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A LONGITUDINAL EVALUATION OF THE OGDEN CITY

HEAD START PROGRAM

by

Robert D. Eyestone

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1970

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ABSTRACT

A Longitudinal Evaluation of the Ogden City

Head Start Program

by

Robert D. Eyestone, Master of Psychology

Utah State University, 1970

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Department: Psychology

This study attempted to investigate the differences in the Head Start population of the Ogden City Schools and to determine if the differences had a significant influence on ability comparisons. An attempt was also made to evaluate the longitudinal benefits of Head Start training. The original data was collected in the 1966-67 evaluation of the Head Start program. Additional data was collected as this original group of Head Start children progressed through kindergarten, first, and second grades.

Variables considered in this study were, residence, age, sex, socio-economic deprivation, family constellation, and ethnic group. In addition, a comparison was made of children in kindergarten, first, and second grades, who had Head Start, to peers who had no Head Start experience.

The variables were tested by analysis of variance and chi-square.

Results of the analyses of data revealed that significant differences existed in the following categories: residence, socio-economic deprivation, ethnic groups, kindergarten, and first grade. The

difference in residence support the Ogden City Schools labeling the target area as a impoverished part of the district that needs additional services. The criteria of family income or socio-economic deprivation is a justifiable measure to use in determining who should be admitted to the Head Start program. It was also determined that the minority ethnic groups made the most gains in the Head Start program with the order of gain being Negro, Spanish American and Caucasian.

It was also concluded that the children who had received the Head Start experience were able to maintain their gains through the first grade. School apparently has a gradual ameliorating influence however as the differences between second graders who had Head Start and matched peers who did not have Head Start were no longer significant.

(97 pages)

INTRODUCTION

With the advent of space age technology, came a national sense of urgency. Suddenly education became more closely allied with national defense and preparedness. Conferences were held from the grass roots clear to the national level. Human resources became more clearly a national resource that must be conserved and developed if we as a nation were to hold our position as a world leader.

The White House Conference on education in 1960 brought some of the best minds from education and related fields together. As a result of this conference many of the nations educational problems were brought to the fore. Research programs were multiplied, studies were conducted, reports were analyzed and recommendations were made.

Recognizing that the educational system in the United States wasn't meeting the needs of a substantial group of students who do not make normal progress in their school learning, a number of experimental schools were established. Conflicting ideas produced at these different child study centers across the nation are keeping the field in a state of healthy agitation. While the conflict continues as to the most effective techniques to be used, it was generally agreed that a compensatory educational program must be provided for children of socially and economically depressed areas. Because of the startling results coming from schools for the pre-school child, the government expanded the program by providing federal funds to establish specialized pilot programs across the nation.

Challenging opportunities in education were created by the passage of the Elementary and Secondary Education Act of 1965 and its

ammendments. The program of Compensatory Education authorized by Title I of the Act is aimed directly at improving the opportunities for educationally and culturally disadvantaged children. Through the Compensatory Education Act war was declared on poverty. Huge sums have been made available since the inception of the program, approximately one billion dollars annually.

At last special recognition was given the special education needs of children of low income families and the impact that concentration of low income families has on the ability of local educational agencies to support adequate educational programs. Congress declared it the policy of the United States to provide financial assistance to local educational agencies serving areas with children from low income families.

Pupil teacher ratios were reduced in these impoverished areas by the addition of supporting personnel such as teacher aids, volunteers and student interns. More diversified programs of reading, speech, art, music and language specialists were introduced. Elementary libraries were added with teacher librarians. Increased emphasis has been placed on the importance of language and communication. Pupil personnel services have been expanded by the addition of social workers and psychologists. As a result more attention is being paid to the child and his total environment.

The Pupil Personnel Staff of the Ogden City Schools had recognized that there were a substantial group of students in the district who did not make normal progress in school. Predominantly, these were students who came to school from an environment of adverse circumstances as described by Bloom, Davis, and Hess (1965) and Deutsch (1964). A large proportion of these youths came from homes in which the adults had a minimal education. In addition low income, large family size, broken homes

and crowded conditions further depressed the child's environment.

In the past the Ogden City Schools had inaugurated special programs in an effort to alleviate the problem. Most of these projects had been restricted to a geographical area (hereafter referred to as "Target Area") of the school district that had been recognized by school officials as being the most economically and socially deprived.

One such program entitled "Project Prevention" was launched in an effort to provide the children with more special services. In the program specialists such as Social Workers, School Psychologists and Public Health Nurses worked closely with principals, teachers, and parents in an effort to upgrade the educational program.

Special Education classes were also increased in number. It soon became apparent that children from the various minority groups occupied a much higher percentage of the enrollment in these special classes than their total population in the district warranted. For instance, the special education population for the 1966-67 school year consisted of 64% European, 26.1% Spanish American and 10% Negro, while the total school population consisted of 88% European, 7.9% Spanish American, and 2.7% Negro children. It was felt that this high enrollment of Spanish-American, and Negro children was partially a reflection of their social and economic background.

The survey of severely and mildly retarded children in the Ogden City School area conducted in 1969, Figure 1, shows the severely retarded (I.Q. below 60) quite evenly distributed across the city. The mildly retarded (I.Q. 60 thru 79) children were found to be concentrated in the low socio-economic area of the city with some residing in the middle and high income areas of the city. This agrees with the 1966-67 special education enrollment percentages which showed a much higher proportion of Spanish American and Negro children enrolled than would be expected

MAP OF OGDEN UTAH

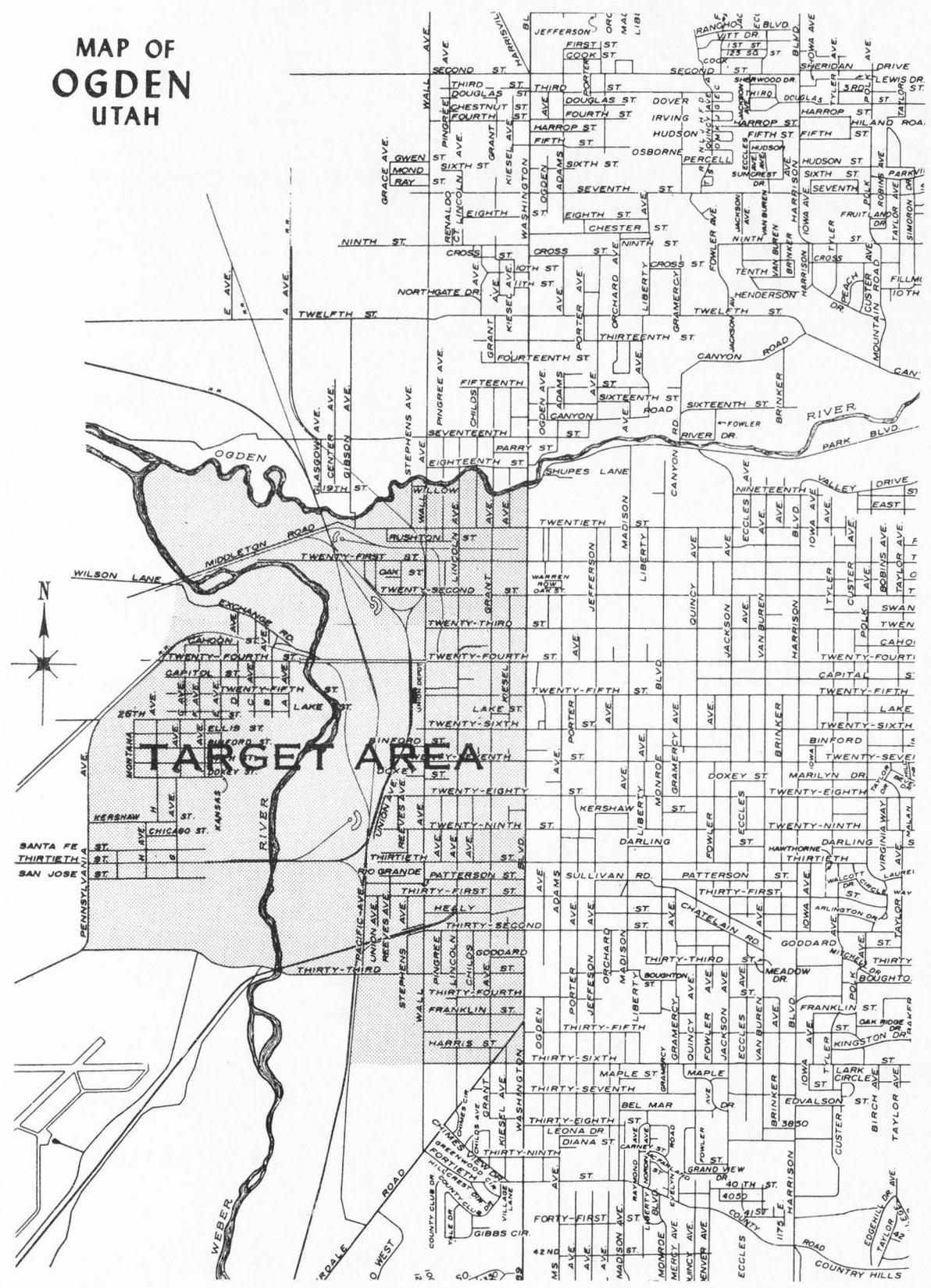


Figure 1. Map of Ogden City showing the socio-economic strata and the residence of mildly and severely retarded children.

on a per capita basis. The majority of these ethnic groups reside in the lower socio-economic area of the city.

With the advent of federal funds made available through the Economic Opportunity Act of 1964 Title II B, a pre-school program called Early School Admissions was established. When funds were made available the summer of 1965 a summer Head Start program was established. During the fall of 1966 federal money for the full year Head Start program was not immediately available. Consequently a small Early Admissions program was established until in February 1967 when Head Start moneys were funded for the district and the regular Head Start program was established.

Each year, since pre-school training was inaugurated in Ogden City Schools in 1965, an attempt has been made to evaluate (as required by the Compensatory Education Act) the progress and provide helpful information for improving the program. The initial pre-school programs were evaluated and reported by Callister and Eyestone (1967).

For the school year 1966-67 two kinds of procedures were used. The psychologist administered two I.Q. tests which have been used extensively with young children. The Head Start teachers also completed a subjective evaluation form on each child.

The Goodenough Draw-a-Man Test is a paper and pencil task which the psychologist used. It is a task where the child is simply instructed to "make a picture of a man; make the very best picture you can." Emphasis is placed upon the accuracy of the child's observation and upon the development of conceptual thinking, rather than upon artistic skill.

The other I.Q. test was the Peabody Picture Vocabulary Test. In the PPVT the subject is shown a series of plates on each of which are four drawings and the subject is to indicate which drawing fits a stimulus word verbalized by the examiner. The test requires only a few minutes to

administer and has a high interest level for most subjects.

The procedure also included the teacher's rating of the children in their classes, the end of the program, on a subjective evaluation form. This rating included the areas of verbal communication, concept formation, social development, muscular coordination and self concept. In addition a cumulative score was derived for all of these areas.

In brief, the findings, Callister and Eyestone (1967) related to the progress of the children on the foregoing measures were as follows:

The children made a significant increase in I.Q. score on the Peabody Picture Vocabulary Test. This increase was significant at the .01 level of confidence. The average child gained 2.80 I.Q. points. On the Goodenough Draw-a-Man Test there was a slight, but not significant, increase. On the Teacher's Observation rating children gained most in the following descending order;

1. Verbal communication
2. Concept formation
3. Social development
4. Muscular coordination
5. Self concept

These findings were helpful, however, several questions remained which could be answered by further investigation of the data.

Purpose for This Study

This study was designed to discover differences in the Head Start population and to determine if those differences had a significant influence on ability comparisons as measured by the Goodenough Draw-a-Man and Peabody Picture Vocabulary Tests and the teacher's subjective evaluations.

Objectives

The existing literature appears to hold only partial answers to the broad questions of early school admissions. The present study attempted to investigate the characteristics of the Head Start child as he appeared in the Ogden City Schools.

Specifically, it would be interesting and helpful in future decisions about pre-school programs to know the answers to such questions as the following, which serve as the questions to be explored in the present study:

1. Do Head Start children residing in the economically deprived "target" area of Ogden differ from Head Start children who reside outside the target area in their progress in the Head Start programs?
2. Do four year olds differ from five year olds in their progress in the program?
3. Do boys differ from girls in their progress in the program?
4. Do the Head Start children "qualified" from economically deprived families differ from the 10% non-economically deprived "non-qualified" Head Start children in their progress in the program?
5. Do Negro, Caucasian and Spanish American children differ in their progress in the program?
6. Do children living with step-parents, living with one parent, living with both natural parents, differ in their progress in the program?
7. How do children in kindergarten who have had Head Start compare with kindergarten students who have not had Head Start?

8. How do children in first grade who have had Head Start compare to first grade students who have not had Head Start when the students are matched on basis of sex, teacher and socio-economic status?

Operational Definition of Terms

The "Office of Economic Opportunity" is the federal agency responsible for the operation and administration of Head Start.

"Head Start" is a federally sponsored and locally operated program for preschool children whose families qualify for participation under the Office of Economic Opportunity income regulations.

The term "economically deprived" is used to describe a state of hardship in which the economic needs of the individual or family are not adequately met. The Office of Economic Opportunity has defined economically deprived in a way that takes into consideration household size. For example a non-farm family of two is eligible if their income is \$2,000 or less. For each additional person the income increases until it reaches a maximum of \$7,300 for a family of twelve or more.

The term "qualified" pertains to those Head Start children who come from economically deprived families as judged by the Office of Economic Opportunity.

The term "non-qualified" applies to those Head Start children who come from homes where the family income exceeds the maximum allowed by the Office of Economic Opportunity. Each Head Start program is permitted to have up to 10% non-qualified children enrolled.

Four and five year old grouping will be determined by birth prior or subsequent to 3/1/62.

"Target area" is that area of the Ogden City School District which is geographically south of the Ogden River and west of Washington Boulevard. This area has previously been designated as being economically deprived.

"Verbal communication" pertains to the individuals' ability to

verbalize, including the use of proper names and labels for persons and things.

1. Amount . . . pertains to the frequency and quantity of verbalization.
2. Quality . . . refers to the child's ability to correctly express himself in complete accurate statements and in the proper use of labels for persons and things.

"Self concept" is a term used to describe the child's view of his own adequacy and worth. The way the child feels about himself as judged by the self assurance and confidence he displays as he moves from one task to another and his interaction with other children and the adults involved in the Head Start program.

The term "social development" refers to the child's ability to relate to peers in the classroom and on the playground. It can be measured by growth in capacity for cooperation, in ability to take turns and in warmth of inter personal relationships.

"Concept formation" is a term given to the ability to provide appropriate labels for objects, to compare and classify, by color, shape, size and number. To grasp the meaning and use properly abstract terms such as above, below, larger than, etc.

