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THE HEAD START PROGRAM AND SUBSEQUENT READING
AND MATH ACHIEVEMENT OF FIRST GRADERS

by
Marisa B. Snyder

A Thesis

Submitted in partial fulfillment of the requirements of the
Master of Arts Degree in the Graduate Division
of Rowan College
May 7, 1996

Approved by _____
Professor

Date Approved 5/7/14

ABSTRACT

Marisa B. Snyder

THE HEAD START PROGRAM AND SUBSEQUENT READING AND MATH ACHIEVEMENTS OF FIRST GRADERS

1996

Dr. John Klanderma, School Psychology

This study examined the effect of the Head Start Preschool Program on first grader's academic achievement in math and reading. A literature review reported the results of other studies and the effect of early educational experiences on at-risk students' elementary school achievement. In general, these studies found that early educational intervention increased cognitive gains in the primary grades, but these gains were not sustained in the upper grades. Also, students from low socio-economic areas demonstrated greater gains than middle class children. In the present study, the Comprehensive Test of Basic Skills was administered to first grade students of low socio-economic class. Of these students, 34 had attended the Head Start Preschool Program. The 34 students who did not participate in the program were randomly selected and matched for sex. In order to determine if there was a statistically significant difference in achievement after the Head Start experience, a t-test for independent samples was done on the two sets of scores for each subject area—reading and math. Results indicated that the Head Start group scored significantly higher in math than the other group. There were no differences in the reading achievement between the two groups.

MINI ABSTRACT

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CHAPTER I

INTRODUCTION

Today there is a growing awareness of the critical importance of the years before a child enters primary school. These years have a vital impact on later academic success. Experts believe that a child has developed nearly all of his intelligence by the age of five (Amundson, 1992). Therefore, these formative years largely determine who will and will not succeed later in life, as students, and more importantly, as human beings. Studies have shown that children who have had rich early childhood experiences make at least short-term academic gains. Early exposure to preschool activities and readiness tasks have a positive influence in kindergarten, first, and second grade (Lang, 1992).

All children should start school ready to learn, and this can only happen if there is encouragement to develop programs which provide positive, nurturing experiences essential to helping young children at risk develop intellectually, socially, and emotionally (Carmine, 1990). High quality care and education are every child's right and can make a critical difference in their future. Education is part of the solution to poverty and other social woes. If poor children could be helped to do as well in school as their middle class peers, they could become more skilled workers when they grow up and be able to break the cycle of poverty (Zigler and Styfco, 1993).

Since the early 1970s, the research and evaluation of preschool education has been increasing. The truly astonishing finding that runs through all of these studies is one of consistently favorable impact on the lives of the children and their families who participate in well designed preschool programs (Judge, 1993). Educators have long been convinced that education is beneficial to children in their formative years and believe it should become an integral part of planning for the young. This was part of the reasoning

behind the federally funded Project Head Start, which began in 1965. Head Start was launched to provide comprehensive services which included education, health, social services, and parent involvement components. It focused on low income, at risk, preschool children. Head Start's goal was to have these children ready to succeed when they entered elementary school by bringing about a greater degree of social competence (Zigler and Styfco, 1993).

It is important to examine whether participation in the Head Start preschool program benefits disadvantaged children academically. This study will hopefully lend support as to whether Head Start actually helps children compensate for experiences that they have missed out on and to prepare them to do well in school. This information is necessary to insure government funding and future development of this important program.

PURPOSE

The purpose of this study is to explore if students who participate in the Head Start program have greater academic achievement in first grade than those who do not participate in the program. The study will look at the effectiveness of Project Head Start in preparing disadvantaged children from the Philadelphia, Pennsylvania area for their beginning public school experiences.

HYPOTHESIS

Students who participate in the Head Start preschool program will have greater academic achievement in first grade than will students who do not participate in the Head Start program.

HISTORY

Child care for the poor became an important issue in the 1960s when President Lyndon

B. Johnson initiated the National War on Poverty Crusade. Early childhood education was a major focus of this project. Head Start was initiated during the summer of 1965 as a basic element to the Great Society's War on Poverty (Flores, 1985). Head Start began as a small pilot program operating from six to eight weeks in duration. After the first year the federal officials realized that the lofty goals of Head Start could not be met in a summer program so the year-round program made its debut in the fall of that same year.

Head Start was the first national movement toward quality early education for at risk children. In fact, no where in the history of early intervention has there been a program as comprehensive and all inclusive as Head Start. The seven goals set out in the original planning meeting included (Judge, 1993):

1. To improve the child's physical health and physical abilities
2. To help the emotional self confidence, spontaneity, curiosity, and self discipline
3. To improve the child's mental processes and skills with particular attention to conceptual and verbal skills
4. To establish patterns and expectations of success for the child that will create a climate of confidence for future learning efforts
5. To increase the child's capacity to relate positively to family members and others, while at the same time strengthening the family's ability to relate positively to the child
6. To develop in the child and the family a responsible attitude toward society and encourage society to work with the poor in solving their problems
7. To increase the sense of dignity and self worth within the child and the family.

Head Start was primarily developed for children between the ages of 3 and 5 years old. Its services were intended for, although not exclusive to, children and their families whose income fell below poverty level. Approximately 90% of all Head Start families income

levels fall below the poverty line. Minority children comprise at least two-thirds of all children enrolled in the program (Judge, 1993). In fact, 42% of all Head Start children are black, 33% are white, 20% are Hispanic, 4% are American Indian, and 1% are Asian (Washington and Oyemade, 1987). The philosophy of the program was based on the idea that the preschool years were critical years with regard to the development of verbal ability, general intelligence, and basic school achievement (Washington & Oyemade, 1987).

Head Start flourished during the initial years of programming. It received good press coverage and by 1966 it was considered a chief social program. In the spring of 1966 most of the initial studies began to report I.Q. gains for the children who participated in the original summer program. Head Start was looked upon as the savior program for the poor (Judge, 1993). In 1969, the famous Westinghouse report was released. This study found that Head Start children showed only moderate gains on standardized tests of cognitive ability and that these gains did not have a lasting effect (Collins and Kinney, 1989). This study, that claimed that Head Start had failed to meet its goal, threatened the very existence of the program. The government began to reduce its funding and re-evaluate the programs' effectiveness. In the upcoming years short-term and long-term studies showing the positive gains of the program began to trickle in and Head Start began to regain its popularity.

During the period from 1972 to 1977 the program witnessed many new developments which included: two performance standards and program options, large scale services to handicapped children, and the launching of numerous projects including Home Start, the Child and Family Resource Program, and Project Developmental Continuity (Lang, 1992). Many of these programs were short lived, but came out of the Head Start movement in an attempt to maintain quality and success.

In 1978, Congress increased the Head Start budget by \$150 million dollars, nearly a one-third funding expansion. This pattern of increasing the budget continued, and the largest expansion of all took place in 1990, when the program received a \$250 million dollar increase. Program and participant change has also continued, a greater number of handicapped children are being served, and the proportion of high risk families has great-

ly increased (Zigler and Styfco, 1993). It took time, but Head Start has regained its popularity. In 1995, Head Start celebrated its 30th anniversary. It acts as the leader in the forefront of all early intervention programs. Although intervention programs are different, it is essential that future trends learn from the early mistakes and collaborate on plans to make such a program as effective as possible for all.

