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D E P R I V E D P R E S C H O O L  
C H I L D R E N

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BY

MARGARET ESTES RUCKER, B. S., M. S.

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We hereby recommend that the dissertation prepared under  
our supervision by Margaret Estes Rucker  
entitled THE EFFECTIVENESS OF AN ENRICHMENT PROGRAM  
FOR CULTURALLY DEPRIVED PRESCHOOL CHILDREN

be accepted as fulfilling this part of the requirements for the Degree of  
Doctor of Philosophy

## Committee:

Dono R. Jager  
Chairman  
Jessie W. Bateman  
Helma A. Brown  
Bernadine Johnson  
John F. Wiley

Accepted: J. L. Morrison  
Dean of Graduate Studies

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## CHAPTER I

### I N T R O D U C T I O N

At the close of the nineteenth century, all states in the United States had universal compulsory education laws. The preschool child was looked upon as non-educable. Earlier psychologists believed the intelligence of a child was fixed at birth and that experiences during the early years, particularly before the development of speech, were unimportant. More recent research has determined that intelligence, rather than being fixed by genetic factors at birth, can be nurtured through environment. Researchers in the psychology of cognition and perception have theorized that exercise of sensory-motor equipment early in life is essential for later development. Mental alertness, particularly the ability to handle abstractions, depends physiologically on a broad diversity of experiences in environment during early childhood. The entire process of learning is currently being studied by professional educators, the professions of psychiatry, pediatrics, social work, mental health, and research. The importance of the young child's learning has been emphasized by Bloom (9) based on studies indicating that half of an individual's general intelligence is formed by age four.

According to Crow and others (17), the Educational Policies Commission recently recommended that all the nation's children begin school at the age of four.

"With universal early childhood education," the Commission stated, "almost every child would have a higher starting point in knowledge and development."

All states, with one exception, have enacted legislation to establish kindergartens and provide for use of local funds to help finance them. The War on Poverty sponsored by former President Johnson brought the plight of the culturally deprived child into the limelight. The Economic Opportunity Act of 1964 provided money for the Head Start Child Development Centers to offer enrichment programs for children of families whose annual incomes did not exceed \$3,200.00. A preschool enrichment program can be used as an antidote for what is referred to as a disadvantage or cultural deprivation. The advisability of an enrichment program is based on psychology that has changed in the last few years. Intellectual capacity of disadvantaged children has been curtailed by some conditions of the environment. Psychological research has indicated that culturally deprived children have special needs which stem from limited backgrounds.

Children living in poverty are subject to deprivation in health, language development, and socio-emotional

development. Some of the four- and five-year old children are overly aggressive, have temper tantrums, and engage in frequent fights. The children appear to have a short attention span, poor listening ability, and an inability to express inner emotions. At the same time, culturally deprived children possess a strong sense of competency in being able to cope with the environment. The children are relatively free of the strains which accompany competitiveness and the need to establish oneself as an individual.

The Head Start Program (35) attacks the roots and effects of the problems of poverty. The program strives to help the child's emotional and social development by encouraging self-confidence, self-expression, self-discipline, and curiosity. The abilities of the child to think, to reason, and to speak clearly are expanded and given an opportunity for expression. An attempt is made to widen and give more varied experiences than the parents can provide. The child is offered numerous opportunities to succeed, thus erasing the pattern of frustration and failure. An atmosphere of confidence is provided so the child can feel free to explore and to make discoveries under the guidance of teachers interested in that child's welfare.

### STATEMENT OF THE PROBLEM

The intellectual inferiority of the American culturally deprived preschool child has received considerable publicity with the opening of year-round Head Start Centers throughout the United States. The traditional kindergarten designed for middle-class preschool children is not sufficient to meet the needs of culturally deprived children.

Numerous curriculums are being developed to provide the enrichment programs needed to correct the effects of cultural deprivation. Activities and experiences are planned in visual and auditory discrimination, concept formation, self-image improvement, and motivation; moreover, field trips are taken to the fire station, zoo and other local places. Basic language and mathematics skills are introduced. Emphasis is placed on developing a program pertinent to real life situations of the children involved. Emphasis is on active physical participation of children in the program and providing multi-level materials which allow for individual differences of children as stated in the National Council on Education of Disadvantaged Children (53).

### PURPOSES OF THE STUDY

The overall purpose of the present study was to evaluate and compare the effectiveness of two Head Start programs,

using a Day Care Center as a control group. The specific purposes of the study were as follows:

- 1) To compare the intelligence quotients of the children attending the Head Start Program started in 1964 with children attending the Head Start Program started in 1968 as well as with children in the Control Group,
- 2) To test the listening comprehension ability of preschool children studied,
- 3) To test the ability of preschool children to use oral language; and
- 4) To give a pretest on listening and language in September, 1968 and a retest on the same in February, 1969.

The long-range purpose of the study was to determine weaknesses of the culturally deprived children and to ascertain measures that can be taken by the schools to eliminate weaknesses and reinforce the strong points of the children. The following assumptions were established as a framework for guiding the development of the present study:

- 1) A study of language comprehension of the culturally deprived child will determine weaknesses, in the present program.
- 2) A culturally deprived child is quite proficient in the use of the language or dialect he has experienced.
- 3) A child from lower status groups is a passive listener.
- 4) A fundamental objective of preschool programs should be to foster language development of the child. The child needs to acquire basic oral communication skills by the age of six years.

