and see exactly what kind of effect they have on child educational performance.

Past research has shown that the home environment has an influence on child educational performance. Trotman (1977) found that there was an overall significant, positive relationship between the intellectual home environment and a child's academic achievement.\footnote{Trotman, Francis K. "Race, IQ, and the Middle Class," Journal of Educational Psychology. 69 (June, 1977): p. 268.} Swick and Willis (1973) found that: (a) the initial learning
environment is the home; (b) parent-child interaction in the home establishes a great deal of social, emotional, and intellectual behavioral patterns that will be taken to the school environment; and (c) the behavioral origins of school success are begun in the home. 47 Finchek (1979) found that educational opportunity and educational achievement are determined to an appreciable extent by conditions that begin early in life. 48 Bronfenbrenner (1976) found that whether and how people learn in educational settings is a function of: (a) the relations between the characteristics of the learner and his or her different environments; and (b) the relations that exist between these different environments. 49 Thus, it appears as though the home environment has a significant influence on child educational performance.

Past research indicates that the social class and socioeconomic status of a child's family has an effect on his or her educational performance. Kahl (1953) found that social class and related values strongly influence school work. 50 Sewell and Hauser (1975) found that socioeconomic status is an important determinant of educational attainment at each level of education. 51 Squibb (1973) found that


there is a connection between the values of socioeconomic groups and their educational attainment.\textsuperscript{52}

There has been contrary evidence found as to whether or not social class and socioeconomic status have a significant influence on child educational performance. Marjoribanks (1979) found that socioeconomic status has little or no influence on the academic performance of students of equal intellectual ability.\textsuperscript{53} Sewell (1980) found that the socioeconomic status of a child's parents have little or no effect on the child's grades independent of measured ability. However, he also found that socioeconomic status does have strong effects on significant others' influences and educational aspirations which in turn influence educational achievement.\textsuperscript{54} Good (1978) found that there are not marked differences in classroom achievement of students from a low socioeconomic status background as compared to students of a high socioeconomic status background.\textsuperscript{55}

On the other hand, Stauffer and Hinzman (1980) found that children of a low socioeconomic status background scored significantly

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\textsuperscript{53} Marjoribanks, Kevin. "Intelligence, Social Environment, and Academic Achievement: A Regression Surface Analysis," \textit{The Journal of Experimental Education. 47} (Summer, 1979): p. 346


lower on three out of four subtests of the Stanford Early School Achievement Test as compared to children from middle and high socio-economic status backgrounds. Also, this was true of overall test scores.  

Lindsey and Cherkaoui (1975) found that there were differences in academic achievement among children belonging to different socialization processes that were experienced by upper and middle class members as compared to lower and working class members. Also, they found that public school systems tend to support and teach middle and upper class values and students are judged by how they adapt to this value system.  

Touliatos, Lindholm and Rich (1978) found that there were significant differences in overall test scores on the California Achievement Test between social classes. Children from higher social classes tended to do better than children from the lower social classes.  

Safer, Heaton and Allen (1977) found that the percentage of students retained at least once during the course of elementary school is approximately three times greater in the lower socioeconomic sample group of their study than the upper socioeconomic status sample group. Children from high, middle and low socioeconomic groups were found to have IQ and academic achievement levels that were relative to


their parents' socioeconomic status. Gordon (1976) found that middle class children had significantly higher IQ achievement test scores than lower and working class children. Thus, some past research indicates that social class or socioeconomic status is significant in affecting child educational performance while other past research indicates it is not significant.

Several educational studies have indicated that the educational level of both a child's mother and father has a strong influence on the educational aspirations of the child. Benbon and Stanley (1980) found that parental educational levels were highly correlated with the mathematical ability of their children. In this study, family profiles were gathered for 893 children who scored above the 97th percentile on the mathematics portion of a standardized achievement test. Of these children, 45% of their fathers were educated beyond college, 21% of the fathers were college graduates, 16% had completed some college, 14% had only a high school diploma and only 4% had not graduated from high school. Of the children's mothers, 21% were educated beyond college, 24% were college graduates, 25% had completed some college, 29% had a high school diploma and only 2% had not graduated from high school. Thus, these parents were highly educated and the mathematical ability


60 Sewell and Hauser., p. 343.

of these children was found to be highly and positively correlated with their parent's educational level. 61 Stanley, Keating and Fox (1974) found that children who score high on tests of intellectual ability tend to have well educated parents. 62 Rayder and Abrams (1978) found the level of education of a child's parents was significantly correlated with overall achievement test performance. 63 Moock (1978) found that the educational attainment of the mother of a pre-school child is related positively to the IQ of the child when tested later in school and to the educational attainment of the child. 64 Thus, it appears as if a child's educational performance and attainment is correlated with the level of education of his or her parents.