THEORY

Research done by Benjamin Bloom has been of great value in helping us understand the premise behind Head Start and other preschool programs. He does this by offering insight into how children not only may be different in their responsiveness to learning experiences, but also how some of these differences come to be. According to Bloom, all later learning is likely to be influenced by the very basic learning which has taken place by the age of five or six. For selected characteristics, such as general intelligence and intellectuality in males and females, there is a negatively accelerated curve of development which reaches its midpoint before age five (Bloom, 1964). Therefore, the preschool years and the years prior are the most rapid period for development.

Ideally, the early intellectual development of the child should take place in the home. In some cases, this is likely to be fruitful. But, we must express pessimism about such possibilities when the total syndrome of poverty, broken homes, slum living, large families, and illiteracy all conspire against the intellectual development of the child (Bloom, 1965). If adequate basic learning can not be provided in the home, it is the responsibility of the schools to ensure that the culturally deprived children have as good a set of initial skills and intellectual development as children from more culturally advantaged homes. Studies in the United States and other countries demonstrate that it is possible to bring culturally deprived children up to satisfactory stages of readiness for regular school learning (Bloom, 1965). These studies show that programs have been developed which reduce the cumulative deficits in learning. Some of these school programs appear to have such powerful effects in the improvement of reading, language, and arithmetic that the differences

between culturally disadvantaged and the culturally advantaged become very small (Bloom, 1965). If this can be done on a broader scale, the regular learning procedures of the schools, which are now effective for middle class children, would also be likely to work for lower class children (Bloom, 1981).

Preschool, kindergarten, and the first three years of elementary school are critical. If learning is not successful and satisfying in these years, the entire educational career of the child is seriously jeopardized. The child's interest in school learning, the problems of the school dropout, and the educational and vocational career of the individual are largely determined by what takes place in the first few years of public school (Bloom, 1964). Nursery schools and kindergartens should be organized to provide culturally deprived children with the conditions for their intellectual development and the learning to learn stimulation which is found in the most favorable home environments (Bloom, 1981). Such nursery schools should be very different from the nursery schools commonly used for middle class children. There is an increasing recognition of the vital importance of the first few years of education. As educators come to realize more fully the key quality of these first years of school, we are likely to see major changes taking place in policy, organization and practice.

DEFINITIONS

AT-RISK—Children who have been subjected to certain adverse genetic, prenatal, perinatal, postnatal or environmental conditions that are known to cause defects or developmental delays. These are usually children of low socio-economic status who are at risk for academic failure.

BASAL READING INSTRUCTION—Using a reading text book that includes a collection of fiction, non fiction story excerpts, short stories, poems, plays and written materials that are separated into chapters or units. They are collected specifically to be used for teaching reading in a directed reading activity.

COMPREHENSIVE TEST OF BASIC SKILLS (CTBS)—A modular testing system that evaluates student's academic achievement from kindergarten through grade twelve. It measures the basic skills of reading, language, spelling, math, study skills, science and social studies.

DISADVANTAGED CHILDREN—Children lacking in resources (housing, medical and educational facilities) due to economic conditions or socialization.

PRESCHOOL EDUCATION—A formal education program which takes place before the age of five.

PROJECT HEAD START—A federally funded compensatory program started in 1965 for preschool children in the United States.

READINESS—The ability to cope with the school environment physically, socially, and emotionally, as well as academically without undue stress, and to sustain in that environment.

WHOLE LANGUAGE—A reading approach that teaches reading, writing, listening and speaking skills using trade books containing actual pieces of literature. The approach incorporates different subject areas of curriculum into thematic units written professionally or written by teachers to achieve the reading goals of the school system.

ASSUMPTIONS

1. The subjects used for this study are representative of a random sample.
2. Whether or not the children attended the same Head Start program is not going to affect the results of the study.

LIMITATIONS

1. This research is generalizable to predominantly first grade, lower socio-economic class white males and females.
2. This research can only be as accurate as the reliability of the Comprehensive Test of Basic Skills.

OVERVIEW

In Chapter II, the literature relevant to the Head Start program is discussed. Many studies have been completed focusing on the different factors which may influence the effectiveness of this program. The most frequently cited studies will be summarized. Chapter III explains the method used in the present study. It elaborates on the design, subjects and procedure of the study. Chapter IV is an analysis of the present findings. The fifth and final chapter summarizes the conclusions of the study and explores the implications of the results.

CHAPTER II

REVIEW OF LITERATURE

From its inception, Head Start has placed considerable priority on research and evaluation as part of an ongoing process of program development and innovation. There have been thousands of studies done on the program Head Start and other preschool programs that are similar in nature. Early research on the impact of Head Start focused on children's performance on tests of general intelligence. These studies often asked simply if Head Start produced gains or if Head Start children were superior to non-Head Start students on I.Q. measures. Then research became more differentiated. Studies examined long term effects, curriculum effects and the impacts of experimental, time-limited interventions (System Development Corp., 1972). Researchers continued to use the popular I.Q. tests but also examined performance on achievement tests and tests of individual cognitive and social abilities. This chapter reviews the pertinent studies done on Head Start and preschool programs.

This research review is divided into four major sections. The first section deals with the study that is most closely related to the present study being done. The second section is an extensive overview of Head Start research and evaluation from the inception of Head Start to the present. It includes classic studies and reviews. The third section is research compiled from other preschool programs. The fourth section is a summary of short and long term effects of preschool programs on child development. This topic is divided into two sub-sections. The first one discusses the area of personal and social development. The second section reviews areas of cognitive, linguistic, and pre-academic development.

RELATED STUDY

Carmine (1990) did a study on Kindergarten Education and the Reading, Language and Mathematics Achievement of First Graders. This study examines the effect of participation in early educational experiences, such as Head Start and first graders' subsequent academic achievement. The population for this study includes 52 first grade students from two first grade classrooms. The subjects are predominately Caucasian, Black and Hispanic students. They are from a middle-low socio-economic class. The school records show that 10 of the 52 students attended a developmental kindergarten. All students from both sub-populations participated in this study. The Comprehensive Test of Basic Skills (CTBS) is administered to all students of this school district during the month of April of each school year. Two sample groups have been identified. Group A includes those students who attended preschool and Group B is the students who did not attend preschool. The total reading, math and language scores from the CTBS is the basis of measurement of this study. The non-equivalent, post-test only, control group design is employed for this study.

In order to determine if there was a statistically significant difference in achievement after the pre-kindergarten experience, a t-test for independent samples was done on the two sets of scores for each subject area—reading, language and mathematics. An examination of the mean post-test scores for the control group reflects scores of 385.5, 335.2 and 437.0 for reading, language and math, respectively. The mean post-test scores for the experimental group are 415.3, 393.2, and 527.4 for reading, language and math, respectively. The t-test scores for reading, language, and math are 1.21, 1.89, and 1.58, respectively; therefore, demonstrating no significant differences in achievement of the two groups in reading, language, or mathematics. This data lead to the acceptance of the null hypothesis: first grade students who attended pre-kindergarten will not demonstrate significantly differing scores in reading, language and mathematics achievement than those who did not attend pre-kindergarten.