## CHAPTER II

### R E V I E W   O F   L I T E R A T U R E

#### THE CULTURALLY DEPRIVED CHILD

Long before a child starts to school, reported Zigler (78), learning begins to take root. For some, the roots of learning are blighted early in life, leading to the familiar problems of unemployment, poverty, and personal hardship.

Silberstein (71) found that culturally deprived children were unstimulated, unemotional, and from impoverished families. The children tend to be overactive and impulsive, have difficulty in concentration, lack basic background information, and have poor motivation in relating to adults. Culturally deprived children often exhibit a marked distrust for authority, have poor control of aggressive behavior, and possess poor language skills.

Culturally deprived children are non-existent according to Ellison (24). Even children who are forced to forage garbage cans because parents provide no food have some awareness of being part of a larger American scene and are influenced by that scene. Ellison referred to culturally deprived children as being unable to communicate effectively;

yet in familiar surroundings, the child utilizes a rich oral language. Children of poverty are being educated in the street, learning to live in the immediate world. Ellison stated that children are not "culturally deprived" but are children of a different culture complex. Manners, codes, customs, and attitudes of culturally disadvantaged children are different from middle-class children. The culture has been handed down from generation to generation. The nation needs some of the traits learned by the culturally deprived: group discipline, patience, aggression, and daring. Ellison observed that:

Napoleon was no different from the slum child that tries to take over the block. To be ill clothed, and ill fed is not the only way to suffer deprivation no matter how high his parents' income. When a child has no fruitful way of relating the cultural traditions and values of the parents to the diversity of cultural forces with which he must live in a pluralistic society, he is culturally deprived.

Taba (73) completed a study using a group of second generation American white and Negro slum children. The children all had a common meagerness of background, low economic status and a minority status. The author found that both groups lacked self-confidence, purpose, and ambition. The term "culturally deprived child" seems to be only a variation in the theme of problem children, retarded children, slow learners, underprivileged, and under-achievers. The



description fits the Southern Negro, Puerto Ricans in the East, Spanish-Americans and Indians in the Southwest, marginal farmers, and the low-class whites of the Appalachian mountains. Taba stated the present interest in cultural deprivation was a consequence of the approaching success of the United States in achieving the goal of providing education for all American children developed as the democratic ideal by the people of the United States.

The National Association for the Education of Young Children (64) reported the investigation of the culturally deprived child and found that many of the behavior problems stemmed from frustration coupled with anxiety. Some of the characteristics related by the Association in describing culturally deprived children included the following:

- 1) Often feel uncertain of the position maintained by the child in society.
- 2) Often do not know the names of objects or even that objects have names.
- 3) Frequently lack curiosity.
- 4) May have never worked with pencils, paper, crayons, scissors, puzzles, blocks, and books.
- 5) May have never left the immediate neighborhood.
- 6) Manifest little interest in learning in the school situation.

Culturally deprived families are described by Deutsch (21) (55) as being concentrated in large cities in crowded

apartments, and plagued by a high rate of unemployment, chronic economic insecurity, and a disproportionate number of broken homes. Consequently, the child has little direct contact with experiences outside the neighborhood. The parents are burdened with the problems of everyday living and a multiplicity of children.

According to Reissman (66), Justman (41), and Noar (54) 14 large cities had one culturally deprived child in 10 in 1950; in 1969, there was one in three. Reissman predicted that by 1970, 50 per cent of the children in 14 large cities will come from deprived homes.

Deutsch (22) reported children deficient in the process of thinking, in language skills, and in reading. Children from the lower socioeconomic class have various linguistic disabilities: poor articulation, limited vocabularies, and poor grammar.

Taba (73) found that culturally deprived children lacked skills and habits necessary for meeting the expectations of first grade teachers. Sometimes Head Start children did not distinguish one piece of paper from another, often tearing a page from a book to make a marker for another, and then cherishing a piece of toilet paper. Teachers found the children had minimal training of discipline in group behavior. The stories children told about the families included many

examples of withdrawals or "running away" in the face of conflict.

Havighurst (33) found culturally deprived children in small cities, large cities, and rural counties. This author speaks of the children as being socially disadvantaged, meaning that the child is disadvantaged for living completely in an urban, industrial and democratic society. The child's family can be described as one that offers little opportunity to extend vocabulary learning or to develop a more adequate self-image. In addition, these families possess few books, seldom read, and show little or no appreciation for the value of education.

The migration of the Southern Negro, the white rural Southerner, and the Puerto Rican to the Northern industrial cities has been partly responsible for the crowded conditions in which culturally deprived groups reside. As these groups tend to have large families, children make up as much as 30 per cent of the child population of such cities as New York, Chicago, Philadelphia, Washington, Detroit, Cleveland, and Baltimore. Justman (41) studied children in an urban school system who came predominately from homes in which adults had had little formal education. Such large families were often plagued by factors such as poverty, discrimination, high mobility and slum conditions. The children from these homes

entered school lacking the experiences, skills, and values of the middle-class child. Justman found the deprived child less verbal, more fearful of strangers, less confident, less exposed to intellectually stimulating materials in the home, less varied in reactional outlets, less knowledgeable about the world outside the immediate neighborhood, and more likely to attend inferior schools.