A child's intellectual development is profoundly influenced by family configuration. 65 Since our divorce rate has increased, perhaps the presence of a one parent family as opposed to a two parent family would have an affect on a child's educational performance. Research on academic achievement as related to one or two parent families is contradictory. Hammond (1979) found that there were no significant


differences in reading or mathematics achievement between children of intact or divorced families. Fowler and Richards (1978) found that fatherless children do not differ from children with fathers in their preparedness to enter the school systems. Kelly and Wallerstein (1976) found that divorce affects some children negatively at school while other children it affects positively as they view school as a release from the tension they encounter at home. Rubin and Price (1979) found that poor academic performance and withdrawal at school characterizes children in the latency period of development (5-7 years) whose parents have had a divorce. However, children in the later latency stage (8-10 years) were found to be more self-assured with their academic performance not being affected to the same degree.

Some research has shown that living in a one parent family as compared to a two parent family has a definite negative effect on child educational performance. Brown (1980) found that the achievement test scores and grades of children being reared in single parent families tend to be lower than those of children being reared in two parent families. Touliatos, Lindholm and Rich (1978) found that children


from two parent families significantly outperformed those from one
parent families in overall test scores on the *California Achievement*
Test. Aler (1980) found that divorce causes a high degree of stress
among children. A high degree of stress will almost certainly affect
children's behavior and ability to perform in the classroom.

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72 Aler, Robert D. "Helping Children Understand Divorce," *Today's
CHAPTER 5

STATEMENT OF HYPOTHESES

The scope of my study involves only those children who were part of the HOPE Follow-Up Study. For the purposes of this study, child educational performance will be defined as the following:

a. Retention in grade--number of grades repeated.

b. School attendance--percentage of days attended during the first five years of school.

c. Achievement test scores.

d. Standard ability test scores.

e. Grade point average--over the first five years of school.

This data was gathered by the AEL during the HOPE Follow-Up Study.

Using a deductive approach, I will make the following hypotheses on the effect of social class, education of parents and marital status of parents on the educational performance of participants and non-participants in the HOPE program:

Social class: H1 = social class will be significantly correlated with child educational performance (the higher the social class, the better the child educational performance).

Ho = social class will not be significantly correlated with educational performance.

Education of parents: H1 = the educational level of a child's parents will be significantly correlated with child educational
performance (the higher the level of the parents' education, the better the child educational performance).

\( H_0 = \) the educational level of parents will not be significantly correlated with child educational performance.

Marital status of parents: \( H_1 = \) the marital status of a child's parents will not be significantly correlated with educational performance.

\( H_0 = \) the marital status of a child's parents will be significantly correlated with child educational performance; those children of two parent families will significantly outperform those of one parent families.

Additionally, I plan to investigate the claims of the AEL that the HOPE program had a significant effect on child educational performance in terms of promotion or retention in grades, school attendance, achievement test scores and standard ability test scores.
CHAPTER 6

METHODOLOGY AND FINDINGS

All the data required to complete my investigation has already been gathered by the AEL. The necessary child data was gathered by searching school records while the necessary parental data was obtained through the direct parent interview. This data was keypunched by the AEL onto computer cards. Each separate case was assigned an identification number. Thus, child and parent data cards had to be matched into a complete set of family data. When this was completed, there was a total of 219 data sets. This was four more cases than was reported in the Childhood and Parenting Research Program Final Report. Therefore, N = 219. The computer data was coded by the AEL in the following manner:

Child Data

a. Promotion or retention in grade--consisted of the number of grades repeated. The data was coded as the following:

   Number of grades repeated:  0__, 1__, 2__, 3 or more __. A frequency run showed that there were two missing data cases, a mean of 0.124 and a standard deviation of 0.370. This shows that a majority of the children had not repeated any grades.

b. School attendance--was in the form of a percentage which was obtained from the following formula:

   \[
   \frac{\text{Total days attended for grades 1-5}}{\text{Total school days for grades 1-5}} \]

A frequency run showed seven missing data cases, a range of 79.3% to
99.9%, a mean of 95.344 and a standard deviation of 3.222.

c. Achievement test scores--through a special process, the AEL combined achievement test scores from the third and sixth grades and arrived at a figure which showed the combined scores in relation to national norms. A negative number means that the score is below national norms while a positive number means it is above national norms. Thus, a score of 0.0 means the score is exactly the same as the national norm. A frequency run showed five missing data cases, a range of -2.28 to 2.02, a mean of 0.069 and a standard deviation of 0.949. This shows that the average score was above the national norm.

d. Standard ability test scores--the scores were coded in the same manner as the achievement test scores except that they included test scores taken at the pre-school, first, third and sixth grade levels. A frequency run showed two missing data cases, a range of -2.07 to 2.16, a mean of 0.159 and a standard deviation of 0.833. This shows that the average score was above the national norm.

e. Grade point average--included the total grade point average for grades one through five. The AEL used a slightly different system than that used in public schools. In their system, A = 5, B = 4, C = 3, D = 2, and F = 1. Thus, the scores could range from 1.0 to 5.0. A frequency run showed six missing data cases, a range of 1.87 to 4.96, a mean of 3.926 and a standard deviation of 0.726. Thus, the average child had close to a B average.