The results suggest that more in depth analysis is needed in order to establish conclusive evidence regarding this issue. For example, this study would have been more valid if

the experimental group would have been larger. Further investigation may include an analysis of the achievement test content. Also, teacher observation or teacher rating scales might represent a more valid means of assessment (Carmine, 1990).

OVERVIEW OF HEAD START RESEARCH AND EVALUATION

Evaluation and Research Centers

A network of fourteen university-based Evaluation and Research Centers collected information on Head Start during the period 1966-1969. The research paradigm focused on comparing "regular" Head Start classes with "intervention" classes (Collins, Raymond, Kinney, 1989). Significant findings were as follows:

- Children with prior Head Start experience received higher scores on school readiness and intelligence. The greatest change occurred in the first year of the program, although there was cumulative improvement in year two.
- Within the span of the yearly program, gains were cumulative. Pre-Post Performance measures showed gains on all cognitive measures beyond levels that would be expected for maturation.
- Program characteristics associated with gains on preschool achievement were in classes where the teacher was older; the teacher had less formal education and experience; the teacher did not use physical control; there was emphasis on independence and self-care and there was high emphasis on structured lessons.

The principal conclusion of this body of research can be summed up in the finding that

there was no one best program or curriculum approach for all children. Program approaches should be matched to the child and the teacher (Collins, Raymond, & Kinney, 1989). It is important to note that research coming out of the E & R centers was not well designed for shedding light on the overall effectiveness of Head Start. No comparison groups were included of children who did not participate in preschool. The compensating strength of the E & R studies was a clear focus on the details of what program variables elicited what outcomes in Head Start participants.

Westinghouse Study

The Westinghouse Learning Corporation—Ohio University Evaluation, popularly known as the Westinghouse Study, was long regarded as the classic study of Head Start. The purpose of the study was to address a limited question concerning Head Start's impact: Taking the program as a whole as it has operated to date, to what degree has it had psychological and intellectual impact on children that has persisted into the primary grades (Goodman, 1982)? The study compared children who had attended Head Start anytime during the period of summer 1965 to spring 1968 and who were in first, second or third grade at the time of the study with comparable children who did not attend Head Start. The control group was matched by eligibility for Head Start, sex, age, ethnicity, family socio-economic status and kindergarten attendance.

During summer and fall 1968, standardized tests (Metropolitan Readiness Test, Stanford Achievement Test and Illinois Test of Psycholinguistic Ability) were given to children in a random sample of 104 centers nationwide. The findings differed substantially for summer and full year programs. Summer programs had no lasting impact. Full year programs stimulated cognitive and language gains at the first grade level, but comparison children had "caught up" by second or third grade. This is sometimes described as the fade out or leveling off of Head Start gains (Goodman, 1982). Particularly noteworthy were gains for black children and for children attending Head Start in central cities and in the Southeast. Head Start children in those groups approached national norms on school

readiness as measured by the Metropolitan Readiness Test (MRT) in first grade. They were behind about six-tenths of a year in second grade.

The Westinghouse Study dismissed even the favorable results for full year programs as not being of practical relevance and not worth the program effort. This interpretation was based on the arbitrary standard that intervention programs should generate gains of one-half a standard deviation on standardized tests (0.5 SD) (Goodman, 1982). MRT gains were only 0.2 SD. Also Campbell and Eribacher (1970) point out that Head Start was targeted on the most disadvantaged children. The comparison group was selected from children in the same locale who did not participate in Head Start. The presumption is that the comparison group will be less disadvantaged, and this proved to be the case in this study and virtually all later research that followed similar methodological approaches for selecting a comparison group. Campbell and Eribacher argued persuasively that this resulted in systematic biases in the direction of making the compensatory program look ineffective.

ETS Longitudinal Study

The Educational Testing Service Longitudinal Study of Young Children and Their First School Experiences was a research effort to gather data on children with Head Start and other preschool exposure. The study addressed two questions: First, what are the components of early education that facilitate or interfere with the cognitive, personal and social development of disadvantaged children? Second, what are the environmental and background variables that moderate these effects, and how do these moderators produce these influences (Shipman, et al., 1976)? The study focused on children in three communities in Alabama, Oregon, and New Jersey.

The ETS—Head Start effort has produced many research studies. An example of an important insight of this research, from the perspective of assessing Head Start outcomes, is an in-depth series of case studies of 186 black children. This special analysis highlighted characteristics and experiences of very high and very low achievers in third grade per-

formance on basic school skills of math and reading. Determination of high and low achievement was made relative to predicted performance at age four. The impact of Head Start on school achievement was evident on school promotion. A higher proportion of black Head Start eligible children who had not attended Head Start were retained in first or second grade (Shipman et al., 1976).

George Washington University Head Start Review

In 1977, the Social Research Group of George Washington University produced a report entitled: "A Review of Head Start Research since 1969" (Mann et al., 1977). The authors reviewed over 50 major Head Start Studies, including approximately 30 dissertations. Positive outcomes were reported for children, the family and the community. The principal findings regarding children can be summarized as follows (Collins, Raymond, Kinney & Patricia, 1989):

- Head Start participants performed equal to or better than their peers when they began regular school. There were fewer grade retentions and special class placements. Children's later reading achievement was improved.
- No one program approach seemed to be better than another in stimulating cognitive gains.
- Significant improvement was reported on standardized tests of intelligence and general ability.
- A high degree of parent participation was associated with a positive impact on children's self-concept.
- Head Start positively contributed to the development of socially mature behavior and facilitated child socialization.

The studies analyzed by the George Washington University research team differed greatly in size, experimental design, measures utilized, and evaluation methodology. No studies were included that the researchers believed would not yield meaningful interpretations of program impact. None of the studies confirmed the negative conclusions of the Westinghouse Study. No studies reported developmental losses for poor children compared to children of comparable characteristics who did not attend preschool. The results were consistently positive, although differing in absolute magnitude from study to study (Mann, et al., 1977).

Head Start Synthesis Project

The Head Start Synthesis Project was one of the most comprehensive assessments of Head Start's impact (Collins and Dolor, 1983). The effort involved the compilation of over 1,600 documents related to Head Start. They analyzed and synthesized 210 reports of research on the effects of local Head Start programs. The project was noteworthy in its attempt to take into account all Head Start research, published and unpublished. Meta-analysis was the principal statistical technique used to produce numerical estimates of Head Start effects. Benefits of Head Start identified by the researchers included the following (Collins et al., 1989):

- Head Start has immediate positive effects on children's cognitive ability.
- Gains on school achievement and school readiness tests persist for one year after Head Start. By the end of the second year, no educationally meaningful differences were found on any of the measures of cognitive development.
- Head Start improves the long-term school success of children. Head Start children are less likely to be held back in school or to be assigned to special education classes.

- Head Start has immediate positive effects on children's self-esteem, achievement motivation and social behavior. Some gains persist for two years after the Head Start experience.
- Head Start produces meaningful improvements in physical health, motor coordination and development. Head Start children experience a level of health comparable to more advantaged children. The largest gains in motor development are for children with physical handicaps and those with developmental delays.