The "Economic Report to the President," prepared in 1964 by the Council of Economic Advisors (15), used the figure of \$3,000 or less annual income as a guide to determine the poverty level. The Conference on Economic Progress (15) established \$4,000 as the poverty line. The Bureau of Census based this figure on studies of family budgets of workers in 20 American cities. The Bureau of Census report for 1962 showed 20 per cent of the total population living in poverty. One-fifth of the families below the \$3,000 level had less than \$1,000 a year in cash to live on. Orshansky (56) found a total of 4.7 million families had insufficient income to provide adequately for the children's needs. The President's Council of Economic Advisors reported that children of poor families numbered about 11 million in 1962. This number would represent one-sixth of the population under 18 years of age. Twenty-six per cent of the families were non-whites, and 63 per cent were headed by women. The probability of poverty rose from 47 per cent to 81 per cent when the family belonged to a non-white race and the chief wage earner was a woman.

Liston (46) emphasized the fact that confusion arises from the various ways poverty is conceived and defined. The Bible referred to beggars being driven from the temple. Charles Dickens offered images of poverty; young children are introduced to poverty through the story of Old Mother Hubbard. Poverty, according to Liston, is the space between "what is and what ought to be" as viewed by the individual.

Growth and development of culturally deprived children are influenced by child-rearing practices to which children are exposed. Lourie (47) hypothesized that a failure by the mother and the environment to provide adequate stimulation for the exercise of perceptual apparatuses may result in increased difficulties in the child's assimilating what is perceived of the outside world. The process of self-awareness can be retarded. A baby left in the crib for long periods of time without anything except drab ceiling and walls to look at receives little sensory or perceptual stimulation. If the bottle is propped in the crib, the child is robbed of the stimulation of being held. The child reared in the slums is often cared for by a type of multiple mothering. The mother's own mother, or a distant relative or a neighbor from down the street often cares for the child. The infant often must adjust to several different handlers within a day or even within an hour. The different rhythmic patterns, different ways of being held, fed, and talked to constitute

inconsistencies in an environment to which the infant must adapt.

Noar (54) scrutinized the culturally deprived child's family and found the economic condition of the families was due to poverty of chronic unemployment or unemployable fathers and of one-parent homes, frequently mother-dominated. The children studied had too little of everything--too little space, too little food and sleep, too little curiosity, too little happiness, and too little clothing. "Feed-back" from the parents as found in the middle-class home was almost non-existent. No one in the culturally deprived child's family had time to direct the child to look and see, to listen and hear, and to follow directions.

Marburger (67) ascertained that the culturally deprived young child arrives at school with "not enough information, not enough food, not enough health care, not enough good housing, and not enough time with people who are not harassed."

Rioux (67) concluded that some teachers make basic assumptions about the experiences of the culturally deprived children and expect little, demand little, and get little from the children. The five-year-old child from a deprived background is started on a halting, disjointed, nonproductive pace that may continue for the next 13 years.

Goslin (29) interpreted the plight of the rural child as living on marginal and worn out land, in mining towns where the mines are operated without much regulation, in lumbering areas where a scarcity of good timber remains, and in fishing villages that line the water front. Others live in hillside shacks or tumble-down houses along the highway. Some move from season to season searching for crops to harvest.

Wattenberg (73) described the culturally deprived child as being different from the "advantaged" in language development, self concept and social skills, as well as in attitudes toward school and society. The deprived child has few interests and gestures; sounds and local words are the method used for communication. The linguistic skills of expression and receptive skills are inadequate. The deprived child does not hear sounds as the middle-class child pronounces them. The deprived child tends to "close-out" many noises. The words heard do not necessarily have the same meaning for the deprived child as for the middle-class child.

Culturally deprived children, according to Powledge (62), is a phrase meaning children that do not have a chance or may never have a chance to succeed in life. The statement intimates that the culturally deprived child will be destined to remain culturally deprived throughout life.

Children of minority groups have a long history of oppression according to Passow (58). The children do not have materials to explore and manipulate; nor do the parents make an active attempt to glamorize education as a valued experience. No pressure is exerted on the child to succeed at school; no emphasis is focused on learning tasks at home that might facilitate school achievement. Behavioral assets such as obedience, punctuality, cleanliness, and care of personal property are not stressed at home.

The problems of culturally deprived families, as reported by Passow (58), stem from poverty, unemployment, discrimination, and lack of adequate housing. Culturally deprived families are a diverse and heterogeneous population. Lack of education, different life style, and child-rearing practices account for part of the problem.

Biber (7) interpreted the family of the deprived as being one in which little conversation takes place and where language development is not encouraged. The pattern is not one that includes reading of newspapers or books as a built-in part of the family life. The child talks and thinks according to the model of talking and thinking produced in the home. Many deprived children have strengths as well as deficits. In evaluating some weaknesses, the author stated:

The people he lives with are not only not talking to each other, not using language freely,



in a richly developed way, it may well be that they are really not in close touch with each other as people; that the child hasn't been noticed as the particular person that he is; that adults haven't played with him very much; that he hasn't been involved in the kind of connections with people from the very beginning of his life that helps a child know who are the familiar people, who are the strange people.

These are the children who cannot be sure of the basic necessities: Will there be enough food? Is there somebody to take care of you? There is uncertainty in their lives about whom they really belong to: Who is the father? And is the mother available to the child in important mothering ways? In fact, is there anybody that really cares about this child in a deep and important way?