Parent Data

a. Marital status--the marital status of a child's parents was coded as follows:
1 = married
2 = divorced
3 = separated
4 = widowed
5 = other

A frequency run showed the following responses in each category:

<table>
<thead>
<tr>
<th>Responses</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>195</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
</tr>
</tbody>
</table>

The frequency of responses in categories 2, 3, 4 and 5 did not have a high enough frequency to be representative when compared to the frequency of responses in the first category. Thus, the effect of marital status on child educational performance had to be eliminated from my investigation as the data was unrepresentative and any generalizations made from the data would be invalid.

b. Education of parents--this included the educational level of the interview respondent and his or her spouse's educational level was measured on a Hollingshead index. This is a seven point scale with each point representing a different level of educational attainment. The scale is as follows:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Level of Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Graduate school experience or professional</td>
</tr>
<tr>
<td>2</td>
<td>Four year college degree</td>
</tr>
<tr>
<td>3</td>
<td>Some college, vocational or technical education</td>
</tr>
<tr>
<td>4</td>
<td>High school graduate</td>
</tr>
<tr>
<td>5</td>
<td>Completed 10th-11th grade--not completed high school</td>
</tr>
<tr>
<td>6</td>
<td>Completed grade 9</td>
</tr>
<tr>
<td>7</td>
<td>Less than 7 years education</td>
</tr>
</tbody>
</table>

A frequency run on the respondents' educational level showed that there were two missing data cases, a mean of 4.106 and a standard deviation of 1.144. Thus, the average respondent had a high school education. A frequency run on the spouse's educational level showed thirteen missing data cases which accounted for the unrepresentative number of one parent families. Also, it showed a mean of 4.204 and a standard deviation of 1.302. Thus, the average spouse also had a high school education.

c. Social class--to determine the effect of social class on child educational performance, I used two different indicators of social class. The first was a subjective identification of social class by the respondent. The respondent was asked to identify with a social class and the responses were coded using the following categories:

- 1 = Upper class
- 2 = Upper middle class
- 3 = Middle class
- 4 = Working class
- 5 = Lower class

A frequency run showed that there were two missing data cases, a mean
of 3.227 and a standard deviation of 0.625. Thus, the average respondent identified with the middle class. Altogether, 136 respondents identified with the middle class and 63 identified with the working class which accounts for 92% of the total sample. This supports the findings of Centers (1949) and Gross (1953) who stated that when asked to choose among the different categories of social classes, people generally would identify with the middle or working class due to the stigma of the lower class label. 74

The second indicator of social class involved the measurement of socioeconomic status. The AEL used a Hollingshead two factor index to measure socioeconomic status. The Hollingshead index is a seven point scale and may be used as a numerical indicator of occupation and level of education. 75 The Hollingshead two factor index combines these two measurements into a measurement of socioeconomic status and uses the following formula:

\[ \text{Head of household occupation} \times 7 + \text{Head of household education} \times 4 \]

Using this formula, the lowest total obtainable would be 11 and the highest total would be 77. Thus, the index uses a certain range of numbers to indicate a certain level of socioeconomic status and is as follows:


75 Miller., pp. 235-238
A frequency run showed 18 invalid data cases, a range of 11 to 77, a mean of 48.817 and a standard deviation of 17.701. Thus, the average family in the sample was on the borderline of middle and upper-lower socioeconomic status.

Descriptive statistics were used to investigate the relationships in the data set. Linear relationships were assumed to exist among the study variables. Multivariate correlation and regression analyses were used to test the significance of the relationships among variables. The multiple regression analysis used the following models:

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital status</td>
<td>Retention in grade</td>
</tr>
<tr>
<td>Respondent's education</td>
<td></td>
</tr>
<tr>
<td>Spouse's education</td>
<td></td>
</tr>
<tr>
<td>Subjective social class</td>
<td></td>
</tr>
<tr>
<td>Hollingshead SES</td>
<td></td>
</tr>
<tr>
<td>HOPE or non-HOPE</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>School attendance</td>
</tr>
<tr>
<td>Spouse's education</td>
<td></td>
</tr>
<tr>
<td>Subjective social class</td>
<td></td>
</tr>
<tr>
<td>Hollingshead SES</td>
<td></td>
</tr>
<tr>
<td>HOPE or non-HOPE</td>
<td></td>
</tr>
</tbody>
</table>
Independent Variables

- Marital status
- Respondent's education
- Spouse's education
- Subjective social class
- Hollingshead SES
- HOPE or non-HOPE