Follow-up Study of Three Cohorts of Head Start Graduates

This study examined the long-term performance of three groups of children who attended the Head Start program in the Montgomery County, Maryland Public Schools. The students attended Head Start as preschoolers in 1970-71, 1974-75, and 1978-79, and were in grades 4, 8, and 12 respectively during the 1983-1984 school year. The study addressed two questions: Does participating in Head Start have any long-term effects, and how does the long-term performance of the Head Start graduates compare to that of other students in the school system (Hebbeler, 1985)?

The study compared the performance of students who applied to Head Start but were not admitted to those who attended Head Start. Overall performance was assessed by comparing the performance of Head Start graduates to that of all other students in the school system born in the same year. Specifically examined were the following: grade retentions, special education placements, standardized test performance, grades, and attendance (Hebbeler, 1985).

The overall pattern of findings indicated that the students who attended Head Start in 1970-71 did much better than the comparison group who had not attended. The findings from the fourth and eighth graders hinted at the possibility of a positive effect for Head Start but the evidence was weak. The only statistically significant difference for the

1974-75 group was the percentage of students below the 40th percentile on the fifth grade California Achievement Test. For the 1978-79 group, the only statistically significant difference was the percentage of students above the 80th percentile on the Verbal subtest of the grade three Cognitive Abilities Test (Hebbeler, 1985). This Head Start group also had a larger percentage of high scorers on the other two subtests and the total score on the California Achievement Test. For all three years of Head Start graduates, there were a number of measures which favored the Head Start group but the differences were not statistically significant (Hebbeler, 1985). There was not a single measure for any of the three Head Start cohorts with a statistically significant difference which favored the comparison group. The Head Start students compared poorly to the rest of the school system. More of the Head Start students were classified as having serious problems and as poor or low average students.

The results of this study support the finding that early childhood education, in this case a Head Start program, can have a positive impact on the educational achievements of children from low income families. On the other hand, the findings about the overall performance of the Head Start students should serve as a reminder that early childhood education is not a "cure all" and that students from low income families still go through elementary and secondary school with many strikes against them (Lazar et al., 1982).

Other Related Head Start Research

In 1970, the Kirshner report, in a review of 58 communities running full-year Head Start programs attained that Head Start effectively made local institutions more responsive to the poor (Washington and Oyemade, 1987). Further studies in support of Head Start and other early intervention programs soon followed.

A cross study analysis by Darlington, Royce, Snipper, Murray and Lazar (1976) found that low income children who had attended early intervention programs in the sixties had "significantly higher rates of meeting school requirements than did control groups...". They found that the children involved in early intervention programs were less likely to

repeat a grade and less likely to receive special education services than their control group peers.

In 1977, another federally funded investigation of Head Start revealed that children who participated in the program entered first and second grade close to or on target with the national norms and remained at this level during their first year of school. However, this investigation found that by the second or third grade, Head Start children did not necessarily show better achievement than non-Head Start children (Washington and Oyemade, 1987).

Clark (1984) reported approximately half a million students were enrolled in Head Start during the first summer of the project. After six to eight weeks of participation, students I.Q. scores increased and achievement gains were noted. A study completed by Datta (1973) supported Clark's findings and reported the following: Students demonstrated increased I.Q. scores, increased preschool readiness scores, and increased motivation to achieve in school. I.Q. deviations represented the least magnitude and motivational changes represented the greatest magnitude.

Shipman (1979) completed a longitudinal study analyzing the effects of Head Start programs. The study was based on children and their mothers from four regionally distinct communities. The families were followed over a period of six years. Results indicated the following:

- The formal educational background of the students' parents had the greatest relationship to the child's scores.
- Changes in the mother's behavior contributed significantly to the child's achievement.
- The child's early exposure to group activities and readiness tasks had a positive influence reported by reading and math test scores in kindergarten, first and second grade.

- Test scores of third grade students did not demonstrate increased performance.
- Mothers of third grade students who attended Head Start had better attitudes toward school and education than those of students who did not attend Head Start.

RESEARCH ORIENTED TOWARD PRESCHOOL PROGRAMS

Heightened policy interest in early intervention programs has been sparked by emerging evidence of lasting effects of preschool programs. Four major analyses will be considered in this part. The first is the project of the Consortium for Longitudinal Studies. The second is the series of reports of the long-term effects of the Perry Preschool Program. The third is of economically disadvantaged children in the Family Development Research Program, otherwise known as the Syracuse Study and fourth is the longitudinal data from the Abecedarian Project conducted at the University of North Carolina, Chapel Hill (Collins et al., 1989). Finally, two other related studies are discussed.

The Consortium for Longitudinal Studies

The Consortium was formed to combine the projects of twelve researchers who had conducted preschool programs in the 1960s in a systematic longitudinal search for lasting effects. The programs were implemented in 11 communities nationwide. Program participants were poor and minority families, with a heavy representation of black families. The children ranged in age from three months to five years at the time of program entry. The studies had the advantage of generally strong research designs, many with random assignment.

Sustained effects of preschool participation on children's functioning were discovered. Preschool education for children at risk elevated I.Q. and achievement test scores in both

reading and math in kindergarten, grades one, and grades two. Children who participated in preschool programs were more likely to succeed in school as measured by staying on grade level with their peers and avoiding inappropriate placement in special education. A median of 24 percent of the children in the preschool programs failed to meet school standards compared with 45 percent in the control groups. Intelligence test gains had faded three years after the program had ended (Lazar and Darlington, 1982). However, the preschool participants experienced lasting advantages on some academic achievement tests, particularly mathematics. In addition to the cognitive outcomes there were signs of favorable impacts on the child's self-concept, parental aspirations for the child's education and the family's achievement orientation (Lazar and Darlington, 1982).

The Perry Preschool Program

The Perry Preschool Program has received even greater attention for the staying power of its initial gains, the social importance of lasting effects, and for the most completely documented evidence of the cost-effectiveness of early childhood programs (Webster et al., 1978). This project was an extensive research program for poor black children which was initiated in 1966. It is the first longitudinal study of an early intervention program which tracked the children until 19 years of age. The project was initiated to give economically disadvantaged children training so they could function better in a school environment.

The project developed over a five year period. Most of the participants in the project were economically poor black children living in one section of Ypsilanti, which was served by Perry School. From 1962 until 1966 small numbers of three and four year olds were chosen as an experimental group and a control group to test various ideas about early childhood education. The first group of children was composed of four year olds who had one year of preschool training followed by kindergarten and then regular school. All succeeding groups were admitted to the program at age three and had two years of preschooling followed by kindergarten and regular school (Weikart, 1978). All participants in the program were selected on the basis of an SES evaluation that used factors of father's edu-

education, occupation and household density. If fathers were not present the mother's occupation was used. All children were tested with the Stanford Binet and only those who registered an I.Q. between 50 and 85 were accepted. In all there were 53 children in the experimental group and 65 in the control group.