For some, education is not enough, according to Foster (26). The child that refused to enter a Head Start Program blurted out, "My belly is hanging out." The child entered only after a shirt had been secured for him. Some of the children would not be fed if it were not for the Head Start Programs. Breakfast at home often consisted of cold spaghetti left over from the night before. This development of the "whole child" is a primary concern of the early childhood education programs.

### LEARNING EXPERIENCES OF PRESCHOOL CHILDREN

#### Intelligence Quotient

Educational principles for meeting individual needs of middle-class children apply equally to culturally deprived children. Learning takes place as a result of the child's

interaction with his environment. The learning of a child is spontaneous and continuous throughout life. Bruner (13) contended that any subject can be taught effectively in some intellectually honest form to any child at any stage of development. Bruner further affirmed that the young child could learn anything faster than adults if the material was presented in terms the child could understand. The child's intellectual development responds to forces of the environment and offers opportunities to forge ahead into the next stage of development.

Breckenridge (11) warned that praise and reward are needed by the child for achievement. The child needs to develop a sense of adequacy which can be gained through continuous experience of success in doing small tasks. Every successful accomplishment of the culturally deprived child should be praised and rewarded. The child needs to feel the acceptance of the teacher. The child should learn cleanliness, promptness, responsibility, obedience, consideration for others, respect for authority, orderliness, the value and dignity of work and the ability to follow directions.

Wattenberg (73) presented evidence that many of the children from the low end of the socioeconomic scale present language deficiencies at least in the uses of language which

is socially acceptable in middle-class settings. The children are often inert in discussion and in communication skills.

Hess (37) affirmed that the structure of the social system and the structure of the family shapes communication and language. The author asserted that language shapes thought and cognitive styles of problem solving. In later studies Hess found that culturally deprived children lived in crowded homes where the mother had little time for explanations or discussions. The children had no reason to think or respond and therefore accepted statements without question. Children become accustomed to short sentences and learn to shut out sounds which are disturbing or unimportant. The habit of not listening affects the adjustment of the child in school. The culturally deprived child has trouble listening to the teacher when the talk is directed to that child for long periods of time.

Listening and speaking are intimately related to personal development. Crosby (16) emphasized that speech is the mirror of personality. Concept of self, of others, and of the infinite and finite worlds have roots in early childhood; these concepts are closely interwoven with family speech patterns and usage. One of the most important factors contributing to the difficulty encountered in school by the

culturally deprived child is the fact that the child is born into a particular family. The culturally deprived child uses an expressive and often colorful language at home and in the neighborhood groups. However, this language is often neither understood nor accepted in most schools.

There is little in the culturally deprived child's environment that is likely to give him any sense of aspiration or direction. Sometimes there is no father figure present in the home for the boy to identify with and little reason to assume that education offers a way out of the slum. Passow (57) elaborated on the conditions affecting culturally deprived children. The children come from semi-literate or illiterate backgrounds which offer very little chance to learn. The intelligence quotient of Head Start or culturally deprived children often drops 20 points as the children progress through school. Many authors are in agreement that these children can be educated.

Today basic literacy is required to participate in the industrial process, as is a fairly high level of ability to deal with words and figures. The worker has to follow directions, read, keep records, and master considerable technical knowledge. The culturally deprived child needs the same education as middle-class children: an education that will teach

the child how to learn, give intellectual discipline and other forces affecting equal opportunity.

Bruner's research (12) on cognition and perception has clearly indicated that exercise of the mind early in life is essential for later development. Mental alertness, particularly the ability to handle abstractions, depends physiologically on a broad diversity of experiences in the environment of early childhood.

To obtain an index of the child's mental abilities, Goodenough (28) estimated that in testing a group of 500 children under the best conditions, at least 100 children may be expected, on retest, to show change in intelligence quotients of as much as 10 points; 25 instances change as much as 15 points, and four or five children will show a change of 20 points. A child's score will be inaccurate if the child, by reason of unique circumstances in the environment, is at a disadvantage on certain test items. Thus, a child that seldom has a chance to use money is at a disadvantage on test items dealing with the name or values of coins.

Researchers of each generation contribute new findings related to a child's intelligence. Plato (60) believed the rearing of children was too important a function to be carried out by mere amateur parents. Other early researchers

felt preverbal experiences were relatively unimportant because the child could not recall having had the experience. Rousseau (68) in 1762 recommended that children should be exposed to pain and cold in order to grow.

Hunt (39) distinguished between culturally deprived and culturally privileged children as analogous to the difference between cage-reared and pet-reared rats and dogs. It is possible today to supply these children with a set of encountered circumstances which will provide an antidote for what the children have missed.

Skills and Dye (72) provided research information relating to changes in intelligence quotient produced by changes in environment. Two infants were studied; one 13 month old with an intelligence quotient of 46, the other a 16-month old child with an intelligence quotient of 35. The intelligence quotients were so low that the children were moved from an over-crowded orphanage to an institution for the feeble-minded. Six months later a psychologist noted that the two infants showed a remarkable degree of development. The children showed neither the apathy nor the locomotion that had been noticeable earlier. A retest showed the 13-month old child had an intelligence quotient of 77 and the 16-month old child had an intelligence quotient of 87, an improvement of 31 and 51 points, respectively, gained in one-half year. The children had been mothered by other inmates

of the institution and given individual attention. A comparison was made involving 12 children who had been left in the orphanage. The children had higher intelligence quotients and, when retested after 21 to 43 months, all showed a substantial decrease in intelligence quotient range. The research indicated that if the deprivation does not persist too long, it is reversible to a substantial degree. Thus the idea of enriching the program in day care centers and in nursery schools for culturally deprived children is advantageous.