Dependent Variable

- Achievement test scores
- Standard ability test scores
- Grade point average

The multivariate correlational analysis revealed contradictory evidence towards the significance of the enduring effects of the HOPE program on child educational performance (see Appendix G). HOPE participation was significantly correlated with less retention in grade but was not significantly correlated with better school attendance, higher achievement and standard ability test scores and high grade point average. A high degree of parental education was significantly
correlated with high achievement and standard ability test scores and high grade point average. The analysis revealed that low socioeconomic status was significantly correlated with greater retention in grade. Also, high socioeconomic status was significantly correlated with higher achievement and standard ability test scores and high grade point average. Subjective social class was significantly negatively correlated with achievement and standard ability test scores and grade point average indicating that children whose parents identified themselves with the lower social classes tended to have a lower grade point average and lower standard ability and achievement test scores.

It is interesting to examine other significant correlations that were not related to my investigation. For example, the families of HOPE participants tended to be two parent families and have a higher degree of parental education. Also, those one parent families that were studied tended to have a lower degree of parental education and were of low socioeconomic status.

Stepwise regression analyses were conducted on the data to determine the relative strength of the predictive variables when they were considered simultaneously. The stepwise regression involving the effect of the independent variables on retention in grade showed that only Hollingshead socioeconomic status was significant in reducing unexplained variance in the dependent variable. The remaining variables were insignificant. This one variable model explained only 4.9% of the variance in the dependent variable. The remaining variables were insignificant (see Appendix H). The "best regression model" is presented below in standardized regression coefficient form:
\[ Y = 0.232 X_1 + 0.975e \]
\[ Y = \text{Retention in grade} \]
\[ X_1 = \text{Hollingshead socioeconomic status} \]
\[ e = \text{Residual error} \]

The stepwise regression using school attendance as the dependent variable showed that none of the independent variables were significant in reducing unexplained variance in the dependent variable (see Appendix I). Thus, none of the independent variables were significantly predictive of school attendance.

The stepwise regression using achievement test scores as the dependent variable showed that two independent variables were Hollingshead socioeconomic status and subjective social class (see Appendix J). This two variable model explained only 12.6% of the variance in the dependent variable. The remaining independent variables were insignificant. The "best regression model" is shown below in standardized regression coefficient form:

\[ Y = 0.297X_1 - 0.160X_2 + 0.935e \]
\[ Y = \text{Achievement test scores} \]
\[ X_1 = \text{Hollingshead socioeconomic status} \]
\[ X_2 = \text{Subjective social class} \]
\[ e = \text{Residual error} \]

The stepwise regression using standard ability test scores as the dependent variable showed that two independent variables were significant in reducing unexplained variance in the dependent variable. These two independent variables were Hollingshead socioeconomic status and the respondent's education level (see Appendix K). This two variable model explained only 12.9% of the variance in the dependent
variable. The remaining independent variables were insignificant. The "best regression model" is shown below in standardized regression coefficient form:

\[ Y = 0.259X_1 + 0.933e \]
\[ Y = \text{Standard ability test scores} \]
\[ X_1 = \text{Hollingshead socioeconomic status} \]
\[ X_2 = \text{Respondent's education level} \]
\[ e = \text{residual error} \]

The stepwise regression model using grade point average as the dependent variable showed that two independent variables were significant in reducing unexplained variance in the dependent variable. These two independent variables were Hollingshead socioeconomic status and subjective social class (see Appendix L). Again, this two variable model explained only 12.9% of the variance in the dependent variable. The other independent variables were insignificant. The "best regression model" is shown below in standardized regression coefficient form:

\[ Y = 0.310X_1 - 0.146X_2 + 0.933e \]
\[ Y = \text{Grade point average} \]
\[ X_1 = \text{Hollingshead socioeconomic status} \]
\[ X_2 = \text{Subjective social class} \]
\[ e = \text{Residual error} \]
CHAPTER 7

SUMMARY AND CONCLUSIONS

HOPE participation was found to be significantly correlated with less retention in grade but was not significantly correlated with better school attendance and higher standard ability and achievement test scores as was indicated by the AEL. Perhaps, the AEL needs to reinvestigate their findings. Also, HOPE participation was not a significant variable in any of the stepwise regression analyses. This indicates that when considered with other variables, the effect of the HOPE program on child educational performance becomes "washed out" and perhaps is not as significant as was reported.

Parental education, both respondent education and spouse's education, was found to be significantly correlated with three out of five child educational performance categories. This indicates that the higher the degree of parental education, the higher the child's achievement test scores, standard ability test scores and grade point average. On the basis of this evidence, I accept the hypothesis H1, the educational level of a child's parents will be significantly correlated with child educational performance (the higher the level of the parent's education, the better the child educational performance). I reject the hypothesis Ho, the educational level of parents will not be significantly correlated with child educational performance.