"Attention" pertains to the child's ability to stick with the on-going process in class in contrast to being inattentive or difficult to involve.

"Muscular coordination" is the ability to use large muscles in running jumping, balancing and climbing activities as well as to perform small muscle coordination activities such as stringing beads, manipulating toys and puzzles.

REVIEW OF LITERATURE

Introduction

The advent of the Sputnik brought about a re-evaluation of the American educational system and an increased emphasis on the role of education in our society. The White House Conference of 1960 focused on developments which were producing changes in the world of children and youth. Katherine Oettinger's (1965) summary of the activities since the 1960 White House Conference lists six factors, all of which affect education, that have contributed to the change. They are:

- "1. The population explosion with over 79.9 million under 21 now with 85.7 million anticipated by 1970.
2. Rising expectations for equality. Consummated in the Civil Rights of 1964.
3. Concern for the peer. The nation has been shocked into awareness.
4. Technological change. Automation and its implications.
5. Advancing knowledge. Total amount of human knowledge has doubled in the past 15 years.
6. Federal legislation. Congress has enacted more than 40 significant laws directly connected with health, welfare, and education since 1960." (Oettinger, 1965, p.43-44)

One area of concern to educators, industry and politicians alike was the growing tide of school dropouts. With the great technological advances of the past decade the unskilled employment opportunities were rapidly disappearing. Increased public pressure was placed on the educator to turn the tide. Consequently, numerous studies were conducted in an effort to determine causes and possible courses of corrective action. Livingston (1959) found retention in grades to be significantly related

to dropping out of school. These findings were corroborated by the Iowa (1958) and again in the Utah (1966) study of dropouts. Riendeau reported that the causes of early school leaving are:

- "1. Poor social relationships at school.
 2. Lack of personal interest at home or at school.
 3. Inability to see value in school subjects.
 4. Limited participation in extra curricular activities."
- (Riendeau, 1962, p. 524)

Liddle (1962) and Williams (1963) both found in their respective studies that the school dropouts made below average social and personal adjustments which contributed to their decision to leave school. Call (1967) in an investigation of the middle class high school dropout found that high school graduates came from homes where education was valued more, had more ability, better academic skills and attitudes than their middle class dropout counterparts.

The results of the early dropout studies focused the attention of those concerned upon preventive programs. Government moneys were made available and numerous pilot programs were launched in some of the major metropolitan areas of the country. Once again the methods of Maria Montessori (1964) became popular as well as those of the French psychologist Piaget (1952) on early child development.

Maria Montessori (1964) demonstrated in the slums of Italy at the turn of the century that children from poor invironments could learn and compete with children endowed with a better environment, providing the process started early enough. Montessori emphasized that infancy is the age when the foundations of education and culture must be laid. Montessori realized that the development of the senses preceeded that of superior intellectual activity. She maintained that the child between three and

seven years is in the crucial period of formation. This is supported by a study of institutionalized feeble minded children conducted by Kirk (1958). Kirk found that early (3 to 6 years) nursery training brought about significant gains in I.Q. These gains were maintained in a follow up study conducted from three to five years later.

Piaget (1952) advanced the idea that the development of intelligence and of all cognitive operations is essentially an active transaction between the child and his environment. Thus the child continually forms certain ways of organizing what he perceives into conceptual schemes, which in turn alter his way of perceiving at the next encounter with environment. By the time the child appears in school he has developed a repertoire of concepts which give meaning and organization to what he experiences in school. Piaget emphasized that perception was the major developmental task of a child between the ages of three and seven and one-half.

Bloom, Davis and Hess (1965) assert that fifty percent of cognitive development occurs between conception and age four. Also, the influence of enrichment programs progressively wanes after the age of four. Bloom's formulations indicate that only an additional seventeen percent of intellectual development occurs between four and six. The years which are emphasized in what is widely believed to be the most promising battle of the Poverty War, "Head Start."

Irwin (1948) concluded that cultural impositions commence at a very early age. In a study of speech sound data collected from two groups of infants there was no significant difference in the mastery of speech sounds produced by the very young (1 month to 1 1/2 years) infants from laboring families as contrasted with professional and clerical families. However, as the infants ages increased (1 1/2 to

2 years) a highly significant difference became evident favoring the infants from the professional and clerical families. The difference appears then to become one of environmental influence.

Utter (1963) in a study of culturally impoverished kindergarten children from Rochester, New York, found language impoverishment and self concept as major obstacles to learning. This was substantiated in a study of four year old early admission students in Baltimore. Bernstein's (1964) research on language points to a definite lack of preparation of deprived children to deal with language as it is used in school and to use language as an aid in conceptualizing the world.

Krugman (1961) found that culturally deprived students are usually poor in communication skills and that this inability causes failure in other subjects. In addition, such students must be helped to accept themselves and to realize that different kinds of language are appropriate as situations vary. In support of this, Gordon, (1969) claims that cognitive development is inseparable from personality development. Adequate self esteem requires an adequate affective and cognitive climate.

Recognizing the importance of the early childhood years the United States Office of Education and the Office of Economic Opportunity jointly published a bulletin entitled, Education: An Answer to Poverty. Under their respective guidance, Early Admission and Head Start programs were developed. These were finally brought together under the Head Start program and the Head Start Manual of Policies and Instructions was published in 1967.

The following are the broad goals of Head Start Child Development Programs:

Improving the child's health.

Helping the child's emotional and social development by encouraging

self-confidence, self-expression, self-discipline and curiosity.

Improving and expanding the child's ability to think, reason and speak clearly.

Helping children to get wider and more varied experiences which will broaden their horizons, increase their ease of conversation and improve their understanding of the world in which they live.

Giving the child frequent chances to succeed. Such chances may thus erase patterns of frustration and failure and especially the fear of failure.

Developing a climate of confidence for the child which will make him want to learn.

Increasing the child's ability to get along with others in his family and, at the same time, helping the family to understand him and his problems, thus strengthening family ties.

Developing in the child and his family a responsible attitude toward society and fostering feelings of belonging to a community.

Planning activities which allow groups from every social, ethnic and economic level in a community to join together with the poor in solving problems.

Offering a chance for the child to meet and see teachers, policemen, health and welfare officers - - all figures of authority - - in situations which will bring respect and not fear.

Giving the child a chance to meet with older children, teenagers, and adults, who will serve as models in manners, behavior, and speech.

Helping both the child and his family to a greater confidence, self-respect and dignity. (Head Start Child Development Programs, 1967, p. 17)

Following these guidelines numerous pre-school programs were established across the nation. As the pre-school pilot programs progressed it became abundantly clear that significant gains were being made, Callister and Eyestone (1967) Deal and Wood (1968), Gray and Klaus (1963 to 1965) and Zigler (1967) in the battle against cultural impoverishment though at times there were questions, Schwertfeger and Weikart (1967) as how to best assess these gains.

Pertinent Questions for Head Start

In the 1966-1967 annual report by the Educational Testing Service it was emphasized that,

We are looking for answers to such questions as: How do criteria of school readiness vary for teachers with different amounts of training and experience? In cities of different sizes? For boys versus girls, for younger children versus older children, for children from different socio-economic backgrounds and with different amounts of pre-school experience. (p. 30)

The Educational Testing Service has thus raised some very pertinent questions.

As alluded to earlier, Hunt (1960) demonstrated the difficulty in altering the motivational patterns of school age children. Bloom, Davis and Hess (1965), Montessori (1964) and Piaget (1952) all emphasized the importance of early training upon the thinking patterns of young children. Scholnick (1968) in a comparative study of disadvantaged and middle class children discovered that both 5 and 8 year lower class children start off with a clear disadvantage in discriminate learning. The difference however was not as great for the 5 as for the 8 year olds.

No attempt was made in any of these studies to determine if there was a learning differential in favor of the youngest children. This investigator feels that such a differentail would support the findings of Bloom (1965), Piaget (1952) and Irwin (1948). The findings of Scholnick, Osler, and Katzenellenbogen (1968) and Young (1968), that the learning differential between culturally deprived and non-deprived children continues to widen as the children progress in school, support the hypothesis that the earlier pre-school training would be more beneficial. Estes (1953) findings however do not support this supposition.

Florey (1935) called attention to the fact that there is a growth

differential in favor of the girls. Florey pointed out that a five year old girl is as fully as far along in her development as a six year old boy. This differential is usually most noticable as the children enter the pre-adolescent, fifth and sixth grade years. Anderson and Dearborn (1952) discovered sex differences are as varied as the intra sex differences.

Harris (1963) in his book, Children's Drawings as Measures of Intellectual Maturity concluded that girls in western cultures do better on the drawing test than do the boys. This he attributed to the girls earlier fine muscle development and their greater aesthetic interests. In addition girls often show a greater awareness of people and personal relationships. These findings by Harris are consistent with those of Goodenough (1926) in which she reported a slight but consistent sex difference in mean score favoring girls and a marked sex difference in the treatment of certain qualitative features. Arlitt (1922) in a comparative study of 5 and 6 year old negro children from Philadelphia and New Orleans found the girls to excell the boys of the same age.

Carrow (1968) conducted a study of 159 children, ages 2-10 through 7-9 years of age, who had I.Q.'s above 80, were free from severe speech or hearing problems and were monolinqual. The mean language comprehension score of the girls was greater than that of the boys at each half year level except at 3-0 years. The mean score of the total group of girls was significantly greater than that of the boys. Mortenson (1968) in his study of auditory discrimination found that in both auditory and visual discrimination of word elements in articulation and most language abilities the girls exceeded the boys. Weaver (1963) in a comparative study of 61 culturally deprived negro children found that there were apparent sex differences with the boys being lower.

Durrell (1940) indicated that the proportion of boys to girls that have been brought to the Boston Reading Clinic has been 10 to 1. Betts (1952) reported that males constituted more than 90% of the children involved in the reading clinic at Temple University. She also found that there were roughly 6 boys to every girl in the summer clinic at Michigan. Delecatto (1959) reports a poor reading ratio of 4 boys for every girl. Using the Iowa Every Pupil Test for Basic Skills for grades 3 through 6 and the Iowa Every Pupil Reading Test for High School, Stroud (1942) found that the girls exceeded the boys at all the grades but the differences were not significant at the High School level.

DiLorenzo and Salter (1968) in their evaluative study of pre-kindergarten programs in 8 districts of New York found conflicting results in the male vs. female question. The boys from the first group of pre-kindergarten students made the most progress over their controls. They were not able to maintain their advantage over their controls through kindergarten. In the second group of children to go through the program the girls performed and benefited more than the boys.

Harris and Morrison (1969) in discussing the merits of kindergarten programs for culturally deprived children emphasizes the role of the teacher. They point out that boys coming from disadvantaged homes are similar in performance on readiness tasks to girls coming from the same environment.

They suggest that the subsequent content or style of teaching may be a major contributing factor in lower reading scores made by boys. Kagan and Moss (1962) reminds us that in both the cognitive and affective aspects of the self, boys and girls view themselves differently, that they tend to use different learning styles and to evaluate different aspects of themselves and the world as being important.

These findings are supported by the Utah School Dropout report (1966)

which disclosed that girl dropouts were better accepted by other students than were the boy dropouts. Sex differences were also noted as to the number of friends the dropout had. Almost half (49.7%) of the boy dropouts had fewer than average or no friends in contrast to only 34.7% of the girls. The boys also had poorer relations with teachers than did female dropouts.

Numerous studies have been made in attempts to measure the consequence of economic deprivation. Bloom, Davis and Hess (1965), Deutsch (1964), Estes (1953), John (1963), Jones (1954), Sexton (1961), Terman and Oden (1947), Wakfield (1964) all report I.Q. differentials favoring the children from the more socio-economic endowed homes. Estes (1953) found these differences to be greatest during the early grade school years and that they tended to diminish as the child gets older. She concluded that the schooling had a gradual ameliorating influence which offset the initial handicap of the low socio-economic children. John (1963) findings on a study of grade 1 and grade 5 Negro children from three social classes however showed differences between social classes at grade 1 which while present were not significant. At grade 5 however, there were significant differences between the social classes favoring the middle class on Peabody Picture Vocabulary Test (PPVT), enumeration, I.Q. and Wechsler Intelligence Scale for Children (WISC).

Bernstein (1964) has investigated different linguistic codes and has demonstrated relationships between these codes and the status system of families. Hess and Shipmen (1965) in a study of social class differences in the ability of children to learn from their mothers found the middle class children the most adept in sorting and verbal skills. One of the features of the behavior of mothers and children of lower socio-economic class is a tendency to act without taking sufficient time for reflection

and planning. In contrast the middle class mother teaches the child to reflect, and to anticipate the consequences of his action and in this way avoid error.

There is little information in the current literature on Head Start concerning the effect the size of the family or the family parental structure has on the success of the children in their pre-school training. Lynn and Sawrey (1959) in making a comparative study of father absent, father present families in Norway concluded that the absence of father does affect the personality development of the children. Waldrop (1965) noted that children born to mothers with many children are more lethargic than those born to mothers with fewer children. This difference persisted and was evident at 2 1/2 years of age when the children were in nursery school.

Kohn and Carrell (1960) discovered in a study of 200 white working class and 200 white middle class families, quite different ideologies of child rearing. Terrel (1959) found significant differences between the lower and middle class families in the value placed on learning. They also observed a difference in the type of reinforcers that could be effectively used with the children.

Riessman (1962) noticed a consistent class difference in language skills between groups of children from the same sub-culture but of different socio-economic class. Murphy (1967) in a study of Topeka pre-school children noted that the sample of middle class children typically explored each new situation with eagerness, curiosity and interest. In contrast the children from the disadvantaged homes did not do such exploring until after many months of encouragement and stimulation.

Seldom does one pick up a paper or listen to a newscast but what they are reminded of the interracial problems plaguing our nation. The

controversy also appears in many of our professional journals with many different philosophies being proffered.

Terman and Oden (1925, 1947) in their early and monumental study of giftedness, found that 63.9% of their gifted children represented five ethnic groups. They were English, German, Scotch, French and Jewish. Among the groups reported least frequently were those of Italian, Portuguese, Spanish American and Negro descent. Klineberg (1944) summarized his review of some of the studies of ethnic differences by stating:

The results show that groups like the English, Scotch, German, Jews, Chinese and Japanese test close to the norm (white American); and American Negroes, Indians, Italians, Portuguese, and Spanish Americans test definitely below the norm. (1944, p. 402)

To some the ethnic differences are not so well defined. Garrett (1947 p. 332) for example, wrote that "the point may be stressed again that the differences between American Negroes and American whites are not true racial differences." Later, however, Garrett (1951) concluded that on tests of mental ability the American Negro ranks on the average consistently lower than the American white. Since this occurred so regularly from babyhood to adulthood it appeared unlikely that environmental opportunity and social status could explain all of the differences found. Garrett in the forward to Shuey's book, The Testing of Negro Intelligence, wrote:

Dr. Shuey concludes that the regularity and consistency of the results strongly imply a racial basis for these differences. I believe that the weight of evidence supports her conclusions. (Shuey 1958, p. viii)

Anastasi and D'Angelo (1952) and Brown (1944) in separate studies of preschool and kindergarten children concluded that at nominally similar socio-economic status that Negro children were not inferior to whites. These findings are supported by those of Klineberg (1963) and

Jenkins (1950) who found that, while on the whole young Negro children score lower than whites, the differences are very much less than in older groups and fall in the normal I.Q. range. Adler (1967) in his review of giftedness among ethnic groups cites Jenkins (1950) study of intellectually superior Negro youth wherein he concludes his findings closely approximate the normal curve of intelligence as typically given. Jenkins studies were drawn from 22,301 cases from northern urban communities.