The results showed that the experimental group did better on the California Achievement Test Total, also in reading and language, than the control group. The most important results concern the longitudinal studies carried out on the children throughout high school. Powerful long-term benefits have been identified. Program children scored higher than youngsters who had not attended preschool on reading, arithmetic and language achievement tests. The preschool participants avoided placement in special education; by end of high school, only 19 percent of the former preschool participants had been tracked in special education while 39 percent of the control group had a special education experience. The children who attended the program had better grades, fewer failing marks, and fewer absences in elementary school. High school graduates increased from 49 to 67 percent. Employment rates increased from 32 to 50 percent (Weikart, 1989). It was concluded that "programs begun anytime during infancy or early childhood can produce significant long-term benefits for disadvantaged children" (Collins, Raymond, Kinney & Patricia, 1989).

The Syracuse Study

A third study for economically disadvantaged young children and their families was the Family Development Research Program, also known as the Syracuse Study. The program provided comprehensive services to 108 families beginning prenatally and continuing until children reached elementary school age. The goal was to improve the well being of the children by providing five continuous years of quality day care which also included supportive, comprehensive services. The program saw parents as the primary intervention target, thus attempting to maximize family functioning (Lally et al., 1987).

The longitudinal results at ten years show that the intervention had a positive impact

on school functioning, attendance rates, and self-perceptions for girls. Effects on families were positive in that program parents were proud of their children's attitudes and behaviors and the quality of their family life. Program children felt more positively about themselves and their future school plans, and reported more active strategies for handling problems than did the control children. Striking differences were found between program and control children related to juvenile delinquency. Program children were less likely to have been processed as probation cases, and the severity of the offenses, degree of chronicity and cost of cases were much higher in the control group than for the program child (Lally et al., 1987). Like the Perry Preschool Program, the Syracuse Study shows long-term benefits to children and families which result from high quality comprehensive early childhood programs.

The Abecedarian Project

A fourth project for young children at risk for school failure was begun in 1971 at the University of North Carolina, Chapel Hill. The Abecedarian Project included 109 families with 111 children and used random assignment to a preschool treatment group and later to the school-age treatment group and to the control groups. Program children attended the program from infancy on a full-day, full-year basis. At the kindergarten level a home/school resource teacher was provided to each child and family. The twice-a-month home visits included an individual home curriculum with an emphasis on reading and math skills. Positive program effects were seen as proportional to the level of the intervention (Collins et al., 1989). The preschool intervention had a positive effect on children's intellectual development and academic achievement which persisted up to 78 months, and showed an effect on retention in grade. The study concluded that systematic early education can reduce the incidence of under achievement and delayed intellectual development (Collins et al., 1989).

Other Related Preschool Studies

Berrueta-Clement et al. (1984) did a cross study analysis of seven early intervention programs. (1) The Early Training Project in Mursfreesboro, TN, (2) The Perry Preschool in Ypsilanti, MI, (3) The Mother-Child Home in Long Island, NY, (4) The Harlem Project in Harlem, NY, (5) The Rome Head Start in Rome, GA, (6) The Milwaukee, WI, and (7) The New York Pre-K in upstate New York. All of these studies tracked participants past the third grade. From this analysis, the following conclusions were made with regard to benefits of early intervention on poor or at risk children:

- Six of the seven studies showed that early childhood education can have an immediate and positive effect on children's intellectual performance as represented by intelligence test scores.
- Six of the studies showed that early childhood education can reduce by one-half the placement into special education classes in later years.
- Three studies showed that early childhood education can help prevent youth from dropping out of high school.
- There is mixed evidence from a few studies that early childhood education can increase future scholastic achievement.
- The Perry Preschool Study is the only study to date to show that early childhood education can help prevent delinquency or teenage pregnancy or to improve the likelihood of employment during the year after high school.

These conclusions indicate considerable evidence that the use of early intervention for

at risk children show positive effects with regard to the development and success of the child. These benefits taper off in the elementary years but there is significant evidence to support the notion that such programs increase a child's cognitive ability in the early years (Berrueta-Clement et al., 1984).

Studies were also conducted by the Illinois State Board of Education (1990) focusing on the Pre-kindergarten Program for Children At Risk of Academic Failure. Most of the students served were from low income families. More than half of those served were from minority groups. Fifteen percent had a native language other than English. More boys than girls participated. Most children served had no previous preschool experience. Based on data reported to the Illinois General Assembly in 1989:

- Sixty percent of the children served in prekindergarten performed at average or above in kindergarten.
- Seventy percent scored above average or within the normal range on achievement tests in reading, math, and language at the beginning of first grade.
- The behavior of three-fourths of the children served in 1987 was rated above average or within the normal range by their teachers.

SHORT AND LONG-TERM EFFECTS OF PRESCHOOL PROGRAMS ON CHILD DEVELOPMENT

There have been numerous reports showing significant immediate effects of participation in preschool programs on personal-social, language, and cognitive development. Many, but not all, of these studies have compared disadvantaged children who have attended summer and full-year programs and other children of similar background who have had no formal preschool experience. It seems clear from these studies that a wide variety of preschool interventions can be of benefit to the child.

Personal-Social Development

Emmerich (1971), using time-sample structured observations of Head Start children during free-play, reported substantial increases in cooperativeness with materials, cooperativeness with peers, friendliness, approach to adults, self confidence, assertiveness, achievement orientation, use of verbal rather than non-verbal communication, and curiosity; and decreases in shyness, timidity, and withdrawal in boys and girls, younger and older children. This improvement takes place within the first six months of program experience (System Development Corp., 1982).

Lamb, Ziller and Maloney (1965) tested Head Start children with a projective measure of self-esteem, and found reliable increases in the children's self concept, both in their opinions of themselves and in how they thought others would view them. The data shows that Head Start increases the children's interest in new things, and improves their interpersonal interactions, task orientation, self concept, and adaptation to situations involving adults, such as testing.

Ditman et al. (1971) using the case history approach reported similar changes in individual Head Start children. Their observations of individual differences in the pace areas, and direction of development points out nuances that become obscured in group analyses. An example of their observations given: "Trying to imagine what the year would have been like for Harold without Head Start leads one to conclude that the experience has been a great asset although no progress has been made with his speech disorder...Harold seems happier and less stoically ready to fight for every inch" (Systems Development Corp., 1972).

Cognitive, Linguistic, and Pre-academic Development

Beller (1969) compared disadvantaged black children who attended a full-year Head Start-like program with a similar non-Head Start control group. Stanford Binet (SB) performance of the Head Start group increased from 90-95, while scores of the control children did not change.

Sontag, Sella and Thorndike (1969) reported a significant difference on the preschool inventory between children who completed six to seven months in a full-year Head Start program and a matched group of the same age about to enter the program. The SB of the experienced group was 100.2; of the new group, 96.1.

Alexander (1968) reported SB gains for inner-city black children attending full-year Head Start programs from 92.8 to 101.7. Kraft et al. (1968) also reported a gain from 82 to 97 on the SB after two years of traditional type preschool for black inner-city children, while at home controls changed from 84.6 to 88.7 (Systems Development Corp., 1972).

DISCUSSION OF PREVIOUS RESEARCH

In general, these studies indicated that early educational intervention increased cognitive gains in the primary grades, but these gains were not sustained in the upper grades. Motivational and attitudinal gains from early intervention were sustained through later formal schooling. Also, students from poverty areas demonstrated greater gains than did middle class children.