#### Language Problems

Between three and six years of age the battle to educate culturally deprived children is either won or lost. Silberman (70) maintained that the root of the problem of educating culturally deprived children is that the slum children do not learn to read properly in the first two grades. Educators are starting too late to educate the children. The children have difficulties that stem from numerous causes in handling abstract concepts. The environment in which lower class Negro and white children live does not provide the intellectual and sensory stimuli needed for learning. Children are poorly motivated due partly to lack of experience in receiving approval for success in a task or disapproval for failure. By the age of six, culturally deprived children

have lost the desire to succeed and are so far behind the middle-class children that the best elementary education will not be sufficient for them to catch up.

The traditional American approach to early childhood training has been to see the child as a static entity that has been determined by genetic environment. Silberman (70) called attention to the emphasis placed on the intelligence quotient as a measure of the ability of the child before the decision of the materials to use and the methods suitable for teaching can be made.

Deutsch (20), Bruner (13), Hunt (39), and Montessori (49) viewed the child as an "open system". These educators were interested less in what the child is than in what the child can become. These researchers were willing to provide materials and techniques needed to develop each child to the greatest intellectual peak.

Montessori's approach (49) to child training emphasized what psychologists call intrinsic motivation. Materials are provided and each child is free to examine and work with whatever seems to be of interest. The chief advantage of the Montessori approach is that the individual child is given an opportunity to find circumstances which will match a particular stage of development.



Rational thinking in a child is governed by maturation level, particularly in the area of space and time. Logical thought must be nurtured and guided in order to develop. Perryman (59) observed that children need first-hand experiences with people and objects where the child can bring all of the senses into play in order to get accurate perception. The child needs opportunities to use verbal expression in connection with experience.

An intervention program for young deprived children was conducted by Gray (31). Sixty children were divided into three groups; the first group received training for three consecutive summers with one home visit made by the teacher during the winter; the second group received two training sessions during consecutive summers with one home visit made during the winter. The third group did not receive training. The author hoped to develop an intervention program designed to improve the educability of young deprived children. Attitudes conducive to learning were included in the program. The children were tested over a period of five years. The data indicated that a program for preschool intervention could have lasting effects. The author believed a carefully designed preschool program could last through the second year of school.

The preschool child imitates patterns of speech heard in the environment. The variety of linguistic patterns

available for imitation to the culturally deprived child is limited and unacceptable as a standard for later schooling. Lewis (45) found that one of the greatest handicaps for culturally deprived children was the crowded conditions in which children reside. The desire to question, to ask, "What's that?" is thwarted since there is often no answer to either the child's question or an answer that is so punishing that questioning is inhibited. Parents are too preoccupied with problems associated with poverty to answer questions asked by preschool children.

Hunt (38) developed a method of using sensorimotor and early symbolic schemata for assessing intellectual and motivational development. If the research is successful, it will provide a tool with which to determine when and how the conditions of development, within the crowded circumstances of poverty, begin to result in retardation.

Bloom (9) contended that later learning is likely to be influenced by the very basic learning which already has taken place by the time a child is five or six years old. Culturally deprived children have the same set of initial skills and intellectual development as children from more advantaged homes. However, culturally deprived children have difficulty in learning to be quiet and to be attentive to a flow of words from the teacher. The author found that most

culturally deprived children spend little time in direct interaction with their parents. The noise and crowded conditions of the house do not allow an opportunity for the child to receive corrective feedback when learning to talk. Language deficiencies of deprived children are often due to the way in which language is used in the home and to the amount of practice children have in using the language. Language usage is limited in the home of the culturally deprived. Communication is often through gestures and other non-verbal means. Language used is often grammatically incorrect.

Accurate pronunciation is considered by Bereiter (6) to be one of the greatest deficiencies of culturally deprived children. The author established a school for children severely retarded in psycholinguistic abilities. The techniques used in the school were those used in teaching a foreign language. Four- and five-year old children were given 60 minutes a day of instruction. The sessions were divided into three 20 minute sessions. The children were required to use whole sentences during the learning sessions. Children over a year retarded in language abilities at the beginning of the training progressed to within nine months of the normal level in language test scores and intelligence quotient by the end of the training.

In a study conducted by Zigler (80), the use of social reinforcers to alter behavior of a child was found to be effective only if careful analysis was made of the inherent characteristics of the particular social reinforcer and of the structure of the child to whom the reinforcer is being given. Zigler (79) found verbal reinforcers having primarily a praise connotation lengthened the performance of culturally deprived children. The performance of the middle-class child was not lengthened. The words "right" and "correct" were used in denoting correctness, while "good" and "fine" were used as denoting praise. Culturally deprived children have had few experiences of receiving praise. The culturally deprived child cannot understand that the success of an experiment is a direct outgrowth of the child's effort and should therefore result in feelings of pride. An earlier study by Zigler (79) showed statistically significant evidence that abstract reinforcers are less effective with lower-income children than middle-class children.