Rieber and Womack (1968) administered the PPVT to 568 Negro, Latin American and Anglo American preschool children from families with incomes in the lowest 20% of the community. The average I.Q. for the Anglo was 85.0, for Negroes 68.0 and for Latins 50.3. Children who scored in the lowest quartile were compared to those in the highest on a number of economic and family variables. Income, educational level of parents, size of family and maternal employment were found to differ significantly for the two groups. After 5 weeks of Head Start preschool program all three groups showed significant improvement.

The large difference in average I.Q.'s of the Latin, Anglo and Negro children are difficult to account for. Inspection of the economic data for these three groups indicated that they were all on about the same level. Similar findings have been reported by McGurk (1953) who controlled for socio-economic level in a comparison of Negro and white elementary school children.

Such evidence is frequently interpreted as supportive of the notion that there are inherent racial differences in intellectual ability. Rieber and Womack (1968) concluded, however, that comparisons across racial groups involve differences in caste as well as social class and controlling for the latter does not eliminate the former.

Keller (1963) compared selected aspects of poor Negro and Caucasian

children attending first and fifth grades in the New York City Public Schools. She discovered that these children's proportion of unfavorable self-references increased from 55% in the first grade to 65% in the fifth. These children typically express a low self esteem, drawing unfavorable comparisons between themselves and their schoolmates. Of this group, the Negro children definitely exhibited more negative self evaluations than did the white.

Call (1968a) in a breakdown of the Ogden City Schools Dropout Report for 1967-1968 reveals that there were approximately three times as many Spanish American and American Indian children dropped from school than the school enrollment would have indicated. The percent of Negro dropouts compared favorably with the percent of enrollment while the Caucasian percentage of dropouts was somewhat lower than was to be expected.

Certainly the literature cited above is not conclusive in the assessment of the abilities of such children. Hopefully, information gained from this study will aid the department in better understanding the needs and in treating the problems of these children.

Deal and Wood (1968) noted the most central theme of educational measurement at the preschool level was the use of measures of intellectual ability for overall program evaluation. Schwertfeger and Weikart (1967) and Weikart (1964) conducted a follow up on children who had been in the Ypsilanti study and found that the differences which were significant in favor of the project children at the completion of the preschool program disappeared by the end of the second year. Weikart (1964) in reporting on the Perry preschool project disclosed that the findings were not consistent and the gains made by the experimental group over the control groups did not persist through kindergarten. These findings are in agreement with those of Woeff and Stein (1967). In contrast, Brittain

(1966) in his review of the preschool programs for culturally deprived children noted that the preliminary findings concerning the effects of preschool enrichment programs are predominantly positive, however, it is not universally so. He further reported that gains in I.Q. scores and augmented language cognitive ability have been found in several follow up studies, along with indirect evidence of greater interest in school and motivation for doing school work.

Precisely how these early results should be interpreted is not clear. Imperfections in assessment methods would be enough to assure variability likewise the preschool enrichment programs differ from one another so extensively they almost assure different results. As a case in point, Young (1968), reporting on the Canton, Ohio preschool program where a highly structured formal no-nonsense program was offered children, noted that children in the experimental group made significantly more progress in language skills than did the children in the regular Head Start program.

Perhaps, as Hyman and Sill (1965) conclude in their report on the Lawrence Township Head Start program, I.Q. gains and persistence of I.Q. gains might very well be a faulty premise from which to judge. They conclude that the true test of preschool experience is the performance of the children in learning to read, write and do numbers in school, their understanding and appreciation of school routines, and their achievements and motivations for school work. This performance is measured by achievement tests, school persistence and attrition and teachers' opinion. Both Henderson and Long (1968) and Zaruba (1968) obtained a high correlation between teacher evaluation and Stanford Achievement Test results.

SUMMARY

The review of literature supports the prevalent view that environment is indeed a vital factor in determining future aspirations and goals for children. It has been clearly established that cultural and socio-economic deprivation does indeed leave its imprint upon the lives of those who feel its influence. The literature supports the view that much can be done to alter the influence of a rather hostile environment.

In keeping with this expectation, the federal government is subsidizing local education programs across the nation to the tune of approximately a billion dollars a year. At the same time, it is still not clearly established as to:

- a. The optimum age level to introduce the environmental intervention programs.
- b. Who should be included in the programs.
- c. The most effective methods of counteracting the environmental deficits.
- d. Effectiveness and duration of benefits of preschool training.

HYPOTHESES

The literature reviewed has been concerned with the characteristics of young children, and the influence that age, sex, race, size of family, and family income has upon their achievement. There have been numerous Head Start programs conducted across the nation for economically deprived children. The Ogden City Schools have participated in the Head Start program since its inception under the Elementary Education Act of 1965. Utilizing data collected from the 1966-1967 Head Start class of the Ogden City Schools, hypotheses 1 thru 6 are presented. Hypothesis 7 is based on data collected on some of these same children during the 1967-1968 school year and hypothesis 8 on data collected in 1968-1969 school year.

1. Influence of place of residence

It is hypothesized that there will be a difference between the children from the "target" as compared to the "non-target" area of the district in:

- a. I.Q. gains on the Goodenough Draw-a-Man and Peabody Picture Vocabulary Tests.
- b. Gains as recorded on the subjective teachers observations.

2. Age

There will be a maturity difference between the children born prior to March 1, 1962 (hereafter referred to as 5 year olds) as compared to those born after March 1, 1962 (hereafter referred to as 4 year olds) as measured by:

- a. I.Q. gains on the Goodenough Draw-a-Man and Peabody Picture Vocabulary Tests.

- b. Gains as recorded on the subjective teachers' observations.

3. Sex

There will be a sex difference among the pre-kindergarten children as measured by:

- a. I.Q. gains on the Goodenough Draw-a-Man and Peabody Picture Vocabulary Tests.
- b. Gains as recorded on the subjective teachers' observations.

4. Family income

There will be a difference between the group of children who are qualified (economically deprived) as compared to the non-qualified children when matched on basis of age, sex, race and size of family as measured by:

- a. I.Q. gains on the Goodenough Draw-a-Man and Peabody Picture Vocabulary Tests.
- b. Gains as recorded on the subjective teachers' observations.

5. Ethnic

There will be an ethnic group difference as measured by:

- a. I.Q. gains on the Goodenough Draw-a-Man and Peabody Picture Vocabulary Tests.
- b. Gains as recorded on the subjective teachers' observations.

6. Parental structure

There will be a difference when the children are grouped on the basis of parental marital patterns categorized as split homes, step parent homes, and natural parent homes as measured by:

- a. I.Q. gains on the Goodenough Draw-a-Man and Peabody Picture Vocabulary Tests.
- b. Gains as recorded on the subjective teachers' observations.

7. Kindergarten achievement

There will be a difference in kindergarten between the children who have had pre-kindergarten schooling and those who have not had pre-kindergarten schooling as measured by the subjective kindergarten teachers' observations when the children are grouped:

- a. As pre-kindergarten and non pre-kindergarten.
- b. As pre-kindergarten and non pre-kindergarten when matched by sex, age, and ethnic groups.

8. First Grade achievement

There will be a difference in first grade between children who have had Head Start and those who have not had Head Start as measured by the subjective first grade teachers' observations when these children are matched on the basis of family income, sex and teacher.

In order to test these hypotheses, data was collected, and statistically tested as outlined in the following section.

PROCEDURE

Introduction

In the recent past, educators and others interested in education have given much consideration to expanding educational programs downward in student age. Through legislation, federal moneys became available through the Office of Economic Opportunity Act of 1964 and through Title I of the Elementary and Secondary Acts of 1965. Both acts supported programs for children from low-income families.

With funds from the Economic Opportunity Act, Title II B of 1964 the Ogden City School District established a Early Admissions program. In the summer of 1965 the Ogden City Schools submitted a proposal for a Head Start program. The federal government soon consolidated these two programs into the Head Start program. The Ogden City Schools have continued to provide educational experiences for preschool students under the Head Start program.

In Weber County the Head Start program is confined to the Ogden City Schools; however, children who qualify are eligible to attend regardless of where they reside in the county. During the 1966-1967 school year, Ogden City had a population of approximately 70,000 persons and the Ogden City School District had a school population of approximately 17,700.

In the Ogden City School District there is an area where most of the low income, bilinqual and welfare recipient families reside. This is the older residential area of the city. Many of the older homes have been converted into multiple tenant low rent dwellings. This area has

been recognized as being socio-economically deprived and has been labeled as the "target area" of the school district.

There are three elementary schools that serve exclusively target area children. There are three other elementary schools that serve children from the target area and the area immediately adjacent. According to the Ogden City School Student Transfer Report (Call, 1968b) the three elementary schools exclusively serving the target area had the highest average student transfer of 26% for the school year of 1967-1968. The three elementary schools that served both target and non-target area children were next with an average transfer of 23%.

The Ogden City School Dropout Report for the same year (Call, 1968a) ranked these six elementary schools among the first eight on basis of dropouts. The two elementary schools having the highest number of dropouts served the target area exclusively.

It is fairly well established that characteristics of culturally deprived area are multiple dwelling, cheap rental units serving the lower socio-economic community or a high percentage of the minority ethnic groups or both. School statistics of such areas typically show high rates of student transfers and dropouts. The target area of the Ogden City Schools encloses just such an area.

Selection of Subjects

The Office of Economic Opportunity has stipulated that at least 90% of the children enrolled in Head Start must be eligible under the family income standards described in Table 1.

Table 1. Maximum family income for admission to Head Start

Family size	Non-farm	Farm
1	\$1,600	\$1,100
2	2,000	1,400
3	2,500	1,700
4	3,200	2,200
5	3,800	2,600
6	4,200	3,000
7	4,700	3,300
8	5,300	3,700
9	5,800	4,000
10	6,300	4,400
11	6,800	4,700
12	7,300	5,100

The total family income to be used in determining the eligibility of new children in the program should be based on the prior calendar year, or the 12 months previous to enrollment, whichever most accurately describes the family's need.

Communities may use their own judgment on the composition of the 10% "non-poor" children who may be recruited into the program. The Ogden City Schools selected these children on the basis of need as determined by family size, place of residence, parental composition and special problems. Of the 131 Head Start children included in this study, there were 15 whose family income exceeded the Office of Economic Opportunity (OEO) income index. Of these 15 children, 13 resided in the target area. There were 5 children from each of the ethnic groups represented in the study.

The children in the Head Start program were recruited through a variety of ways. School social workers using the latest school census compiled a list of children in each elementary school area that were four to five years of age. These lists were then reviewed with the appropriate elementary principal. Families known to exceed the OEO

poverty index were eliminated from the list. The remaining families residing in or near the target area were personally contacted by the social workers in a house to house survey. The Head Start program was introduced to the parents, qualifications were explained and the family invited to complete an application if they felt that they qualified.

In other elementary districts the same procedure was used with the exception that only those families were contacted that the elementary principal was reasonably certain qualified. Other families received a letter from the district office which explained the program. Parents were invited to make application if they felt they could qualify for the program.

The Weber County Welfare was also contacted. All families receiving public assistance were included in the survey providing they had children of proper age.

Articles explaining briefly the Head Start program were submitted to the local newspapers. Parents were encouraged to contact the Ogden City Schools if they had children who qualified for this program.

Upon completion of registration, all applications were screened to assure qualification. Those who did not qualify were also screened carefully. From this group sufficient children were selected on the basis of need to make up the 10% "non-poor" who could be recruited into the program. Those children accepted into the program were then screened for dental and medical problems and grouped into classes.

During the 1966-1967 school year there were 131 children enrolled in the Head Start program who completed both pre and post testing. Of this number, 116 children met the "poverty line" index as determined by the Office of Economic Opportunity. Interpreted another way, this means that 116 children or 89% of those in the 1966-1967 Head Start Program

came from economically deprived families. Of the 131 Head Start children, 77 or 59% came from the target area. Most of the other Head Start children came from areas immediately adjacent to the target area. A breakdown of that Head Start enrollment is shown in Table 2.

Table 2. Ogden City Head Start enrollment for 1966-1967

Ethnic Group	No.	% of School Population	% Head Start	Residence		Economic	
				Target	Non-T	Qualified	Non-Q
Caucasian	66	86.85	50.4	19	47	61	5
Spanish American	46	8.84	35.1	39	7	41	5
Negro	19	3.15	14.5	19	0	14	5
Total	131			77	54	116	15

Evaluation

In order to determine the value of this expended school program to four and five year old children, it became necessary to determine just what the main objectives of the Head Start program were. The following five objectives, in keeping with the broad goals of Head Start as set forth in the Head Start Child Development Program (1967 p. 2-3) were accepted as being most important:

1. Enhance ability to communicate verbally.
2. Enhance self concept
3. Further social development.
4. Enhance ability to grasp elementary concepts.
5. Develop muscular coordination.

It was assumed that if progress could be made in the above areas, it would be reflected in students ability scores on standardized tests. The tests selected were the Peabody Picture Vocabulary Test, and the Goodenough Draw-a-Man Test. These two standardized tests had already gained wide acceptance and were used extensively, Anastasi (1952), Deutsch (1964), Gray and Klaus (1963), John (1963), McGurk (1953) and Riessman (1962) in the evaluation of many preschool programs for children considered socially and economically deprived.

In the school year 1966-1967, two kinds of procedures were used. The psychologist administered the Goodenough Draw-a-Man Test and the Peabody Picture Vocabulary I.Q. Test at the beginning and at the end of the program to determine the overall change in I.Q. scores.

In addition it was felt that the progress of each child could be subjectively evaluated by the teacher according to the above program objectives. The procedure involved the teacher rating the children in

their classes at the beginning and at the end of the program on a subjective evaluation form which included the areas of verbal communication, self concept, social development, concept formation, muscular coordination and a cumulative score for all of these areas combined. The rating scale for this purpose is shown in Appendix A.