Researchers believe the findings of these studies are evidence of lasting benefits of Head Start. This is both true and false. These studies demonstrate convincingly that the educational attainments and life opportunities of low income and minority children can be dramatically improved by interventions parallel to those carried out in the day-to-day Head Start programs (Collins et al., 1989). The findings illustrate what lasting benefits it is possible to elicit in Head Start. There has been evidence of long-term outcomes, such as in the Perry Preschool Program, but there has not been evidence of lasting gains of a comparable magnitude. There have been few research and evaluation projects that focus on lasting benefits and virtually no longitudinal studies of strong design have been carried out on regular Head Start programs.

Clearly, though, there is evidence to support Project Head Start and other quality early intervention programs. The research shows children do demonstrate cognitive gains that allow them to enter into the primary grades on level with their middle class peers. The

studies found that early intervention reduces the likelihood of special education and grade retention. These results also suggest that Head Start children may have developed the desired social and cognitive ability so that they can progress in school, stay in the mainstream and satisfy teacher's requirements. Chapter III reviews the current study on Head Start and its academic effect on first grade students. The design, procedure and sample will be discussed.

CHAPTER III

METHOD

Subjects

The subjects for this study includes 68 first grade students from four first grade classrooms at Sheridan Elementary School. Students attending Sheridan Elementary School are from Central East Philadelphia (Kensington area). They are considered part of the School District of Philadelphia. The samples are from May of 1992. The subjects are comprised of Caucasian students predominately of low socio-economic class. The school records indicate that 34 of the students attended the Head Start Program. The 34 subjects who did not attend pre-kindergarten were selected randomly using the table of random numbers and then matched for sex. The ages of the subjects ranges from 6 to 7 years of age. There are 47 males and 21 females in the study.

Setting and Apparatus

The study took place in each of the four first grade classrooms between May 5 and 7, 1992. The teacher administered the Comprehensive Test of Basic Skills to the students.

Independent and Dependent Variables

The independent variable in this study is whether the subject was in the Head Start Program or not. The dependent variable is the subject's reading and math scores on the Comprehensive Test of Basic Skills.

Design

The non-equivalent, post-test only, control group design is employed for this study. A one-way analysis of variance will be used. The findings will be tabulated in terms of means and standard deviations. A t-test for independent samples will be applied at the .05 level of confidence to determine if there is any statistically significant differences between the mean scores.

Procedure

The Comprehensive Test of Basic Skills is administered by the teachers to first through fifth grade students of the Philadelphia School District during the month of May of each school year. The test is an achievement test. It is designed to measure achievement in reading, language, spelling, mathematics, study skills, science and social studies. It has several positive features including functional level testing, different versions of norm-referenced and curriculum-referenced testing, and three sets of norms a year. Two samples of students have been identified including Group A: those students who attended the Head Start Preschool Program, and Group B: those students who did not attend the Head Start Preschool Program. The total reading and math scores from each subject who took the Comprehensive Test of Basic Skills, which was administered during the spring of the 1991-1992 school year, are the basis of measurement for this study. A comparison of Group A and Group B's scores will be compared using the number correct from the total math and reading score of each subject.

CHAPTER IV

RESULTS

The main purpose of this study was to determine if students who participate in the Head Start Preschool Program will have higher math and/or reading achievement than students who did not participate in the Head Start Program. The Comprehensive Test of Basic Skills was used to measure the first grade students achievement in math and reading. A t-test for independent samples was done on the two sets of scores for math and reading. There were 68 students who participated in this study. Of the 68 students, 34 attended a Head Start program and 34 did not.

Table 4.1 contains the breakdown of males and females in the study.

TABLE 4.1

Frequency of Male vs. Female Subjects

	<u>Female</u>	<u>Male</u>
Head Start	10	24
Non-Head Start	<u>11</u>	<u>23</u>
Total	21	47

The data shown in Table 4.2 shows the results of the comparison of Head Start and Non-Head Start students in reading. The means are 36.7 and 33.7, respectively. The standard deviation for the Head Start students is 10.06. The standard deviation for non-Head Start students is 12.30. The t-value for reading is $t_{(66)} = 1.07$ ($p \geq .05$). This data led to the acceptance of the null hypothesis. First grade students who attended Head Start will not

demonstrate significantly differing scores in reading than those who did not attend Head Start.

TABLE 4.2
Means, Standard Deviations, and t-Values for Head Start
and Non-Head Start Students in Reading

	Reading		
	<u>Mean</u>	<u>Standard Deviation</u>	<u>t-Value</u>
Head Start	36.70	10.06	1.07
Non-Head Start	33.79	12.30	1.07

Table 4.3 displays the results of the comparison of Head Start vs. Non-Head Start students in math. The mean post test scores are 48.76 and 43.05, respectively. The standard deviation is 8.14 for Head Start and 10.85 for Non-Head Start. The t-value is $t_{(66)} = 2.45$ ($p \leq .05$). This led to the rejection of the null hypothesis. First grade students who attend Head Start will demonstrate significantly higher scores in math achievement than those who did not attend Head Start.

TABLE 4.3
Means, Standard Deviations, and t-Values for Head Start
Students and Non-Head Start Students in Math

	Math		
	<u>Mean</u>	<u>Standard Deviation</u>	<u>t-Value</u>
Head Start Students	48.76	8.14	2.45
Non-Head Start Students	43.05	10.85	2.45

CHAPTER V

DISCUSSION

SUMMARY

People are becoming increasingly aware of the critical importance of the years before a child begins elementary school. These years lay the groundwork for latter academic success. Experts believe that a child has developed nearly all of his or her intelligence by the age of 5 (Amundson, 1992). Studies have shown that children who have had rich early childhood experiences make at least short term academic gains. Early exposure to preschool activities and readiness tasks have a positive influence in kindergarten, first, and second grade (Land, 1992).

Educators have long been convinced that education is beneficial to children in their formative years, and believe it should become an integral part of planning for the young. This was part of the reasoning behind Head Start (Zigler and Styfco, 1993). Head Start was developed to provide comprehensive services which included education, health, social services, and parent involvement components. If focused on low income at-risk preschool children. Head Start's goal was to have these children ready to succeed when they entered elementary school by bringing about a greater degree of social competence. It is important to examine whether participation in the Head Start preschool program benefits disadvantaged children academically. This information is necessary to insure government funding and future continuation and development of this crucial program.

This study examined the effect of the Head Start preschool program on the math and reading achievement of first grade students. The hypotheses of the study are that the subjects who attended the Head Start program will do better in math than the subjects who did not participate in the program. The second hypothesis is that the subjects who attend-

ed the Head Start program will do better in reading than the subjects who did not participate in the program. A literature review reported the results of other studies on the effects of early educational experiences on at-risk students' elementary school achievement. In general, these studies indicated that early educational intervention increased cognitive gains in the primary grades, but these gains were not sustained in the upper grades; that motivational and attitudinal gains from early intervention were sustained through later formal schooling; and that students from poverty areas demonstrated greater gains than did middle class children. The results also suggest that Head Start children may have developed the desired social and cognitive ability so that they can progress in school, stay in the mainstream, and satisfy teacher's requirements (Carrine, 1990).