Language is the primary avenue for communication, absorption, and interpretation of the environment according to Duetsch (20). Language reflects style of thought and the formation of ideas for solving or not solving problems. The child's language skills and verbal behavior are affected by the socioeconomic status of the whole family. Culturally deprived children respond to questions in partial sentences or

exclamations. Frequently the child's answers consist of a "yes," "no," "go way," "later," or simply a nod. Often families do not sit at the table for meals and communication between parents and children is limited.

A "Verbal Survey" was conducted by Deutsch (20). Results indicated that lower-class children, Negro and white, as compared with middle-class children, were subjected to a "cumulative deficit phenomenon" which took place between the first and fifth grades. Some of the deficiencies could be attributed to early deprivation and some were attributed to school training.

Passow (57) related an experience pertaining to asking the culturally deprived children to tell a story about a particular picture. The response to, "Tell me a story," was absolutely minimal in the culturally deprived children while the middle-class children would tell a fair story. The more attention given the culturally deprived child, the better the response the child made. Learning can take place when the child learns to trust the teacher. A mute, sullen, unresponsive child cannot learn. The author found that culturally deprived children needed books dealing with issues of slum life, not a lily-white fairy book family unfamiliar to the children. Keats' The Snowy Day and Whistle for Willie are about little colored boys. These are books to which the colored child can relate.

Daniel (19) determined that a program for culturally deprived children should be based on the premise that children can learn. Given a teacher capable of empathizing with children and a program planned to provide for developing a broad range of cognitive, affective and behavioral learnings which will help the learner to achieve the maximum potential, the child will learn. A wide range of aptitudes and abilities exists among culturally deprived children. A teacher that respects the children's ability to learn can guide the children to develop to the greatest potential.

A study conducted by Arni (3) was designed to provide culturally deprived children with many experiences, attitudes, and drives expected by the school before the child reached school age. The purpose of the study was to determine whether carefully planned preschool activities could help the culturally deprived children achieve success in the basic curriculum of the language arts program during its first year. The program consisted of stories, art experiences, listening experiences, movies, perception experiences, puppet shows, health activities, and field trips. The program was planned for one-half day, five days a week. Three groups consisting of lower socioeconomic children, middle-class children, and a control group were used. The two experimental groups attended a kindergarten program while the control group received no training. Report cards, narrative reports, and

results of tests were used in evaluating the program. The results indicated that the children attending the kindergarten made greater progress and had a higher degree of success in the language arts program of the first grade.

#### VALUE OF A HEAD START PROGRAM

In 1965 former President Johnson (40) presented the following goals in his State of the Union Message:

. . . to keep our economy growing; to open for all Americans the opportunities now enjoyed by most Americans; to improve the quality of life for all.

In 1966 the Johnson Administration enacted an anti-poverty program. Sargent Shriver, Jr. was appointed head of the Office of Economic Opportunity, and nine months later he reported to Congress that the progress of the program provided confidence that poverty in the United States could be abolished.

Project Head Start was one of the programs provided for in the War on Poverty. The program was designed to prepare 561,359 disadvantaged preschool children to enter public school. The summer program, 1964, was very successful and a full year Head Start Program was provided for children from three years of age to the age at which children enter the public school system. The program required that 90 per cent

of the children enrolled in the program must be from families whose income did not exceed \$3,200, a figure set by the Office of Economic Opportunity.

The Office of Economic Opportunity established aims and educational goals for the Head Start Programs to help the children

- 1) Learn to work and play independently, at ease about being away from home, and to be able to accept help and direction from adults;
- 2) Learn to live effectively with other children, and value one's own rights and the rights of others;
- 3) Develop self-identity and a view of themselves as having competence and worth;
- 4) Realize many opportunities to strive and to succeed physically, intellectually, and socially;
- 5) Sharpen and widen language skills, both in listening and in speaking;
- 6) Be curious, wonder, and seek the answers to questions;
- 7) Strengthen physical skills, using large and small muscles;
- 8) Grow in ability to express inner, creative impulses in dancing, in making up songs, in painting, in handicrafts; and
- 9) Grow in ability to channel inner destructive impulses, turn aggression into hard work, talk instead of hit, understand the difference between feeling angry and acting angry, and feel sympathy for the troubles of others.



The Head Start Program focuses attention on the conditions of the preschool children of lower-socioeconomic families. The program is mobilizing attitudes sympathetic to this undertaking. The program is provoking a wide spread commitment for help. The Head Start Program, according to Rioux (67), pressed the issue of the child development center approach to young children rather than school readiness alone. Culturally deprived children have many handicaps--nutritional, dental, and medical--which the Head Start Program endeavors to eliminate. The educators that planned the program were confronted with the attitude possessed by some kindergarten teachers that culturally deprived children had low capacity and low expectations. The methods, materials, and expectations used for a middle-class child are not applicable for the culturally deprived child. The Head Start Program places heavy emphasis on language development to compensate for the severe language communications deficiencies that are consistently identified as one of the characteristics of the culturally deprived children. Experimental programs to find more appropriate methods to compensate for language deficiency are being instigated. Each child learns by a different style of learning and each child shows indications of different strengths, whether culturally deprived or middle-class.

Ferman (25) asserted that the poverty faced by families of culturally deprived children today is a new poverty. It is the poverty of automation, the poverty of minority groups, and a poverty that under present conditions could become hereditary unless the cycle is broken.