In brief, the findings related to the progress of the children on the foregoing measures were as follows:

1. The children made a significant increase in I.Q. scores on the Peabody Picture Vocabulary Test. This increase was significant at the .01 level of confidence. The average child gained 2.80 I.Q. points.
2. On the Goodenough Draw-a-Man Test, there was a slight but not significant increase.
3. On the Teacher's Observation Rating, children gained most in the following descending order:
 - a. Verbal communication
 - b. Concept formation
 - c. Social development
 - d. Muscular coordination
 - e. Self concept

The findings just cited were felt to be helpful and encouraging. However, several questions still remained which could be answered by a thorough investigation of data obtained in the 1966-1967 evaluation.

Present Study

The present study utilized the basic data gathered in the 1966-1967 evaluation. In addition, follow up data was gathered utilizing teacher evaluation scales to determine the longitudinal benefits of Head Start

training on children in kindergarten and first grade.

Specifically, it would be interesting and helpful in future decisions about preschool programs to know the answers to such questions as the following which serve as the questions to be explored in the present study:

1. Do Head Start children residing in the economically deprived "target area" of Ogden differ from Head Start children who reside outside the area in their progress in the Head Start program?
2. Do four year olds differ from five year olds in their progress in the program?
3. Do boys differ from girls in their progress in the program?
4. Do Head Start children from economically deprived "qualified" families differ from the 10% non-economically deprived "non-qualified" Head Start children in their progress in the program?
5. Do Negro, Caucasian and Spanish American children differ in their progress in the program?
6. Do children living with a step parent, living with one natural parent or living with both natural parents, differ in their progress in the program?
7. How do children in kindergarten who have had Head Start compare with students who have not had Head Start?
8. How do children in first grade who have had Head Start compare with students of similar socio-economic background who have not had Head Start?

Method

In all cases, the ability comparisons made involve a gain score

based on the difference in pre and post testing. The Head Start teacher's subjective evaluation involves the ratings of the teachers on each child at the end of the year which reflects the progress made in the areas indicated. The data gathered at the conclusion of the 1966-1967 Head Start year was utilized for the first six questions.

The evaluation conducted at the end of the 1967-1968 kindergarten school year utilized the Teacher Rating Scale to which the additional goal of "attention" had been added. Two elementary schools were selected to carry out the kindergarten evaluation. Both schools border the target area. The Washington Elementary on the border line inside the target area and the Lewis Elementary on the border line outside the target area. Both schools serve approximately equal populations of target and non-target area children.

The school psychologist carefully explained the Teacher Rating Scale to the kindergarten teachers prior to the evaluation. In an effort to eliminate teacher bias, the instructors were not acquainted with the purpose of the evaluation.

The evaluation conducted at the end of the 1968-1969 first grade school year utilized the Teacher Rating Scale to which had been added an achievement category on reading and number concepts. The teachers checked each child on the rating scale continuum from poor to superior on each of the nine categories. The orientation for each teacher included only the fact that the psychologists were attempting to assess the progress of children from low economic families. The teachers were not appraised of the fact that a comparative study was being conducted.

First grade classes from six different elementary schools were sampled. These schools were selected because they served the lower socio-economic area of the city and were more likely to have first grade

children in about equal proportions who had and who had not had Head Start. The specific procedure for choosing which children would be included in the study was as follows:

1. All first grade children whose parental income exceeded the income specified by the government for Head Start were excluded.
2. The children who had not been in Head Start and whose families met the income standards were placed in the Control Group.
3. The children who had had Head Start and whose families met the income standards were placed in a group from which were randomly selected those children who comprised the Experimental Group. The Experimental Group were matched to the Control Group on the basis of sex, teacher, school, and level of income. The total sample after the matching process comprised eighty-two children (41 in each of the experimental and control groups).

Statistics Used

In order to gain a perspective of the subjects and materials under investigation and to effectively test the stated hypotheses, the following statistical techniques were employed:

1. Analysis of variance. This statistical procedure was employed to determine the presence or absence of significant differences between the different groups on the ability evaluation. This statistic was accomplished at the Computer Center at Utah State University.
2. Chi-square. This statistical procedure was employed to determine the presence or absence of significant differences between the different groups on the teachers' evaluations.

FINDINGS AND INTERPRETATION OF THE DATA

Introduction

The primary purpose of this study was to investigate some of the characteristic differences of young children and to determine the impact of these differences on achievement in the preschool Head Start program. The study was also designed to provide a longitudinal comparison in kindergarten and first grade of children who had Head Start experiences with children who had not been enrolled in Head Start but were from the same area of the community.

The initial data from which the characteristics of the subjects were determined was collected on all the children enrolled as they completed a school year of Head Start in the spring of 1967. The data for the kindergarten and first grade follow up evaluations was collected in May of each of the respective school years.

The findings and interpretation of this study will be presented in the order of the original hypotheses. They were as follows:

1. There will be significant differences in gains made by the target and non-target children as determined by standardized tests and teachers' evaluations.
2. There will be significant differences in the gains made by the four and five year olds as determined by standardized tests and teachers' evaluations.
3. There will be significant differences in gains made by the boys and girls as determined by standardized tests and teachers' evaluations.

- 4A. There will be significant differences in gains made by the qualified and the non-qualified children as determined by standardized tests and teachers' evaluations when the children are matched on the basis of sex, age, and size of family.
- 4B. There will be significant differences in gains made by the qualified and the non-qualified children as determined by standardized tests and teachers' evaluations.
5. There will be significant differences in gains made by the three ethnic groups (Caucasian, Negro, and Spanish American) as determined by standardized tests and teachers' evaluations.
6. There will be significant differences in gains made by the children from homes with different parental constellations (both natural parents, one natural parent, or one natural and one step parent) as determined by standardized tests and teachers' evaluations.
7. There will be significant differences in gains made in kindergarten by children who have had Head Start as compared to those children who have not had Head Start as measured by the teachers' evaluations.
8. There will be significant differences in gains made in first grade by children who have had Head Start as compared to children who have not had Head Start as determined by the teachers' evaluations when these children have been matched on the basis of sex, teacher, and family income.

Findings

Hypothesis 1 predicted that there would be significant differences in gains made by the children who resided in the target area as compared

to the children who lived outside of the target area. This comparison includes the total population of these who had both a scorable pre-test and scorable post-test.

A. Ability Evaluation

- (1) Goodenough Draw-a-Man Test: There was a difference approaching the .05 level in favor of the non-target children.
- (2) The Peabody Picture Vocabulary Test: No significant difference.

B. Head Start Teachers' Subjective Evaluation.

- (1) Verbal Communication: There was no significant difference. However, the target area children were twice as frequent in the much improved categories.
- (2) Self Concept: The difference was significant at the .001 level in favor of the target area children.
- (3) Social Development: There was no significant difference
- (4) Concept Formation: No significant difference.
- (5) Muscular Coordination: There was no significant difference.
- (6) Cumulative: The difference was significant at the .01 level in favor of the target area children.

Table 3. Comparison of target and non-target area children on a teachers' subjective evaluation.

Evaluation areas	Degrees of freedom	F
Verbal Communication	2	4.12
Self Concept	2	27.05**
Social Development	2	.48
Concept Formation	2	5.46
Muscular Coordination	2	.83
Cumulative	2	10.99*
n - 131	Target n - 77	non-Target n - 54

* significant at the .01 level

** significant at the .001 level

A percentage comparison of the target and non-target area children rated as improved and much improved on the six point subjective teachers' evaluation form is found in Figure 2.

TARGET VS NON-TARGET CHILDREN

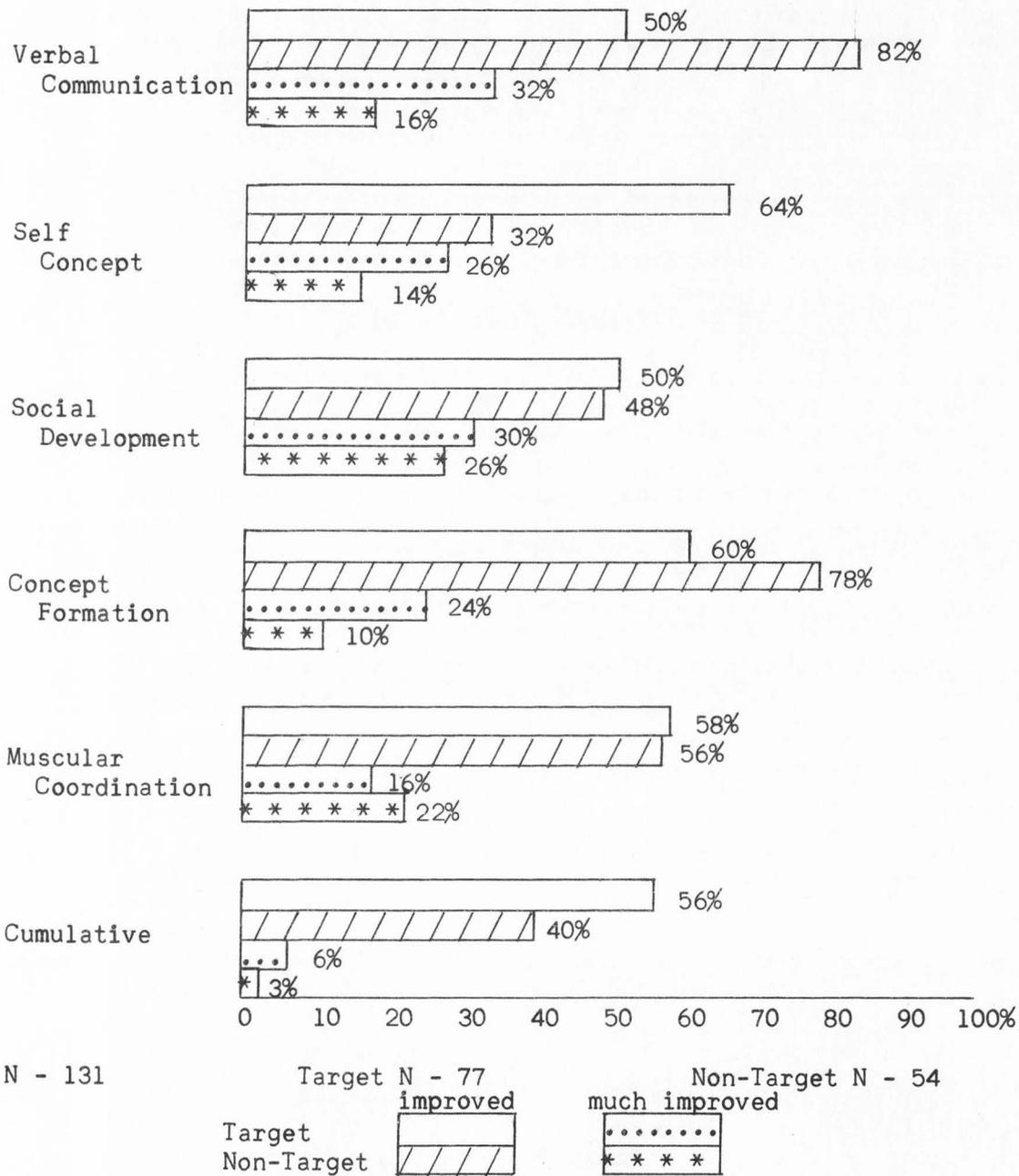


Figure 2. Percentage comparison of the target and non-target area children rated as improved and much improved on the teachers' subjective evaluation form.

Hypothesis 2 predicted that there would be significant differences in gains made by the four and five year old children. This comparison is based on the total population of these with a scorable pre and post test.

A. Ability Evaluation.

- (1) Goodenough Draw-a-Man Test: No significant difference.
- (2) Peabody Picture Vocabulary Test: There was a difference approaching the .05 level in favor of the five year olds.

B. Head Start Teachers' Subjective Evaluation.

- (1) Verbal Communication: There was no significant difference.
- (2) Self Concept: There was no significant difference.
- (3) Social Development: There was no significant difference.
- (4) Concept Formation: There was no significant difference.
- (5) Muscular Coordination: There was no significant difference.
- (6) Cumulative: There was no significant difference.

Table 4. Comparison of four and five year old children on a teachers' subjective evaluation.

Evaluation area	Degree of Freedom	\bar{X}
Verbal Communication	2	4.48
Self Concept	2	.53
Social Development	2	1.44
Concept Formation	2	1.41
Muscular Coordination	2	.95
Cumulative	2	.91
n - 131	4 year olds - 58	5 year olds - 73

A percentage comparison of the four and five year old children rated as improved and much improved on the six point subjective teachers' evaluation form is found in Figure 3.

Hypothesis 3 predicted that there would be significant differences in gains made by the boys and girls. This comparison is based on the total population of those with a scorable pre and post test.

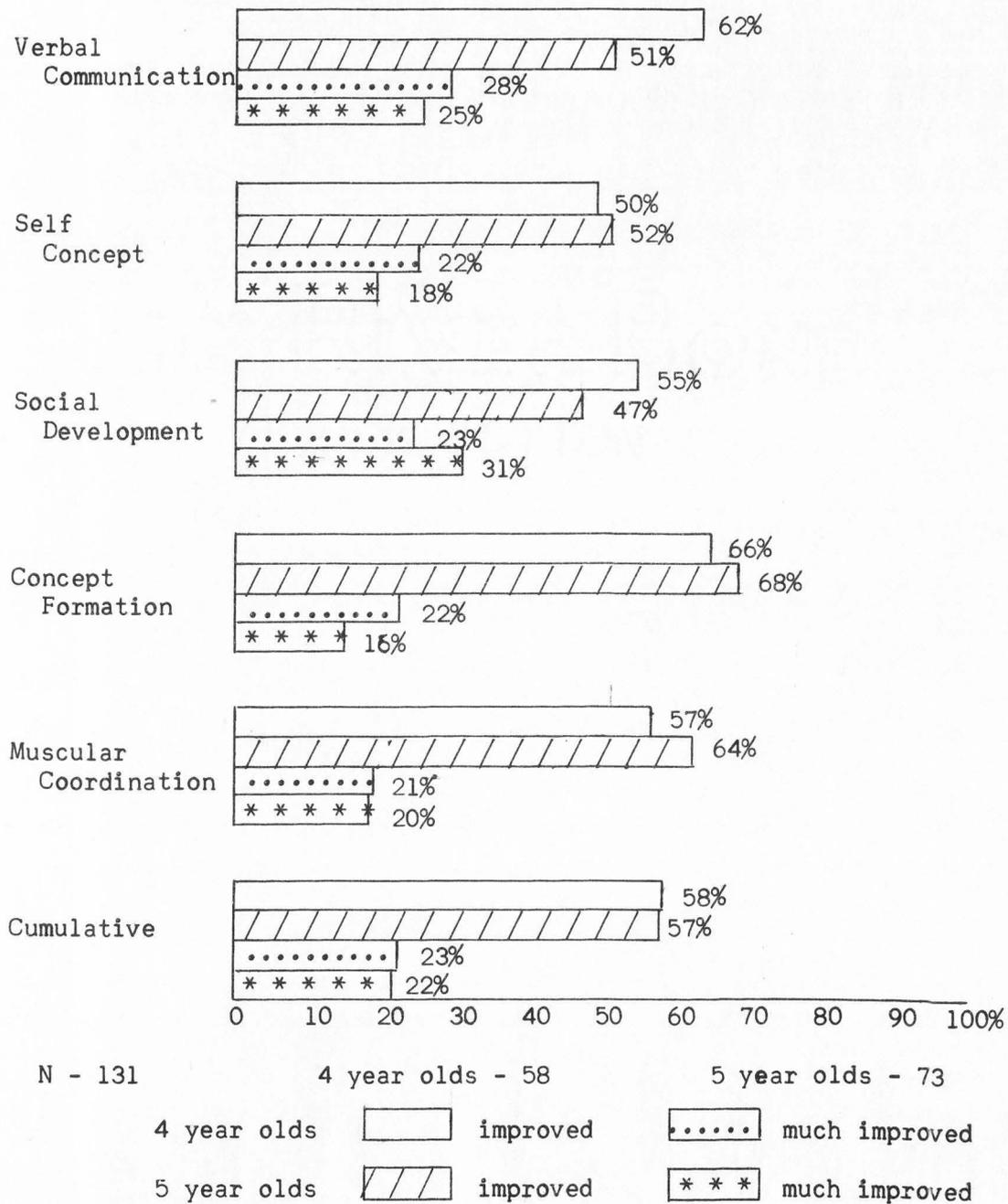
A. Ability Evaluation

- (1) Goodenough Draw-a-Man Test: There was no significant difference.
- (2) Peabody Picture Vocabulary Test: There was no significant difference.