In the present study, the Comprehensive Test of Basic Skills was administered in May 1992 to four first grade classrooms. Of these first grade students, 34 had participated in the Head Start program, and the 34 who did not participate were randomly selected and then matched according to sex. The students were predominantly Caucasian and of low socio-economic class. The ages of the subjects ranged from 6 to 7 years of age. The total reading and math scores for each subject who took the Comprehensive Test of Basic Skills during the spring of 1992 were the basis of measurement for this study. A comparison of Head Start and non-Head Start subjects scores will be implemented. The results indicated that there was no difference in the reading achievement between the two groups, but there was a significant difference in math achievement. The Head Start subjects scored higher in math on the CTBS than the other students.

CONCLUSIONS

The students who participated in the Head Start Preschool program did better on the math section of the CTBS than the other students. The math section of the CTBS focuses on math computation, concepts, and applications. Therefore, the Head Start students acquired a foundation in these areas while in the program. They were better prepared in their critical thinking and problem solving ability. These scores on the CTBS most likely

reflect their report card grades and everyday math achievement ability. On the other hand, there were no significant differences found between the Head Start and non-Head Start subjects on reading scores on the CTBS. The CTBS measures visual and sound recognition, word analysis, vocabulary and comprehensive ability.

Past research supports the present studies findings. For example, Shipman (1979) found that a child's early exposure to group activities and readiness tasks had a positive influence reported by reading and math test scores in kindergarten, first, and second grade. Also, the Illinois State Board of Education (1990) concluded that 70% of students who had attended a pre-kindergarten scored above average or within the normal range on achievement tests in reading, math, and language at the beginning of first grade. The literature reported by Chafel (1990) indicated that children from lower socio-economic backgrounds demonstrated greater gains from a pre-kindergarten experience than those students from higher socio-economic backgrounds.

DISCUSSION

Head Start's success derives from several critical components. First, program performance standards require the use of a developmentally appropriate curriculum keyed to each child's development. Through such a program, teacher's facilitate, rather than direct learning (Zigler & Styfco, 1993). By making individual choices about their activities, children build a disposition for learning and creative problem solving.

The Head Start program provides a variety of learning activities that help children grow in all developmental areas — including cognitive, language, social, self-help, and gross and fine motor. Some areas of activities include: dramatic play, manipulative table, block area, discovery area, art center, library center, construction area, circle time, outside play, and field trips. These activities aid in preparing the child for the math and reading tasks they will encounter in elementary school.

The Head Start program builds a strong math foundation. The program helps the child become familiar with and recognize basic math concepts. The Head Start curriculum in

math overlaps with the first grade math curriculum. The Head Start program teaches the core skills, then they are reintroduced in the first grade. This allows the student to review, refine, and expand on the concepts. When the child feels comfortable with the material it increases their level of mastery.

Through everyday life skills these children from underprivileged backgrounds experience many hands-on activities using math concepts. They are often responsible for using money to shop at the corner store, use and pay for public transportation, and often cook and prepare foods using measuring techniques. These activities require everyday use of systems of numeration (such as counting), operations with whole numbers, daily problem solving, and dramatization of number situations to help them get through their daily routine.

The students who did not attend a prekindergarten program entered first grade with a significant disadvantage. They were not familiar with the materials being taught and therefore had to start from the beginning, whereas the Head Start students had already formed-schemas and felt reasonably comfortable with the material.

The Head Start math curriculum is broken down into seven general areas with specific objectives that build upon the knowledge learned prior to it. This helps the child form a frame of reference for the data. The Head Start's math curriculum scope and sequence follows:

1. Systems and numeration—pupils will be able to compare objects based on size and count to 5.
2. Operation with whole numbers—pupils will be able to recognize one-to-one relationships, count the number of objects in a set to 5, and order sets by number.
3. Operations with practical numbers—pupils will be able to understand wholes and parts.

4. Measurement—pupils will be able to compare sizes of objects, recognize coins, tools of measurement, and thermometers.
5. Organizing and interpreting data—pupils will be able to interpret a simple pictograph.
6. Geometry—pupils will be able to recognize and match shapes and relate geometric shapes to the physical world.
7. Problem solving—pupils will be able to match concrete objects, sort objects, dramatize number and spatial situations and relationships.

The first grade curriculum starts out by re-teaching what is already familiar to the Head Start student and then builds on the child's already existing math skills. This enables the child to understand and learn new and more complex topics. The math education for first grade is divided into three report card periods. All three periods cover the same topics, but they increase in difficulty as the year progresses. The topics include: numeration, whole numbers, measurement, data, geometry, problem solving, and fractions.

The Head Start reading curriculum tries to prepare the child for success in first grade reading. It focuses upon five areas which are as follows:

1. Oral communication—this includes listening and speaking ability
2. Reading readiness—listen to stories, explore books, recognize own name on paper, sort objects, recognize letter sounds, begin to sequence events.
3. Literature—listen to stories and poems, expand vocabulary, learn rhymes, react to books through discussions and drawings, select books from the classroom library.

4. Writing—develop fluency by conversations, creative drawings and paintings, dictate simple labels, signs, stories, poems and letters, draw or scribble using writing grasp, hand-eye coordination, and trace simple forms.
5. Mass media—begin to discriminate between fantasy and reality, use news paper and magazine resources for the classroom program.

Although the results of the present study did not show significant results for Head Start students in reading achievement, there was a positive direction found in the results. The Head Start students' mean in reading was higher than the non-Head Start group (36.70 vs. 33.79). Some studies have found that the Head Start program does help the children's language development. When care givers speak often to children, especially to give or ask for information rather than to control behavior, and encourage children to initiate conversations with them, the children do better on tests of language development than children who do not have conversations with adults (Papalia & Olds, 1990). These skills need to be fostered at home in conjunction with the program. Parents or guardians need to read and communicate with the child on an everyday basis. If this is lacking, the child will have a hard time with the Head Start reading curriculum as well as future requirements.

The first grade curriculum also focuses on reading comprehension, writing, speaking, listening, and mass media. The curriculum is broken down into three main sections. The first is reading and literature. This area covers topics such as: comprehending literature and content material, sustained silent reading, study skills, and test taking skills. The next area is oral and written composing. This includes listening and responding to speech, directions, poems and stories, dictating as teacher records experiences, drawing and printing in a journal, and latter in the year composing and writing sentences. The third area is language analysis. This includes expanding vocabulary, word recognition and spelling, mechanics and handwriting, and usage.

In most recent years in the Sheridan school there has been a shift away from teacher

directed reading activities. In the past, they taught reading by using a basal reading program. Now whole language theme oriented programs using trade books are the core of the reading program. Instruction focused more upon concepts and meaning of stories, including problem solving, and less emphasis upon separate phonics instruction and other decoding skills. Children from underprivileged areas who enter a first grade program with a Head Start experience are still missing years of daily hands on situations that are rich with all the prerequisite reading skills found in the scope and sequence. They still come to school from homes that are print illiterate and weak in situations where reading, writing, listening and speaking skills are used. They do not have the framework necessary to understand or grasp many ideas and topics presented in the whole language readiness. In the time frame of the Head Start experience, the program can not totally make-up for the previous years of neglect in this area. The first grade curriculum's use of whole language assumes that all of these areas in the scope and sequence have been fulfilled previously in the preschool and home experience before entering elementary school. This is not always the case. There needs to be a balance of time spent on reading for meaning, story analysis, character development, problem solving, phonics, and other decoding skills and drills.