Reissman (66) stated that some of the dangers a democracy faces are hostility, prejudice, and intolerance which are usually found among those with unfilled needs and those whose education is deficient. Poor families today are not all immigrants; many are products of the United States.

Hunt (39) advocated a preschool enrichment program to be used as an antidote for what is referred to as cultural deprivation or social disadvantage. The author stated that

The psychological basis for using enrichment programs for cultural deprivation is due to a change in beliefs such as:

- 1) Belief in fixed intelligence;
- 2) Belief in predetermined development;
- 3) Belief in the fixed and static, telephone switchboard nature of brain function;
- 4) Belief that experiences during early years, particularly before speech, are unimportant;
- 5) Belief that whatever experience does effect later development is a matter of emotional reaction based on the fate of instinctual needs;
- 6) Belief that learning must be motivated by homeostatic need, by painful stimulation, or by acquired drive based on these.

Hunt (39) suggested that an enrichment program should provide a variety of materials for experimentation and

manipulation, an opportunity to acquire information and understanding about the world of people, and experiences which will help children solve problems.

The strengths of culturally deprived children are often downgraded by references concerning rugged individualism and willingness to work hard to get ahead. Perryman (59) came to realize the fallacy of the adage, "To give people the will to accomplish a task is the major part of the work." The people had determination; otherwise, they would hardly have been able to survive the conditions which surrounded them, much less keep their families together. Another adage is, "Once people are properly motivated to help themselves, half the battle is won." Experience has proven this is not always true. Motivation is present and it is easy to stimulate.

Some culturally deprived children enrolled in Head Start Programs have overcome all forms of deprivation and have emerged talented, insatiably curious, and capable of moving at a fast pace. The Head Start Program can take advantage of Reissman's helper principle (66) in learning and teaching. The author recommended that children who have learning difficulties and at the same time have a certain level of achievement could assist in teaching others who knew less. These children, thereby, could provide a service and build images of themselves as persons of value, capable of helping others.

The British Infant School movement is built on the premise that if parents concentrate on the oldest child, this child will teach the younger ones. Robert Kennedy (44) remarked that this was the policy followed in raising the Kennedy children. Kennedy found indications that two- or three-year old children who had been started in a guidance plan would regress if the plan was discontinued. The author elaborated on the importance of the children knowing the background of their race, its contribution to history, and the culture and creation of this country. A sense of community enhances the growth process and helps the child grow up as an individual.

Lewis (45) pointed out that some educators believe proper education for ghetto children is essentially a question of the technique of teaching and the attitude of the teacher toward the student. Others maintained that the whole learning process is so heavily conditioned by the psychology of the child, which is a function of the family environment, that the two cannot be separated. Children from families in which parents are very oriented toward concrete thinking have very little capacity for abstract thinking.

The National Advisory Council on Education (51) determined that much of the widespread achievement of Title I Program has caused teachers and administrators to focus new

thinking on ways to overcome educational deprivation. Some programs were found to be fragmented and vague efforts directed at "enrichment." The Council ascertained the rarity of strategically planned, comprehensive programs based on the four essential needs of the child. These needs are as follows:

- 1) Adoption of academic content to the special problem of culturally deprived children.
- 2) Improvement in service training of teachers.
- 3) Attention to nutrition and other health needs.
- 4) Involvement of parents and community agencies in planning and assistance to school programs.

The Title I programs were characterized by the quality of relationship between teacher and child.

#### Auditory Influence

A common weakness in language usage of deprived children stems from poor conditioning to listening. Crow (17) found culturally deprived children became inattentive to what is being said in the child's presence in the classroom. The author included among listening disabilities the following:

- 1) Inability to discriminate in a variety of situations.
- 2) Inability to recognize sounds.
- 3) Inability to discriminate between sounds.

- 4) Inability to enunciate and articulate sounds correctly.
- 5) Inability to follow directions.
- 6) Inability to overcome poor language patterns.
- 7) Inability to distinguish between voiced and voiceless sounds.

Deutsch (21) suggested that the slum child comes from a home not verbally oriented, causing difficulties in the child's auditory discrimination. In another study, Deutsch (22) showed how the low-signal-to-noise ratio in the homes of many culturally deprived families damages the acquisition of appropriate auditory images of language patterns.

Black (8) observed that culturally deprived children learn less from what the children hear than do middle-class children. Most of the homes consist of a milieu of sounds created by radio, television, and many people living together in overcrowded quarters; this situation provides an atmosphere from which the child tries to retreat.

Piaget (60) has conceived of looking and listening as existing among the schemata inherited at birth. The author attributed key importance during the first phase of intellectual development to looking and listening. Piaget stated, "The more a child has seen and heard, the more he wants to see and hear."

Breckenridge (10) stated that a child's hearing is well-developed at birth. Hearing is an important means by which the child relates to the environment and a factor in learning to speak. According to Hammond (32), listening involves recognizing sounds that are familiar, reacting to or interpreting them, and integrating them with knowledge and experience. Listening is an important facet of communication. Through listening the young child gains much of the vocabulary and learns to imitate ways of enunciating words.