B. Head Start Teachers' Subjective Evaluation.

- (1) Verbal Communication: There was no significant difference.
- (2) Self Concept: There was no significant difference.
- (3) Social Development: Significant at .02 level favoring the boys.

AGE



No significant differences.

Figure 3. Percentage comparison of the four and five year old children rated as improved and much improved on the teachers' subjective evaluation form.

- (4) Concept Formation: There was no significant difference.
- (5) Muscular Coordination: There was no significant difference.
- (6) Cumulative: There was no significant difference.

Table 5. Comparison of male and female children on a teachers' subjective evaluation.

Evaluation area	Degree of freedom	$\frac{2}{X}$
Verbal Communication	2	2.29
Self Concept	2	1.27
Social Development	2	8.36*
Concept Formation	2	.49
Muscular Coordination	2	1.08
Cumulative	2	1.78
Total n - 131	male n - 74	female n - 57

* significant at the .02 level.

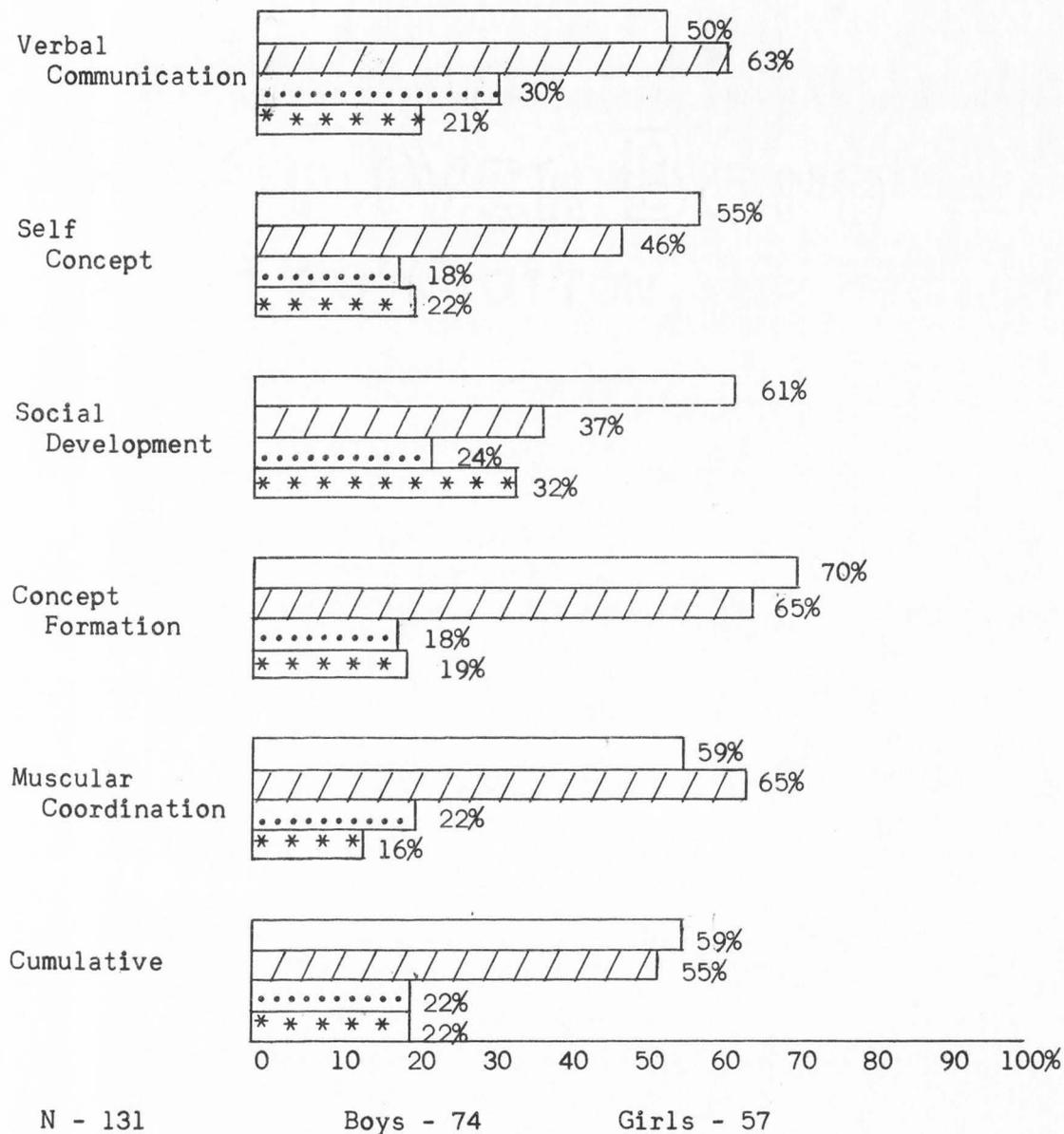
A percentage comparison of the male and female children rated as improved and much improved on the six point subjective teachers' evaluation form is found in Figure 4.

Hypothesis 4-A predicted that there would be significant differences in gains made by the qualified and non-qualified children when matched on the basis of sex, age, and size of family. There were 13 matched pairs in this study.

A. Ability Evaluation

- (1) Goodenough Draw-a-Man Test: There was no significant difference.

BOYS VS GIRLS



Boys improved much improved
 Girls improved *** much improved

Social Development - significantly different at .02 level favoring the boys

Figure 4. Percentage comparison of the boys and girls rated as improved and much improved on the teachers' subjective evaluation form.

(2) Peabody Picture Vocabulary Test: No significant difference.

B. Head Start Teacher's Subjective Evaluation

(1) Verbal Communication: There was no significant difference.

(2) Self Concept: There was no significant difference.

(3) Social Development: There was no significant difference.

(4) Concept Formation: There was no significant difference.

(5) Muscular Coordination: There was no significant difference.

(6) Cumulative: There was no significant difference.

Table 6. Comparison of qualified and non-qualified children matched on basis of age, sex, and size of family, as rated on a teachers' subjective evaluation.

Evaluation area	Degrees of freedom	χ^2
Verbal Communication	1	.72
Self Concept	1	1.52
Social Development	1	.00
Concept Formation	1	.24
Muscular Coordination	1	.72
Cumulative	2	3.10
n - 13 matched pairs		

A percentage comparison of the qualified and non-qualified children matched on basis of age, sex, and size of family as rated on a six point subjective teachers' evaluation form is found in Figure 5.

Hypothesis 4-B predicted that there would be significant differences in gains made by the qualified and non-qualified children using the total population.

QUALIFIED VS NON-QUALIFIED MATCHED
ON SEX, AGE & SIZE OF FAMILY

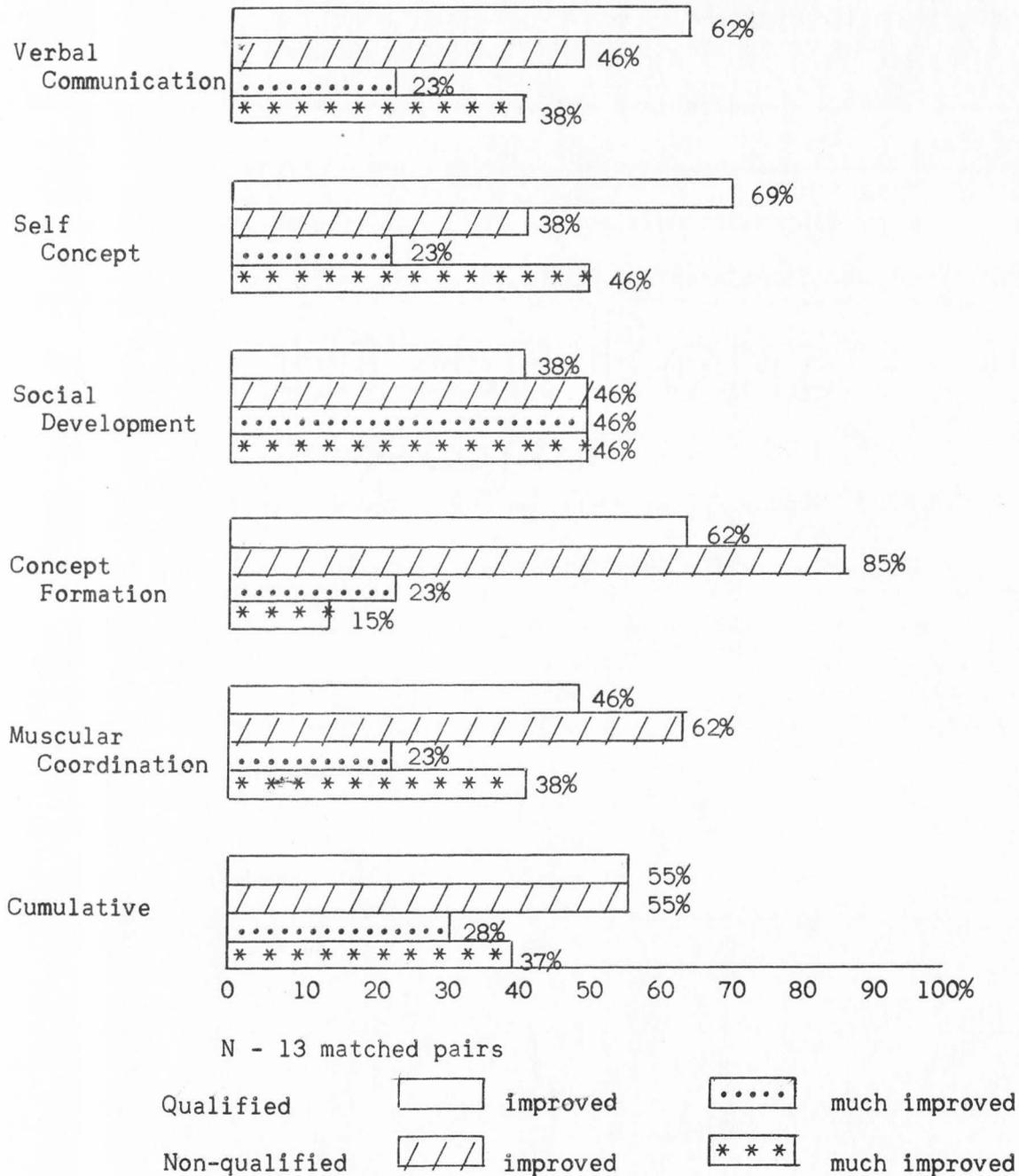


Figure 5. Percentage comparison of the qualified and non-qualified children matched on basis of age, sex, and size of family as rated on the teachers' subjective evaluation form.

A. Ability Evaluation

- (1) Goodenough Draw-a-Man Test: There was no significant difference.
- (2) Peabody Picture Vocabulary Test: There was no significant difference.

B. Head Start Teachers' Subjective Evaluation.

- (1) Verbal Communication: There was no significant difference.
- (2) Self Concept: There was no significant difference.
- (3) Social Development: There was no significant difference.
- (4) Concept Formation: There was no significant difference.
- (5) Muscular Coordination: There was no significant difference.
- (6) Cumulative: There was a significant difference at the .05 level favoring the non-qualified children.

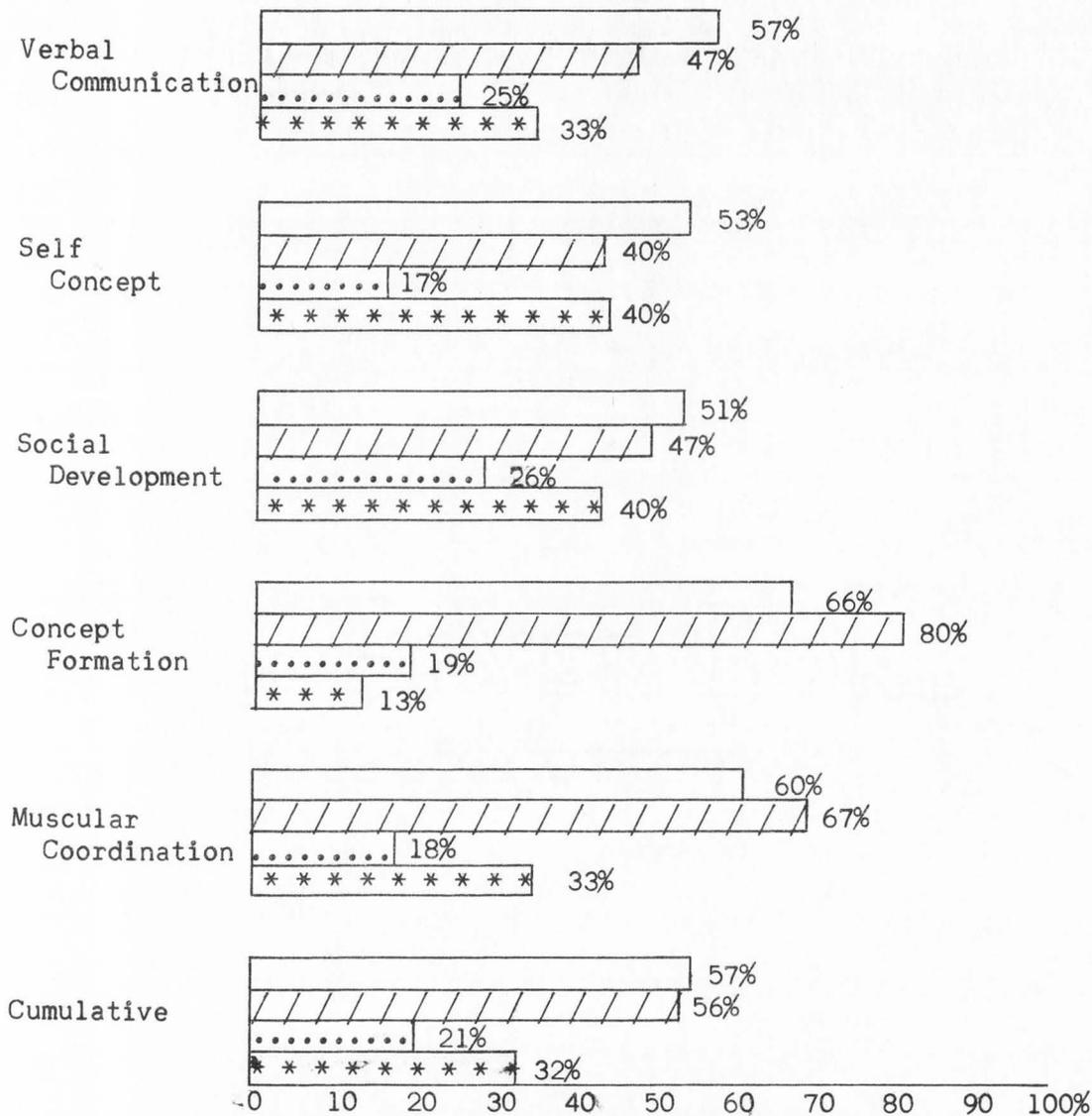
Table 7. Comparison of qualified and non-qualified children on a teachers' subjective evaluation.