However, when considered in the stepwise regression analyses,
the respondent educational level was significantly related to only standard ability test scores. The spouse's educational level was insignificant in all the stepwise regressions. This indicates that, by itself, parental education is significantly correlated with standard ability test scores, achievement test scores, and grade point average. However, when considered with other variables, parental education is insignificant as an overall predictor of child educational performance.

The effect of marital status on child educational performance could not be considered in this investigation as there was an unrepresentative number of two parent families as compared to one parent families. Therefore, any generalizations made from this data would be invalid and the acceptance or rejection of the hypotheses cannot be done.

Social class was found to be highly correlated with child educational performance. Hollingshead socioeconomic status was found to be significantly correlated with four out of five child educational performance categories, indicating that the higher the socioeconomic status, the less the retention in grade, and the higher the achievement test scores, standard ability test scores and grade point average. Subjective social class was found to be significantly correlated with three out of five child educational performance categories indicating that the higher the social class identification by parents, the higher the child's achievement test scores, standard ability test scores and grade point average. On the basis of this evidence, I accept the hypothesis H1, social class will be significantly correlated with child educational performance (the higher the social class, the better the child educational performance). Also, I reject the hypothesis H0, social class will not be significantly correlated with child educational performance.
The stepwise regression analyses showed that Hollingshead socioeconomic status was significant in four out of five stepwise regressions. Also, subjective social class was significant in two stepwise regressions. Each time subjective social class was significant, it combined with Hollingshead socioeconomic status to form a two variable model. It is important to remember that Hollingshead socioeconomic status consists of the level of education and occupation of the head of the household. Therefore, it appears as if the educational and occupational level of the head of the household is significant in predicting child educational performance. Hollingshead socioeconomic status was found to be significantly predictive of retention in grade, achievement test scores, standard ability test scores and grade point average. Subjective social class was found to be significantly predictive of achievement test scores and grade point average. It is interesting to note that the most powerful regression models were those that consisted of Hollingshead socioeconomic status and subjective social class. However, at best, this two variable model explained only 12.9% of the variance in grade point average and 12.6% of the variance in achievement test scores.

Thus, it appears as if subjective social class and especially Hollingshead socioeconomic status are significant variables in predicting child educational performance. However, a prediction of child educational performance based solely on these two variables would be inaccurate as the variables are not very predictive. Therefore, it must be concluded that child educational performance is influenced by a greater number of variables than were used in this study. Further research needs to be conducted to determine exactly what these
influential variables are. Perhaps then, more accurate and influential steps can be taken to correct our decline in educational standards and performance.
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Books


Reports Published


APPENDIX B
APPENDIX B

Size of the Different Treatment Groups in the HOPE Study

<table>
<thead>
<tr>
<th>Age</th>
<th>TV-HV-MC</th>
<th>TV-HV</th>
<th>TV only</th>
<th>Control</th>
<th>Kindergarten</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>25</td>
<td>34</td>
<td>13</td>
<td>36</td>
<td>--</td>
</tr>
<tr>
<td>4</td>
<td>39</td>
<td>47</td>
<td>22</td>
<td>34</td>
<td>--</td>
</tr>
<tr>
<td>5</td>
<td>31</td>
<td>49</td>
<td>31</td>
<td>33</td>
<td>66</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>130</td>
<td>66</td>
<td>103</td>
<td>66</td>
</tr>
</tbody>
</table>
APPENDIX C
APPENDIX C

PPVT pre-test and post-test IQ scores by treatment

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV-HV-MC</td>
<td>96.54</td>
<td>104.20</td>
<td>95.98</td>
<td>101.87</td>
<td>89.05</td>
<td>96.51</td>
<td>94.08</td>
<td>96.05</td>
</tr>
<tr>
<td>TV-HV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TV only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D
APPENDIX D

Pre-test and Post-test means, standard deviations and sample sizes for ITPA total raw score

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>TV-HC-MC Pretest</th>
<th>Post-test</th>
<th>TV-HV Pretest</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>M</td>
<td>x= 75.50, N= 10, o= 24.27</td>
<td>x= 140.91, N= 12, o= 34.8</td>
<td>x= 86.33, N= 11, o= 23.85</td>
<td>x= 123.13, N= 16, o= 33.3</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>x= 80.00, N= 11, o= 25.55</td>
<td>x= 127.92, N= 13, o= 28.1</td>
<td>x= 71.40, N= 10, o= 33.37</td>
<td>x= 124.00, N= 18, o= 42.8</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>x= 132.88, N= 9, o= 26.70</td>
<td>x= 172.35, N= 20, o= 27.4</td>
<td>x= 118.22, N= 9, o= 45.54</td>
<td>x= 150.68, N= 25, o= 47.4</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>x= 124.13, N= 9, o= 3.63</td>
<td>x= 179.05, N= 19, o= 35.5</td>
<td>x= 140.50, N= 10, o= 28.02</td>
<td>x= 174.96, N= 22, o= 39.8</td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>x= 172.15, N= 13, o= 27.36</td>
<td>x= 211.06, N= 16, o= 31.2</td>
<td>x= 167.75, N= 8, o= 39.08</td>
<td>x= 195.18, N= 27, o= 39.7</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>x= 160.10, N= 11, o= 23.59</td>
<td>x= 193.20, N= 15, o= 29.3</td>
<td>x= 155.10, N= 10, o= 38.69</td>
<td>x= 185.32, N= 22, o= 38.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>x= 126.15, N= 63, o= 22.97</td>
<td>x= 173.45, N= 95, o= 29.13</td>
<td>x= 121.13, N= 58, o= 38.07</td>
<td>x= 163.69, N= 130, o= 40.81</td>
</tr>
</tbody>
</table>
## APPENDIX D