Aside from the curriculum, a key component of Head Start's success is due to parental involvement. Head Start believes that parents are critical educators of their children. Children need the active involvement of their families to achieve their full educational potential. The parents know their communities, their homes, and their children as no one else does. Parents can play a positive role in the educational process by reinforcing learning at home and helping teachers understand the child's unique needs. Their opinions and voices need to be heard if programs are to succeed in strengthening the development of children.

Few government programs have been as successful as Head Start in bringing the concept of parent involvement to life. Even reluctant parents, once they see Head Start's positive effects on their children, often develop a relationship of trust with program staff that leads to involvement. Many parents receive the support needed to lift themselves out of

poverty and to improve their parenting skills.

In contrast, many parents do not continue their involvement in their children's elementary school, because outreach to parents and a policy role for families are less developed. According to one survey, a majority of elementary and secondary school teachers feel uneasy or reluctant about approaching parents to talk with them about their children; yet almost ninety percent of teachers feel that lack of parental support is a problem in their school. As for parents, the lower their income and educational levels, the more reluctant they are to approach their children's teachers (Zigler & Styfco, 1993). Teachers fault parents for failing to provide their children with the intellectual and motivational prerequisites for successful learning, and parents blame teachers for denying their children the same quality of education they believe middle class children receive. This negative relationship decreases the effectiveness of school programs designed to help disadvantaged children. In addition, when schools fail to encourage parents to reinforce learning at home, they miss important opportunities to increase educational success; the curriculum of the home is twice as predictive of academic learning as family socioeconomic status (Zigler & Styfco, 1993).

IMPLICATIONS FOR FUTURE RESEARCH

The results show that a more thorough analysis may be necessary to find significant differences between Head Start students and non-Head Start students. There are many variations of this study that could provide beneficial results. Some suggestions for future research include:

1. Using a larger experimental group.
2. Using report card grades, other achievement tests, teacher observations and/or teacher ratings scales as means of assessment.
3. Comparing the test results of first, second, and third graders to see if the results remain consistent for different age groups.

4. Doing a longitudinal study of subjects in first, second, and third grade to see if their gains remain stable over time.
5. Including different ethnic and socio-economic groups.
6. Comparing Head Start and non-Head Start students achievement in other areas and subjects aside from math and reading.

In conclusion, Head Start is an important and beneficial part of an underprivileged child's development. It aids in the preparation for elementary school. Although there is little long-term evidence specific to Head Start, there are volumes of studies testifying to its short term benefits (Zigler and Styfco, 1993). Recent Head Start graduates do score better on intelligence and achievement tests than other students. More studies need to be done to enable educators to improve the Head Start program and start to produce long-term benefits.

BIBLIOGRAPHY

- Amundson, K. (1992). Getting Your Child Ready for School...and the School Ready for Your Child. American Association of School Administrators. Arlington, VA.
- Berreuta-Clement, J.R., Schweinhart, L.J., Barnett, S., Epstein, A. & Weikart, D.P. The Effects of the Perry Preschool Program on Youths Through Age 19. Monographs of the High/Scope Educational Research Foundation, 1984, 8.
- Bloom, B. (1964). Stability and Change in Human Characteristics. New York: John Wiley & Sons Inc.
- Bloom, B., Davis A. & Hess, R. (1965). Compensatory Education for Cultural Deprivation. New York: Holt, Rinehart & Winston Inc.
- Bloom, B. (1981). All Our Children Learning. New York: McGraw-Hill Book Co.
- Campbell, D., & Erlebacher, A. (1970) Reply to the Replies. Disadvantaged Child, 3, 185-210.
- Carmine, J. (1990). Kindergarten Education and the Reading, Language and Mathematics Achievement of First Graders. Report, ERIC Document ED 341 454.
- Chafee, J., Children in Poverty: Policy Perspectives on a National Crisis. Young Children, Vol. 45, No. 5, July, 1990.
- Clarke, A., Early Experience and Cognitive Development. Review of Research in Education. Washington, DC. American Education Research Association, 1984.
- Collins, R., & Deloria, D. Head Start Research: A New Chapter. Children Today, July-August 1983.
- Collins, R. & Kinney, P. Current Early Education and Child Care Projects: A Quick Reference, Technical Paper of the Head Start Evaluation Design Project, Collins Management Consulting, Inc., Vienna, Virginia, Nov., 1989.
- Datta, L., New Direction for Early Child Development Programs: Some Findings from Research, University of Illinois, Oct., 1973.
- Flores, A., Tucker, J. & Riley, M. (1985). Head Start Celebrates 20th Anniversary and America's Future. Metro Impressions, Region VI, Spring, 4-10.
- Goodman, P. (1982). Are the Long Term Effects of Early Childhood Education Effective Even Though the Short Term Effects Seem Ineffective? Viewpoints. pp. 2-11.

- Hebbeler, K. Follow-Up Study of Three Cohorts of Head Start Graduates. Report at Annual Meeting of the American Educational Research Association, Chicago, Illinois. (1985).
- Illinois State Board of Education, Prekindergarten Program for Children at Risk of Academic Failure. August, 1990.
- Judge, K.A. (1993) Trends in Programs for at Risk Preschool Children, Ages 3-5. Viewpoints, pp. 3-63.
- Lally, J.R., Mangione, P.L., & Honig, A.S. Syracuse University Family Development Research Program: Long-Range Impact of an Early Intervention with Low-Income Children and their Families. San Francisco: Center for Child and Family Studies, 1987.
- Lang, C. (1992). Head Start: New Challenges. New Chances. Newton, Mass. Education Development Center, Inc.
- Lazar, I, Darlington, R., Murray, H., Royce, J. & Snipper, A. (1982). Lasting Effects of Early Education: A Report for the Consortium for Longitudinal Studies. Monographs of the Society for Research in Child Development. Vol. 47, Nos. 2-3.
- Mann, A., et. al., A Review of Head Start Research Since 1969, Social Research Group, George Washington University, Contract No. HEW-105-76-1120, July 1977.
- Papalia, D. & Olds, S. (1990). A Child's World – Infancy through Adolescence. New York: McGraw-Hill Publishing Co.
- Shipman, V., et. al., Notable Early Characteristics of High and Low Achieving Black Low-SES Children. Disadvantaged Children and their First School Experiences, ETS-Head Start Longitudinal Study, EDS, Princeton, New Jersey, Dec. 1976.
- Systems Development Corp. (1972). Effects of Different Head Start Program Approaches on Children of Different Characteristics. Report on Analysis Data from 1968-1969 National Evaluation. Santa Monica, CA: Author.
- Washington, V., & Oyemade-Bailey, U. (1995). Project Head Start: Models and Strategies for the Twenty-First Century. NY: Garland Publishing Inc.
- Weber, C.V., Roster, P.W., & Weikart, D.P. (1978). An Economic Analysis of the Ypsilanti Perry Preschool Project, Monographs of the High/Scope Educational Research Foundation, Number Four, Ypsilanti, Michigan.
- Zigler, E., & Styfco, S. (1993). Head Start and Beyond. Connecticut: Yale University Press.