Evaluation area	Degree of freedom	$\frac{2}{X}$
Verbal Communication	2	.63
Self Concept	2	4.34
Social Development	2	1.83
Concept Formation	2	1.20
Muscular Coordination	2	4.87
Cumulative	2	6.58*
Total n - 131	qualified n - 116	non-qualified n-15

* Significaant at the .05 level

A percentage comparison of the qualified and non-qualified children as rated on a six point subjective teachers' evaluation form is found in Figure 6.

QUALIFIED VS NON-QUALIFIED



N - 131 Qualified - 116 Non-Qualified - 15

Cumulative significantly different at .05 level favoring the non-qualified children.

Qualified improved much improved

Non-Qualified improved much improved

Figure 6. Percentage comparison of the qualified and non-qualified children as rated on the teachers' subjective evaluation.

Hypothesis 5 predicted there would be significant differences between the ethnic groups. This comparison utilized the total population.

A. Ability Evaluation.

- (1) Goodenough Draw-a-Man Test: There was no significant difference.
- (2) Peabody Picture Vocabulary Test: There was no significant difference.

Note: Though there were no significant differences on these tests among the three groups, the trend for both tests was consistent. The most gain was made by the Negro children. The next greatest gain was made by the Spanish American and the least gain was made by the Caucasian children.

B. Head Start Teachers' Subjective Evaluation.

- (1) Verbal Communication: There was a difference significant at the .01 level. The Negroes were rated improved in a greater frequency than the other two groups.
- (2) Self Concept: The difference was significant beyond the .001 level. The gain sequence in descending order was Negro, Spanish American and Caucasian.
- (3) Social Development: There was no significant difference.
- (4) Concept Formation: There was no significant difference.
- (5) Muscular Coordination: There was no significant difference. The Negro group made the lowest gain with thirty-two percent making no gain.
- (6) Cumulative: Significant beyond the .001 level. The gain sequence was Negro, Spanish American and Caucasian.

Table 8. Comparison of ethnic groups on a teachers' subjective evaluation.

Evaluation area	Degree of freedom	$\frac{2}{X}$
Verbal Communication	2	11.01*
Self Concept	2	17.81**
Social Development	2	2.83
Concept Formation	2	2.66
Muscular Coordination	2	2.38
Cumulative	4	28.35**
Total n - 131	Caucasion n - 66	Spanish American n - 46 Negro n - 19

* significant at the .01 level
 ** significant at the .001 level

Order of gain was Negro, Spanish American and Caucasian

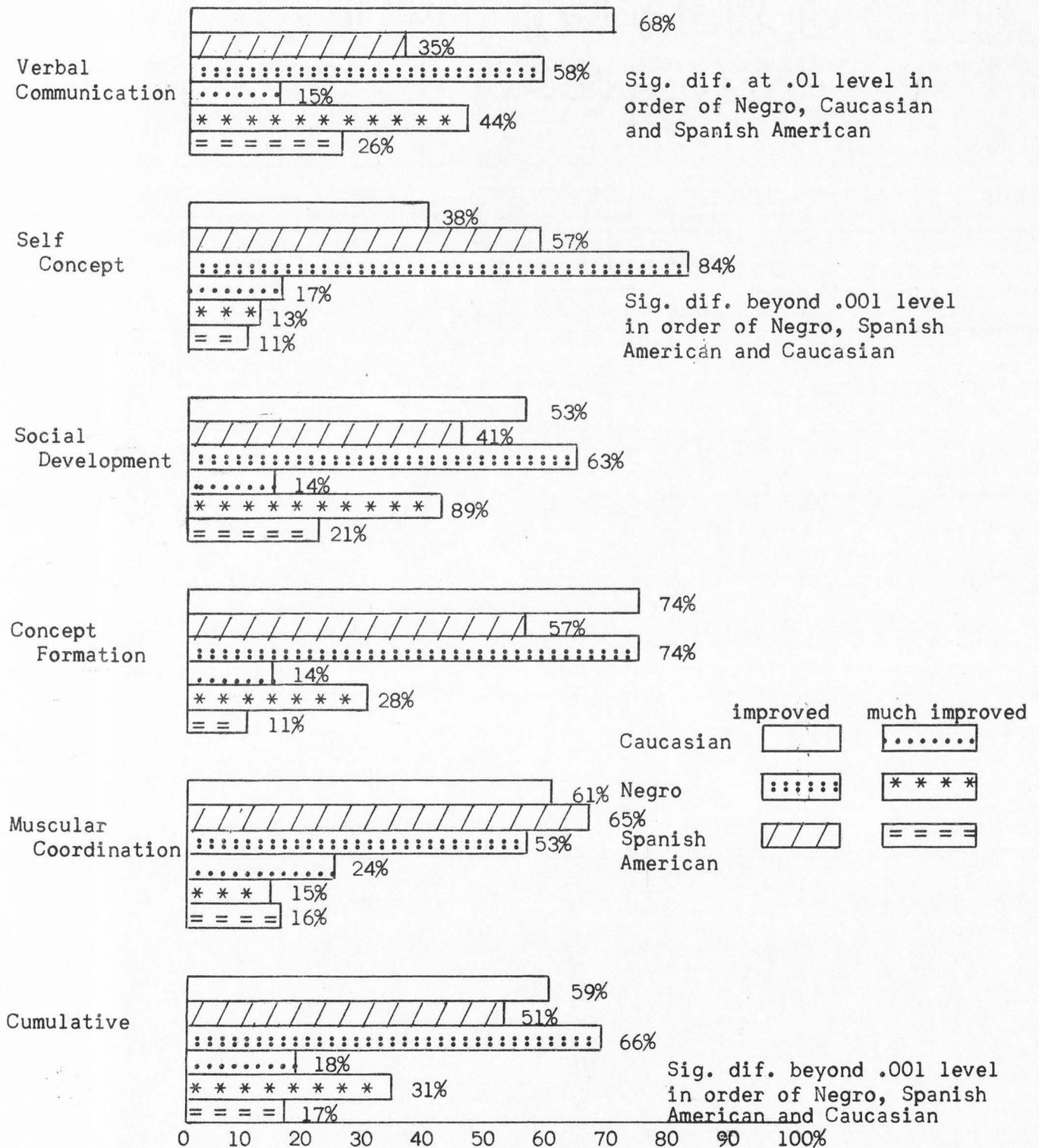
A percentage comparison of the ethnic groups rated as improved and much improved on the six point subjective teachers' evaluation form is found in Figure 7.

Hypothesis 6 predicted that there would be a significant difference in gains made by the children living with both natural parents, children living with one natural parent and children living with one natural and one step parent. This comparison utilized the total population.

A. Ability Evaluation

- (1) Goodenough Draw-a-Man Test: The difference was significant at the .05 level. Greatest gains made in decending order were children living with one natural and one step parent, one natural parent and both natural parents.
- (2) Peabody Picture Vocabulary Test: There was no significant

ETHNIC GROUPS



N - 131 Caucasian - 66 Spanish American - 46 Negro - 19

Figure 7. Percentage comparison of the ethnic groups rated as improved and much improved on the teachers' evaluation.

difference.

B. Head Start Teachers' Subjective Evaluation.

- (1) Verbal Communication: There was no significant difference.
- (2) Self Concept: There was no significant difference.
- (3) Social Development: There was no significant difference.
- (4) Concept Formation: There was no significant difference.
- (5) Muscular Coordination: There was no significant difference.
- (6) Cumulative: There was no significant difference.

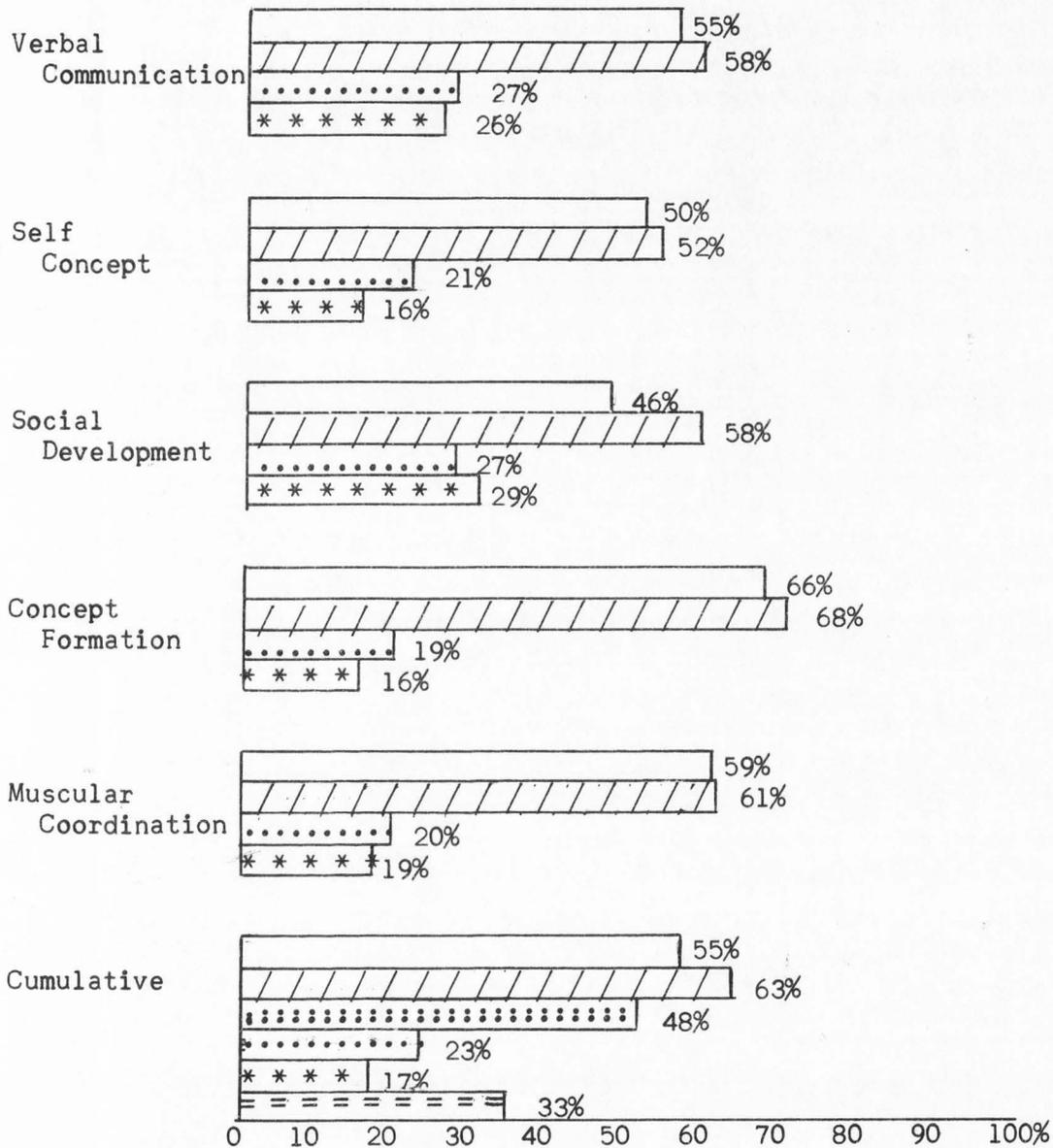
Table 9. Comparison of children living with both parents, one natural parent or one natural and one step parent, on a teachers' subjective evaluation.

Evaluation areas	Degrees of freedom	χ^2
Verbal Communication	2	.10
Self Concept	2	.43
Social Development	2	2.22
Concept Formation	2	.22
Muscular Coordination	2	.04
Cumulative	4	5.09
Total n - 131 both parents n - 98 1 parent n - 23 one step parent n - 8		

A percentage comparison of the children from different parental constellations rated as improved and much improved on the six point subjective teachers' evaluation form is found in Figure 8.

Hypothesis 7 predicted that there would be significant differences in kindergarten teachers' evaluation scores of the children who had Head Start and those who had not had Head Start on a seven point subjective teachers' evaluation form. This comparison was conducted at the

PARENTAL CONSTELLATION



N - 131 Both Parent N - 98
 One Parent N - 23
 One Step Parent & 1 Parent N - 8 Combined except for cumulative

No significant differences improved much improved

Both parents
 COMBINED or one parent
 One Step Parent

Figure 8. Percentage comparison of the children from different parental constellations rated as improved and much improved on the teachers' subjective evaluation.

conclusion of the 1967-1968 school year and included all of the kindergarten children enrolled in the Lewis and Washington Elementary schools.

Kindergarten Teachers' Subjective Evaluation.

- (1) Verbal Communication: There was no significant difference.
- (2) Self Concept: There was no significant difference.
- (3) Social Development: There was no significant difference.
- (4) Concept Formation: There was no significant difference.
- (5) Muscular Coordination: There was a difference significant at the .05 level favoring children who had no preschool training.
- (6) Attention Span: There was a difference significant at the .02 level favoring children who had no preschool training.
- (7) Cumulative: There was a significant difference at the .001 level favoring the children who had no preschool training.