Pre-test and Post-test means, standard deviations and sample sizes for ITPA total raw score

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
<th>TV only</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pre-test</td>
<td>Post-test</td>
</tr>
<tr>
<td>3</td>
<td>M</td>
<td>x= 67.27 N= 11 o= 29.44</td>
<td>x= 94.63 N= 8 o= 29.9</td>
</tr>
<tr>
<td>3</td>
<td>F</td>
<td>x= 81.40 N= 5 o= 28.46</td>
<td>x= 102.00 N= 5 o= 27.8</td>
</tr>
<tr>
<td>4</td>
<td>M</td>
<td>x= 123.01 N= 13 o= 34.78</td>
<td>x= 172.86 N= 14 o= 36.9</td>
</tr>
<tr>
<td>4</td>
<td>F</td>
<td>x= 116.50 N= 10 o= 35.61</td>
<td>x= 120.88 N= 8 o= 43.3</td>
</tr>
<tr>
<td>5</td>
<td>M</td>
<td>x= 141.38 N= 8 o= 38.61</td>
<td>x= 180.92 N= 12 o= 45.7</td>
</tr>
<tr>
<td>5</td>
<td>F</td>
<td>x= 153.00 N= 13 o= 34.24</td>
<td>x= 191.16 N= 19 o= 31.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>x= 117.19 N= 60 o= 33.95</td>
<td>x= 158.44 N= 66 o= 35.88</td>
</tr>
</tbody>
</table>
APPENDIX E

Post-test scores on the ITPA as compared to national norms

<table>
<thead>
<tr>
<th>Group</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
<th>Score 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Mean</td>
<td>173.45</td>
<td>163.87</td>
<td>158.43</td>
<td>147.55</td>
</tr>
<tr>
<td>TV-HV-MC</td>
<td>158.83</td>
<td>158.83</td>
<td>173.84</td>
<td>147.00</td>
</tr>
<tr>
<td>TV-HV</td>
<td>62 mos.</td>
<td>62 mos.</td>
<td>65 mos.</td>
<td></td>
</tr>
<tr>
<td>TV only</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>59 mos.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX E*
APPENDIX E

Scores on the Frostig test as compared to national norms

<table>
<thead>
<tr>
<th>Group</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV-HV-MC 62 mos.</td>
<td>33.25</td>
</tr>
<tr>
<td>TV-HV 62 mos.</td>
<td>31.13</td>
</tr>
<tr>
<td>TV only 65 mos.</td>
<td>31.81</td>
</tr>
<tr>
<td>Control 59 mos.</td>
<td>29.76</td>
</tr>
<tr>
<td></td>
<td>34.62</td>
</tr>
<tr>
<td></td>
<td>23.73</td>
</tr>
<tr>
<td></td>
<td>28.18</td>
</tr>
</tbody>
</table>
# APPENDIX F

Social Skills Categories: An Observational System

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Initiation</td>
</tr>
<tr>
<td>12</td>
<td>Question or Request for Help</td>
</tr>
<tr>
<td>21</td>
<td>Giving Help</td>
</tr>
<tr>
<td>22</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

**Initiation**

- **11**: Initiates constructive or neutral statement: a statement that does not impede the completion of the task or interaction between group members. Declarative statements to the teacher; verbal enthusiasm.
- **12**: Initiates nonverbal constructive or neutral action to peer; shows or gives an object to peer.
- **13**: Initiates antagonistic statement.
- **14**: Initiates antagonistic action.

**Question or Request for Help**

- **21**: Asks a question of peer.
- **22**: Requests assistance verbally of peer.
- **23**: Requests assistance nonverbally of peer.
- **24**: Asks a verbal or nonverbal question of the teacher.
- **25**: Listens to the teacher or responds to teacher's question.