Table 10. Comparison of children in kindergarten who have had Head Start to those who have not had Head Start on a teachers' subjective evaluation.

Evaluation area	Degrees of freedom	F
Verbal Communication	3	5.22
Self Concept	3	3.44
Social Development	3	1.51
Concept Formation	3	2.76
Muscular Coordination	2	8.18*
Attention Span	3	9.84**
Cumulative	3	19.83***
Total n - 114	Head Start n - 69	No Head Start n - 45

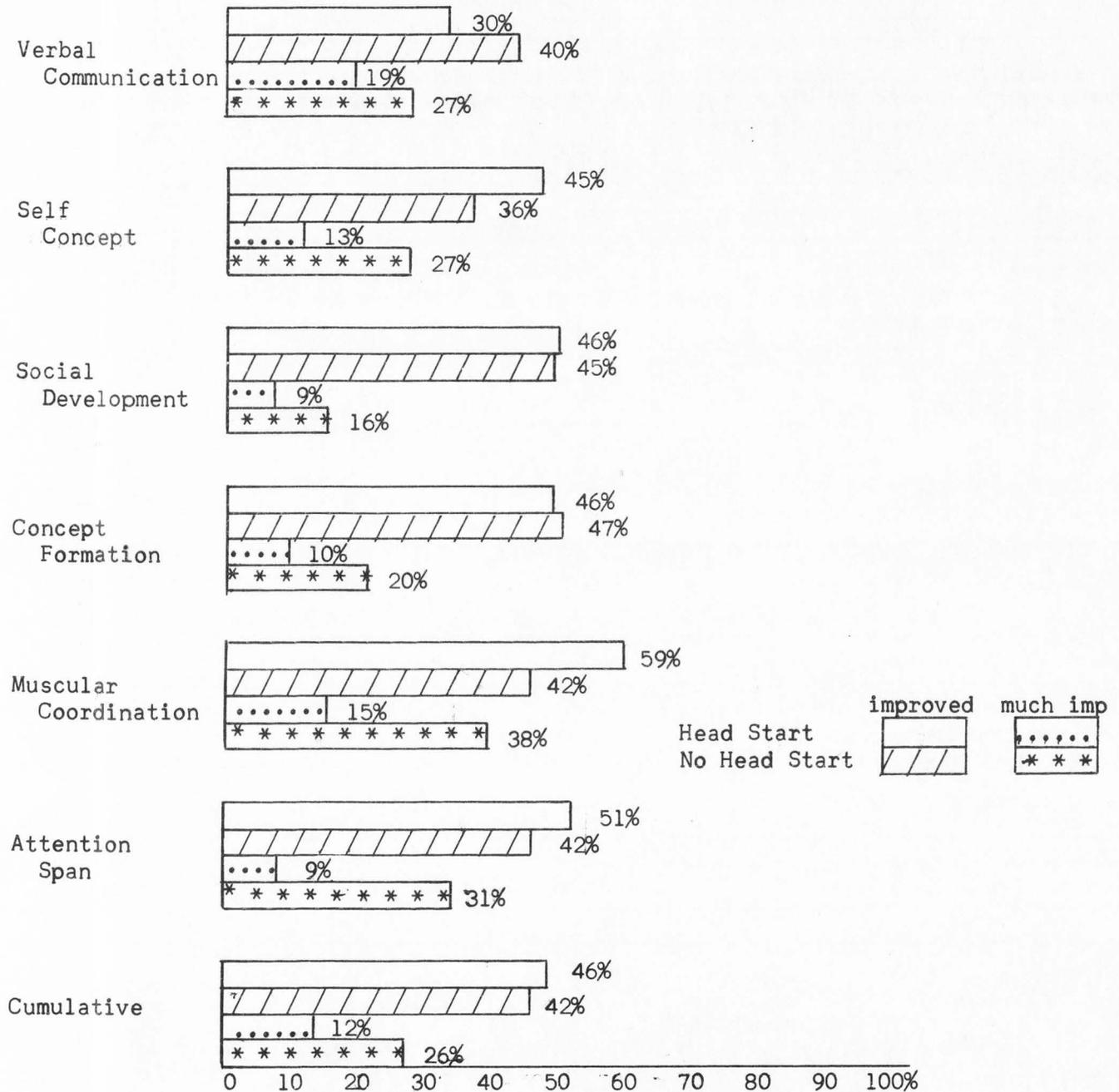
- * significant at the .05 level
- ** significant at the .02 level
- *** significant at the .001 level

A percentage comparison of children in kindergarten who had Head Start to those who had not had Head Start rated as improved and much improved on the seven point subjective teachers' evaluation form is found in Figure 9.

Hypothesis 8 predicted that there would be a difference in the first grade teachers' evaluation of the children who had Head Start and the children who had not had Head Start when those children were matched on basis of sex, teacher and economic deprivation.

- (1) Verbal Communication (quantity): No significant difference.
- (2) Verbal Communication (quality): No significant difference.
- (3) Self Concept: No significant difference.
- (4) Social Development: Significantly different at the .02 level favoring the Head Start group.
- (5) Concept Formation: Significantly different at the .02 level favoring the Head Start group.
- (6) Muscular Coordination: There was no significant difference.
- (7) Attention Span: There was no significant difference.
- (8) Achievement (reading): Significantly different at the .02 level favoring the Head Start group.
- (9) Achievement (number concepts): Significantly different at the .05 level favoring the Head Start group.
- (10) Cumulative: Significantly different at the .001 level favoring the Head Start group.

KINDERGARTEN



N - 114 Head Start N - 69 No Head Start N - 45

Muscular Coordination significantly different at .05 level favoring no Head Start.
 Attention Span significantly different at .02 level favoring no Head Start.
 Cumulative significantly different at .001 level favoring those who had no Head Start.

Figure 9. Percentage comparison of children in kindergarten who had Head Start to those who had not had Head Start rated as improved and much improved on the teachers' subjective evaluation.

Table 11. Comparison of first grade children who had Head Start to matched group of first graders on basis of sex, teacher and economic deprivation who did not have Head Start.

Evaluation area	Degrees of freedom	$\frac{2}{X}$
Verbal Communication (quantity)	1	1.77
Verbal Communication (quality)	1	1.27
Self Concept	1	1.77
Social Development	1	5.96**
Concept Formation	1	6.14**
Muscular Coordination	1	1.81
Attention	1	.05
Achievement (reading)	1	6.14**
Achievement (number concepts)	1	4.95*
Cumulative	1	24.58***
n - 41 matched pairs		

- * significant at the .05 level of confidence.
 ** significant at the .02 level of confidence.
 *** significant at the .001 level of confidence.

A percentage comparison of children in first grade who had received Head Start to children who had not had Head Start, with all children being matched on basis of sex, teacher and economic deprivation, rated as improved and much improved on the 10 point subjective teachers' evaluation form is found in Figure 10.

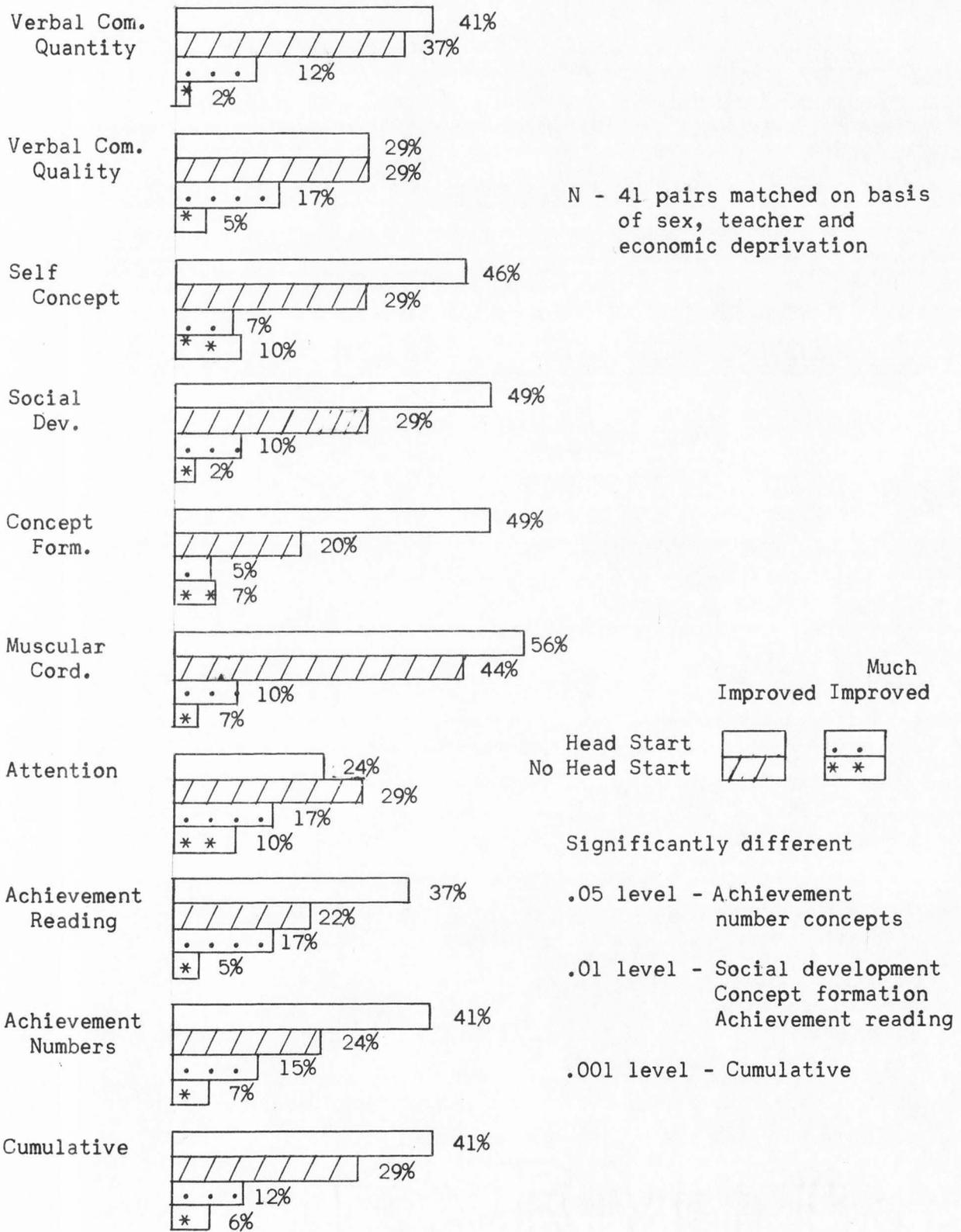


Figure 10. Percentage comparison of 41 pairs of first graders matched on basis of sex, teacher and economic deprivation as rated on the teachers' subjective evaluation.

DISCUSSION

It is the purpose of this section to present the writer's views concerning the findings cited in this chapter. The major conclusions of the study will be listed in the order of the questions to be answered by the study.

Target vs non-target children

There were no significant differences in the progress made by the target children compared with the non-target children in the ability areas.

In the Head Start Teachers' Subjective Evaluation the only significant differences in the amount of gain made by the two groups was in the area of self concept which favored the target area children at the .001 level. The composite of all of the ratings reached the .01 level of significance favoring the target children.

It is the researcher's opinion that this composite difference in favor of the target area children is to be attributed to the ethnic differences of the two groups. Only forty point nine percent (40.9%) or twenty-seven (27) of the Caucasian children resided in the target area whereas one hundred percent (100%) of the Negro children and eighty-four point eight percent (84.8%) or thirty-nine (39) of the Spanish American children were from homes in the target area. This appears to be a logical conclusion since the evaluation is in terms of gains made and since the order of the ethnic groups in gains made were Negro, Spanish American and Caucasian.

These findings support the Ogden City Schools having labeled this geographic area of the city as a target area needing special educational programs. These findings also support the findings of Utter (1963) that culturally impoverished children have low self concepts. Estes (1953) findings that school has a gradual ameliorating influence are also supported by these results.

Four year olds vs five year olds

There were no significant differences in the gains made by the two groups on either ability scores or subjective teachers' evaluations. The examiner feels that the age difference between the four and five year old groups was not sufficient (approximately 4 months) for a true difference, however the four year olds performed as well as the five year olds. These findings, though not significant, tend to support Montessori (1964) and Piaget (1952) in emphasizing the importance of early training.

Sex differences

There were no differences between boys and girls in the gain on ability scores. The only significant difference on the teachers' subjective evaluation was in the area of social development favoring the boys. The cumulative gain made as measured by the teachers' evaluation showed the boys making slightly more improvement than the girls (81% for the boys and 77% for the girls) however, this is not significant. These findings support those of Harris (1969) wherein he points out that girls and boys from the same environment are similar in performance on readiness tasks.

Qualified vs non-qualified

When the qualified and non-qualified children were matched on the

basis of age, sex and size of family, there were no differences in gains made either on the ability measurements or on the teachers' evaluations.

When the total population was compared the non-qualified children made significantly better gains on the Peabody Picture Vocabulary Test (significant at the .01 level).

On the Teachers' subjective evaluations, the only difference that reached a level of significance was on the cumulative score which favored the non-qualified children.

It is important to keep in mind in interpreting these results that the non-qualified children were a small ($n = 15$) group that were permitted to enter the program because of special handicaps and as a result are not representative in general of children who are not economically deprived.

Ethnic groups

There was no difference in the progress made on the ability evaluations among the three groups. On the Teachers' Subjective Evaluation, there was a difference in verbal communication significant at the .01 level favoring the Negro children; however, the Spanish American children were rated more often proportionately in the much improved category.

In self concept gain, the teachers rated the Negro children highest, next Spanish American children and then Caucasian children. This difference was significant beyond the .001 level of confidence favoring the Negro children. The cumulative gain was significant beyond the .001 level with the order of gain being Negro, Spanish American, and Caucasian.

It is the researcher's opinion that the significant differences between ethnic groups on the Subjective Teachers' Evaluation is not a true ethnic difference. One factor is that fifty-nine percent (59%)

of the Caucasian children in the study lived outside of the target area while one hundred percent (100%) of the Negro and eighty-four point eight percent (84.8%) of the Spanish American children lived in the target area. It should also be noted that the Spanish American children were the only children in the study having a bi-lingual background. These same children came from larger families with parents who had a more limited education background. Because of these uncontrolled factors the researcher is hesitant in drawing any conclusions other than that the more deprived children were the children making the most significant gains. The findings agree with those of Rieber and Womack (1968) that all three groups made significant improvement. In future studies in the Ogden City Schools the examiner would recommend that ethnic gain differences within the target area be considered.

In the comparison of children from different parental constellations, there were no significant differences in any of the areas except for the Goodenough Draw-a-Man Test. The examiner hesitates to draw any conclusions from these findings as there were only eight children who had a step parent and twenty-three who had only one parent. The majority of the children in this study having a step parent were Caucasian from the non-target area, while almost all of the children having but one parent resided in the target area and were of the minority ethnic groups.