**Giving Help**

- **31**: Gives help on own initiative or in response to categories 22, 23 or as needed. This is nonverbal.
- **32**: Gives help on own initiative when not needed. This is nonverbal.
<table>
<thead>
<tr>
<th>Code No.</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Refusing Help</strong></td>
</tr>
<tr>
<td>41</td>
<td>Refuses request for assistance with good reason--verbally or nonverbally.</td>
</tr>
<tr>
<td>42</td>
<td>Refuses a reasonable request of assistance--verbally or nonverbally.</td>
</tr>
<tr>
<td></td>
<td><strong>Group Consciousness</strong></td>
</tr>
<tr>
<td>51</td>
<td>Shows nonverbal enthusiasm.</td>
</tr>
<tr>
<td>52</td>
<td>Participates quietly with group on task.</td>
</tr>
<tr>
<td>53</td>
<td>Withdraws from group and works alone.</td>
</tr>
<tr>
<td>54</td>
<td>Does not work on the project whether alone or with group; watches others, bored, etc.</td>
</tr>
<tr>
<td>55</td>
<td>Withdraws for security.</td>
</tr>
<tr>
<td>56</td>
<td>Exploring the situation, e.g., gets distracted by microphone, camera, lights, etc.</td>
</tr>
<tr>
<td></td>
<td><strong>Response to Peer</strong></td>
</tr>
<tr>
<td>61</td>
<td>A non-antagonistic verbal response to a non-antagonistic peer statement/action.</td>
</tr>
<tr>
<td>71</td>
<td>A non-antagonistic nonverbal response to a non-antagonistic peer statement/action (listening).</td>
</tr>
<tr>
<td>62</td>
<td>A non-antagonistic verbal response to an antagonistic peer statement/action.</td>
</tr>
<tr>
<td>72</td>
<td>A non-antagonistic nonverbal response to an antagonistic peer statement/action.</td>
</tr>
<tr>
<td>63</td>
<td>An antagonistic verbal response to an antagonistic peer statement/action.</td>
</tr>
<tr>
<td>73</td>
<td>An antagonistic nonverbal response to an antagonistic peer statement/action.</td>
</tr>
<tr>
<td>Code No.</td>
<td>Category</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
</tr>
<tr>
<td>64</td>
<td>An antagonistic verbal response to a non-antagonistic peer statement/action.</td>
</tr>
<tr>
<td>74</td>
<td>An antagonistic nonverbal response to a non-antagonistic peer statement/action.</td>
</tr>
</tbody>
</table>
APPENDIX G
# APPENDIX G

Correlation matrix for variables involved in determining the educational performance of HOPE and non-HOPE participants (N= 219)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tbody>
<tr>
<td>1</td>
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<td></td>
</tr>
<tr>
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<td>1.000</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.141*</td>
<td>0.108</td>
<td>0.534*</td>
<td>1.000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.178*</td>
<td>0.150*</td>
<td>0.553*</td>
<td>0.714*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>0.004</td>
<td>-0.040</td>
<td>0.165*</td>
<td>0.110</td>
<td>0.123*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>0.132*</td>
<td>0.117</td>
<td>0.131</td>
<td>0.125</td>
<td>0.232*</td>
<td>-0.003</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
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<td>0.022</td>
<td>-0.044</td>
<td>-0.131</td>
<td>-0.074</td>
<td>-0.011</td>
<td>-0.333*</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>-0.035</td>
<td>-0.116</td>
<td>-0.249*</td>
<td>-0.244*</td>
<td>-0.331*</td>
<td>-0.223*</td>
<td>-0.300*</td>
<td>0.097</td>
<td>1.000</td>
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<tr>
<td>10</td>
<td>-0.111</td>
<td>-0.168*</td>
<td>-0.302*</td>
<td>-0.294*</td>
<td>-0.346*</td>
<td>-0.157*</td>
<td>-0.278*</td>
<td>0.115</td>
<td>0.677*</td>
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<td>11</td>
<td>-0.099</td>
<td>-0.127</td>
<td>-0.260*</td>
<td>-0.248*</td>
<td>-0.341*</td>
<td>-0.212*</td>
<td>-0.555*</td>
<td>0.299*</td>
<td>0.760*</td>
<td>0.641*</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*Significant at the .05 level
APPENDIX H
APPENDIX H

Stepwise regression analysis for retention in grade and selected independent variables presented in standardized regression coefficient form (N=219)

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Hollingshead Socioeconomic Status</th>
<th>HOPE or non-HOPE</th>
<th>Spouse's Education</th>
<th>Subjective Social Class</th>
<th>Respondent Education</th>
<th>Adjusted Coefficient of Determination</th>
<th>F-Ratio of Entering Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.232</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.050</td>
<td>12.380</td>
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<tr>
<td>2</td>
<td>0.216</td>
<td>0.094</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.054</td>
<td>1.963*</td>
</tr>
<tr>
<td>3</td>
<td>0.277</td>
<td>0.095</td>
<td>-0.087</td>
<td>---</td>
<td>---</td>
<td>0.053</td>
<td>0.846*</td>
</tr>
<tr>
<td>4</td>
<td>0.293</td>
<td>0.093</td>
<td>-0.091</td>
<td>-0.056</td>
<td>---</td>
<td>0.051</td>
<td>0.690*</td>
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<tr>
<td>5</td>
<td>0.286</td>
<td>0.092</td>
<td>-0.097</td>
<td>-0.057</td>
<td>0.020</td>
<td>0.048</td>
<td>0.059*</td>
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</tbody>
</table>

* Insignificant at the .05 level
APPENDIX I
APPENDIX I

Stepwise regression analysis for school attendance and selected independent variables presented in standardized regression coefficient form (N=219)

<table>
<thead>
<tr>
<th>Step Number</th>
<th>HOPE or non-HOPE</th>
<th>Hollingshead Socioeconomic Status</th>
<th>Spouse's Education</th>
<th>Adjusted Coefficient of Determination</th>
<th>F-Ratio of Entering Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.120</td>
<td>---</td>
<td>---</td>
<td>0.010</td>
<td>3.152*</td>
</tr>
<tr>
<td>2</td>
<td>-0.110</td>
<td>-0.054</td>
<td>---</td>
<td>0.008</td>
<td>0.622*</td>
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<tr>
<td>3</td>
<td>-0.110</td>
<td>-0.088</td>
<td>0.048</td>
<td>0.005</td>
<td>0.244*</td>
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</tbody>
</table>

* Insignificant at the .05 level
APPENDIX J
APPENDIX J

Stepwise regression analysis for achievement test scores
and selected independent variables presented in
standardized regression coefficient
form (N=219)

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Hollingshead Socioeconomic Status</th>
<th>Subjective Social Class</th>
<th>Respondent Education</th>
<th>HOPE or non-HOPE</th>
<th>Adjusted Coefficient of Determination</th>
<th>F-Ratio of Entering Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.331</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.105</td>
<td>26.716</td>
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<tr>
<td>2</td>
<td>-0.297</td>
<td>-0.160</td>
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<td>---</td>
<td>0.126</td>
<td>6.111</td>
</tr>
<tr>
<td>3</td>
<td>-0.251</td>
<td>-0.156</td>
<td>-0.084</td>
<td>---</td>
<td>0.127</td>
<td>1.218*</td>
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<tr>
<td>4</td>
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<td>-0.155</td>
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<td>0.024</td>
<td>0.123</td>
<td>0.137*</td>
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</table>

* Insignificant at the .05 level
APPENDIX K
APPENDIX K

Stepwise regression analysis for standard ability test scores and selected independent variables presented in standardized regression coefficient form (N=219)

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Hollingshead Socioeconomic Status</th>
<th>Respondent Education</th>
<th>Subjective Social Class</th>
<th>HOPE or non-HOPE</th>
<th>Spouse's Education</th>
<th>Adjusted Coefficient of Determination</th>
<th>F Ratio of Entering Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.346</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.116</td>
<td>29.476</td>
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<tr>
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<td>=0.258</td>
<td>-0.159</td>
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<td>---</td>
<td>---</td>
<td>0.129</td>
<td>4.372</td>
</tr>
<tr>
<td>3</td>
<td>-0.245</td>
<td>-0.153</td>
<td>-0.079</td>
<td>---</td>
<td>---</td>
<td>0.131</td>
<td>1.499*</td>
</tr>
<tr>
<td>4</td>
<td>-0.238</td>
<td>-0.150</td>
<td>-0.081</td>
<td>-0.046</td>
<td>---</td>
<td>0.129</td>
<td>0.508*</td>
</tr>
<tr>
<td>5</td>
<td>-0.200</td>
<td>-0.137</td>
<td>-0.084</td>
<td>-0.046</td>
<td>-0.062</td>
<td>0.127</td>
<td>0.447*</td>
</tr>
</tbody>
</table>

* Insignificant at the .05 level
APPENDIX L

Stepwise regression analysis for grade point average and selected independent variables presented in standardized regression coefficient form (N=219)

<table>
<thead>
<tr>
<th>Step Number</th>
<th>Hollingshead Socioeconomic Status</th>
<th>Subjective Social Class</th>
<th>Respondent Education</th>
<th>HOPE or non-HOPE</th>
<th>Adjusted Coefficient of Determination</th>
<th>F-Ratio of Entering Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-0.341</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.112</td>
<td>28.634</td>
</tr>
<tr>
<td>2</td>
<td>-0.310</td>
<td>-0.146</td>
<td>---</td>
<td>---</td>
<td>0.129</td>
<td>5.084</td>
</tr>
<tr>
<td>3</td>
<td>-0.260</td>
<td>-0.141</td>
<td>-0.092</td>
<td>---</td>
<td>0.131</td>
<td>1.479*</td>
</tr>
<tr>
<td>4</td>
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<td>-0.040</td>
<td>0.128</td>
<td>0.387*</td>
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</tbody>
</table>

* Insignificant at the .05 level