Preschool vs no preschool

No ability evaluation was made in the kindergarten.

On the teachers' evaluation there was a difference in gains between the two groups in muscular coordination significant at the .02 level favoring the children with no preschool experience. There was also a difference in attention span significant at the .02 level favoring the

children with no preschool experience.

These findings agree with the findings of Alpern, Lawrence and Welsh (1967) who found that children receiving traditional nursery school experiences did not differ significantly in intelligence or in school readiness in kindergarten from children who had not had preschool experiences. These findings are also in agreement with those of Weikart (1964) and Woeff and Stein (1967).

The examiner feels that there were two factors that weren't controlled for in the kindergarten comparison that may have biased the results. The preschool children were found to be from families significantly larger than the families of the children who had no preschooling. Furthermore, the Head Start children were from families on a lower socio-economic level. Jones (1954) and Estes (1953) found that children from low socio-economic groups have significantly low I.Q.'s which persist into the upper elementary grades.

The examiner feels that the Head Start children enjoyed greater freedom to explore and had more individual help in the Head Start classroom than in the kindergarten classroom. This resulted in their not being as attentive and self disciplined as the children who had no Head Start experience.

Comparison of first grade children who had Head Start to children who had no preschool experience with the children being matched on the basis of sex, teacher and economic deprivation.

This first grade follow up study was conducted with eighty-two children, forty-one of whom had been in Head Start and forty-one who had not, matched on the basis of sex, economic deprivation, school, class and teacher.

The teachers were asked to rate each child by checking the appropriate category on a teachers' rating scale for each factor indicating the adequacy of the child for that factor. The teachers were not told that a comparison was being conducted between Head Start children and those who hadn't had Head Start, but just that there was a study being made of the progress of children from the lower economic families.

Verbal Communication (quantity): This factor rated by the teachers indicated the amount of verbalization the child exhibited in routine class activities. There was no significant difference between the two groups; however, the children who had Head Start had six more of their group receiving high ratings than did the group that had not had Head Start experiences.

Verbal Communication (quality): This factor was designed to compare the quality of the childrens' speech, not how often or how much the children spoke. The children having previous Head Start experiences had five more in the highest category than the control group. This difference was not significant.

Self Concept: While this difference was not statistically significant, there were six more of the children who had previous Head Start experience who rated in the highest category than were from the control group.

Social Development: In this area the teachers rated the children on their ability to relate to peers in the classroom in the highest category than there were in the Control group. This was statistically significant at the .025 level.

Concept Formation: In this area the teachers rated the children according to their ability to discriminate and generalize. There were twice as many of the former Head Start students who received the highest rating than there were in the Control group. This was statistically

significant at the .025 level.

Muscular Coordination: There were eight more of the children who had previous Head Start experience rated in the highest category than there were from the Control group. This difference was not statistically significant.

Attention: In this rating the teachers were asked to evaluate the children on their ability to stick with the on-going process in the class in contrast with being unattentive or difficult to involve. There were practically no differences between the experimental and control groups; on this factor.

Achievement (reading): There were twice as many of the experimental group, in the highest category than there were in the control group. This difference was statistically significant at the .025 level.

Achievement (number concepts): There were ten more children from the group who had previous Head Start experience in the highest category than from the control group. This difference was statistically significant at the .05 level of confidence.

Composite Comparison: This includes the total ratings on all of the nine factors involved in the teachers' survey comparing the experimental and control groups. The chi-square obtained was highly significant, exceeding the .001 level. These findings are in agreement with those of Brittain (1966) and Young (1968).

Hyman and Sill (1965) concluded in his report on the Lawrence Township Head Start program that the true test of preschool experience is the performance of the children in learning to read, write, and to do numbers in school. Using this criteria the examiner feels that the findings in this study are phenomenal. It appears that the children who had the Ogden Head Start program function much better

than similar children who had no pre-school program. It is interesting to note that both areas of social development and academic achievement were areas which were significantly different and in favor of Head Start children. Also of importance is the fact that every single difference favored the Head Start group.

In May of 1970, a follow-up study was conducted in the three elementary schools that serve exclusively target area children. In this study, the first and second grade teachers rated all of their children on the subjective teachers' evaluation form. The evaluation ratings received by the children in the first and second grades, who formerly had Head Start training, were then compared to the ratings received by the remainder of their classmates. A study was also made in which the former Head Start students and their classmates, who were judged to be from homes economically deprived, were compared.

At both the first and second grade levels, those children, who had formerly had Head Start, were found to be essentially the same as their peers who had received no Head Start training. There were no significant differences in the way they were evaluated by their teachers. See Table 12 for chi-square values of first grade comparison and Table 13 for the second grade comparison.

When the children were matched on the basis of teacher and socio-economic deprivation the children in the first grade who had the Head Start experience were rated significantly higher than their peer group who did not have the Head Start experience. See Table 14 for the chi-square comparison.

When the second grade children were matched on the basis of teacher and socio-economic deprivation the children who did not have Head Start were rated significantly higher in the area of social development. The

cumulative differences were in favor of those children who had participated in Head Start; however the difference was not statistically significant. Table 15 shows the chi-square comparison of the second grade children who were matched on basis of teacher and socio-economic deprivation.

Table 12. Comparison of children in first grade 1969-70 who have had Head Start to those who have not had Head Start on a teachers' subjective evaluation

Evaluation areas	Degrees of Freedom	χ^2
Verbal Communication		
A. Quantity	1	.02
B. Quality	1	.81
Self Concept	1	2.32
Social Development	1	.79
Concept Formation	1	.01
Attention	1	.14
Achievement		
A. Reading	1	.95
B. Number Concepts	1	.12
Cumulative	3	3.13
Total n = 96	Head Start n = 51	No Head Start n = 45

Table 13. Comparison of children in second grade during the 1969-70 school year who have had Head Start to those who have not had Head Start on a teachers' subjective evaluation

Evaluation areas	Degrees of freedom	\bar{X}
Verbal Communication		
A. Quantity	1	1.63
B. Quality	1	1.35
Self Concept	1	.00
Social Development	1	2.78
Concept Formation	1	3.34
Attention	1	.21
Achievement		
A. Reading	1	.38
B. Number Concepts	1	.56
Cumulative	3	6.14
Total n = 107	Head Start n = 47	No Head Start n = 60

Table 14. Comparison of children in the first grade during the 1969-70 school year who had Head Start to a matched group of first graders on basis of teacher and socio-economic deprivation who did not have Head Start.

Evaluation areas	Degrees of freedom	$\frac{2}{X}$
Verbal Communication		
A. Quantity	1	.12
B. Quality	1	.24
Self Concept	1	3.07
Social Development	1	2.35
Concept Formation	1	1.89
Attention	1	.11
Achievement		
A. Reading	1	.30
B. Number Concepts	1	.30
Cumulative	3	8.12*
Total n = 66	Head Start n = 51	No Head Start n = 15

* Significant at the .05 level

Table 15. Comparison of children in second grade during the 1969-70 school year who had Head Start to a matched group of second graders on basis of teacher and socio-economic deprivation who did not have Head Start.

Evaluation areas	Degrees of freedom	χ^2
Verbal Communication		
A. Quantity	1	2.46
B. Quality	1	.89
Self Concept	1	.62
Social Development	1	4.51*
Concept Formation	1	1.77
Attention	1	.61
Achievement		
A. Reading	1	.60
B. Number Concepts	1	.64
Cumulative	3	5.31
Total n = 75	Head Start n = 46	No Head Start n = 29

* Significant at the .05 level

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purposes of this study were twofold: (1) to determine if there were any area, age, sex, economic or ethnic differences which influenced a child's ability to profit from Head Start experience, and (2) to determine if the gains made by the children in Head Start were longitudinal in nature.

It was assumed that this kind of investigation would be beneficial in understanding and administering the Head Start program in the Ogden City Schools.

Summary of the Study

One hundred thirty one, four and five year old children were enrolled in the Ogden City Head Start program during the 1966-67 school year. The present study utilized the basic data gathered in the 1966-67 evaluation. In addition follow up data was gathered utilizing teacher evaluation scales to determine the longitudinal benefits of Head Start training on children in kindergarten and first grade.

The following hypotheses were tested:

1. There will be significant differences in gains made by the target and non-target children as determined by standardized tests and subjective teachers' evaluations.
2. There will be significant differences in the gains made by the four and five year olds as determined by standardized tests and subjective teachers' evaluations.
3. There will be significant differences in gains made by the boys

- and girls as determined by standardized tests and teachers' subjective evaluations.
- 4A. There will be significant differences in gains made by the qualified and the non-qualified children as determined by standardized tests and subjective teachers' evaluations when the children are matched on the basis of sex, age, and size of family.
 - 4B. There will be significant differences in gains made by the qualified and the non-qualified children as determined by standardized tests and subjective teachers' evaluations.
 5. There will be significant differences in gains made by the three ethnic groups (Caucasian, Negro, and Spanish American) as determined by standardized tests and subjective teachers' evaluations.
 6. There will be significant differences in gains made by the children from homes with different parental constellations as determined by standardized tests and subjective teachers' evaluations.
 7. There will be significant differences in gains made in kindergarten by children who have had Head Start as compared to those children who have not had Head Start as measured by the subjective teachers' evaluations.
 8. There will be significant differences in gains made in first grade by children who have had Head Start as compared to children who have not had Head Start as determined by the teachers' evaluations when these children have been matched on the basis of sex, teacher and family income.

The important findings obtained as a result of testing the above

hypotheses are summarized below:

1. The children residing within the target area were found to be significantly different from those children residing outside of the target area at the .01 level of confidence.
2. The boys were found to make the most gains in social development (significant at the .02 level); however there were no other significant sex differences.
3. The children who were not economically deprived were found to have made significantly more gains as rated by the teachers than did the economically deprived children. This difference was at the .05 level of confidence.
4. There were ethnic differences which were significant with the order of gains being Negro, Spanish American and Caucasian. The significant areas were verbal communication at the .01 level of confidence, self concept at the .001 level of confidence, and the cumulative area also being significant at the .001 level of confidence.
5. At the kindergarten level all differences were in favor of the children who had received no preschool training. These differences were: muscular coordination at .05 level of confidence, attention span at the .02 level of confidence, and the cumulative score at the .001 level.
6. At the first grade level all differences were in favor of the children who had the Head Start experience. The areas of significance were: social development, concept formation and achievement in reading all being significant at the .02 level of confidence. Achievement in number concepts was significant at the .02 level of confidence and the cumulative area was

significant at the .001 level of confidence.

7. In the 1969-70 evaluation of the children in first grade and second grade in three of the target area schools the first grade students who had Head Start when matched with other first graders on basis of teacher and economic deprivation were found to have a cumulative score significantly better at the .05 level of confidence. The non-Head Start second graders were significantly different in the area of social development with the former Head Start second graders having a nonsignificant edge on the cumulative score.

Conclusions

From the findings of this study the following conclusions were drawn:

1. Ogden City Schools have been justified in labeling the target area as an impoverished part of the district that needs additional service.
2. That the criteria of family income is a justifiable measure to use in determining who should be admitted to the Head Start program.
3. That the minority ethnic groups benefit most from early childhood training and consequently should be given extra consideration for placement in special programs.
4. That the school process has an ameliorating influence which tends to neutralize some of the initial gains of children who have had Head Start.

Recommendations

On the basis of the findings of this study the following recommendations are made:

1. That Ogden City Schools continue the Head Start program with special consideration being given the minority ethnic group who reside in the target area of the city.
2. That the curriculum of the present Head Start program be evaluated and that part of the children be placed on the Engelmann no-nonsense or Distar curriculum approach to determine if more lasting longitudinal gains can be obtained.

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APPENDIX A

The following is a sample of the Head Start Teachers' subjective evaluation sheet used in 1966-1967 school year.

Child's Name _____

Date _____

(Score comparing each child with class peers)

	Poor	Adequate	Good	Superior
I. Verbal Communication				
II. Self Concept (Student's view of his own adequacy and worth)				
III. Social Development (ability to relate to peers in classroom and playground)				
IV. Concept Formation (ability to discriminate and generalize)				
V. Muscular Coordination				

Any additional comments concerning this child

APPENDIX B

The following is a sample of the teachers subjective evaluation sheet used in kindergarten and first grade.

Child's Name _____

Date _____

(Score comparing each child with class peers)		Poor	Adequate	Good	Superior
I. Verbal Communication	A. Amount				
	B. Quality				
II. Self Concept (Student's view of his own adequacy and worth)					
III. Social Development (ability to relate to peers in classroom and playground)					
IV. Concept formation (ability to discriminate and generalize)					
V. Muscular Coordination					
VI. Attention (ability to stick with on-going process in class in contrast to being inattentive or difficult to involve)					
VII. Achievement level at this point	A. Reading				
	B. Number concept				

Any additional comments concerning this child

APPENDIX C

The following is a sample of the teachers' subjective evaluation sheet used in the evaluation of first and second grade in 1969-70.

Child's Name _____

Date _____

Grade _____

(Score comparing each child with class peers)

	Poor	Adequate	Good	Superior
I. Verbal Communication				
A. Amount				
B. Quality (ability to express oneself and deal with abstract concepts)				
II. Self Concept (Student's view of his own adequacy and worth)				
III. Social Development (ability to relate to peers in classroom and playground)				
IV. Concept Formation (ability to discriminate and generalize)				
V. Attention (ability to stick with on-going process in class in contrast to being inattentive or difficult to involve)				
VI. Achievement level at this point				
A. Reading				
B. Number Concept				

Any additional comments concerning this child:

VITA

Robert Dale Eyestone

Candidate for the Degree of

Master of Education

Thesis: A Longitudinal Evaluation of Ogden City Head Start Program

Major Field; Counseling Psychology

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Personal Data: Born at Waco, Nebraska, May 12, 1923, son of Royal Dewey and Josaphine W. Eyestone; married Virginia Geddes June 2, 1948; five children--Suzanne, Janet, Robert Dewey, Mary Jo, and Edward Dale.

Education: Attended Utica High School, Utica, Nebraska, graduated from Twin Falls High School, Twin Falls, Idaho, 1941; received the Bachelor of Science Degree from University of Idaho with a major in Agriculture Education, 1948; did graduate work at Brigham Young University; completed requirements for the Master of Science Degree at the Utah State University, specializing in Counseling Psychology, 1970.

Professional Experience: 1969 to present, Coordinator of Special Education, Ogden City Schools, Ogden, Utah; 1963-69, District Counselor, Ogden City Schools; 1958-62, Plantation Manager, Samoa and Tonga for the Church of Jesus Christ of Latter Day Saints, Pacific Board of Education; 1952-58, Vocational Agriculture Instructor, Rexburg, Idaho; 1948-50, Vocational Agriculture Instructor, Kimberly, Idaho.