Wepman (77) defined auditory discrimination as the ability to recognize or distinguish between individual sounds used in speech. Graham (30) commented that imitation and identification of sounds aid in both the development of verbal skills and in the ability of the child to discriminate among stimuli. Graham (30) determined many ways of increasing the child's listening ability. When the child is enrolled in the Head Start Program, experiences are designed to teach the child to become aware of the sounds in a room, such as the ticking of the clock, the trickle of water from the faucet, and the honking of a horn in the distance. The experiments also included the sounds of weather, wind, rain, thunder, and the crunch of snow underfoot. Ability to discriminate between sounds is determined by questions such as, "What is a scratching sound? A buzzing sound? A splashing sound? What is the difference between calling and shouting?"

Holmes and others (34) evaluated Head Start Programs in various parts of the country. The authors contended that early intervention in unsatisfactory educational development is imperative to effectively reduce educational disabilities. The objectives of the program were to improve the child's self-image, linguistic abilities, social-emotional development, and preacademic concepts. Many of the children were compared with children not attending a Head Start Program. Results indicated that the child's intelligence quotient score, psycholinguistic abilities, and learning aptitude improved. The conclusion was that Head Start Programs are beneficial to culturally deprived children.

#### Compensatory Programs

Numerous programs are being conducted today to compensate for the deprivation of the culturally deprived child. Nimnicht (52) conducted an experimental new nursery school program for three- and four-year old culturally deprived Spanish-American children. The objectives of the school are

- 1) To develop a positive self-image
- 2) To increase sensory and perceptual acuity.
- 3) To improve language ability.
- 4) To improve problem solving and concept formation ability.



Families with little education and an income of \$3,000 or less possess a cultural pattern different from those of higher income and more education. Less educated and poorer families lack knowledge and motivation to encourage the children in school. These families frequently pass educational handicaps on to the children. Due to a language barrier, the parents' speech is characteristically difficult to understand, limited in terminology, lacking in simple concepts, and limited in the ability to solve problems.

The new nursery school program attempts to assist children to become more efficient learners by developing learning through the senses as a means of exploring the environment. The school strives to prepare the child to meet and solve problems independent of the teacher or parents. Children are taught to classify, describe, and make associations between objects and action, and to understand and express ideas of color, size, shape, and numbers. The emphasis is on learning rather than on teaching in the traditional sense. The approach of the school is organized as an autotelic response environment. Autotelic activities are undertaken for the sake of wanting to learn.

Perryman (59) pointed out that the child's rational thinking is governed somewhat by the maturation level, particularly in the areas of space and time. The educator realized

that logical thought does not develop automatically by the sheer passing of time. Nurturance and guidance are needed, as well as first hand experiences with objects and people where the child can bring all the senses into play in order to get accurate perception. The child needs the guidance a preschool program can provide when, at the proper time, introduction to new materials, equipment, and experiences can be made which will move the play toward certain desired educational goals. Providing time after play for questioning, answering, discussing what has happened, and telling and listening to related stories, the teacher provides the child with opportunities to exercise growing cognitive powers.

Bereiter (5) emphasized a five-year old child having an intelligence quotient score of 85 would be about nine months retarded in overall school-relevant learning. An intelligence quotient of 90 for a five-year old child represents six months retardation. The average culturally deprived child was found to be at least one year behind in language development. Thus these children cannot make full use of language as a tool of learning and thinking and they are prevented from taking full advantage of the opportunities for education and advancement that are available. The author planned an experimental program to convert "deficits," "needs," and "conditions" into specific learning objectives

and then developed instructional methods to achieve the learning objectives, as opposed to trying to treat the "deficits," "needs," and "conditions" directly. The academically oriented program consisted of structured language pattern drills. Repetition was emphasized in the program.

Gray (31) conducted a program to improve the educability of children from low income homes. The general aim was to make the intervention program developmental rather than remedial. Four groups were used in the program. One group had three summer sessions of special planned preschool programs plus weekly visits in the home by a specialist whose task was to involve the mother and child in activities similar to the summer experiences. One of the purposes of the specialists was to give the mothers aspirations for the child, educationally and vocationally. Group two had a similar intervention program except that it began one year later. The third group served as a control group and the children were given no training. The fourth group was in a town 60 miles away and was also used as a control group. The program was initiated to answer the question, "Is it possible to offset the progressive retardation usually observed in deprived children as the children progress in school?" The answer would depend upon the program. A carefully designed preschool program can offset progressive retardation. However, the

school cannot be expected to assume the entire task of providing adequate schooling for children from deprived circumstances.

Kamii (42) conducted a two year experimental preschool program, the Perry Preschool Project of Ypsilanti, Michigan. The program was designed to compensate for mental retardation associated with lower socioeconomic status. The experimental group attended a cognitively-oriented preschool five and one-half days a week. Each child visited with a teacher or participated once a week in a tutorial session which lasted for one and one-half hours. The father and mother met once a month with the teacher. The children spent one year in the three-year old group and one year in the four-year old group. Each fall a new experimental and control group consisting of approximately 12 children were added to the program. By 1965, 20 experimental children had completed the program. At the end of the first year the experimental group scored significantly higher on the Peabody Picture Vocabulary Test than the control group. At the end of two years the experimental group again performed at a significantly higher level than did the control group. Scores for the control group declined on the Peabody Picture Vocabulary Test at the end of the second year. The test highlights deficiencies in vocabulary and language development of children who do not attend preschool. The children's score on the California Achievement

Test indicated that the experimental group benefited from schooling and came close to the level of intelligence of middle-class children of the same age. The control group had difficulty in learning what was taught in school. The experimental group's attention span was improved; moreover, relationships with the teacher and social adjustment with peers were more effective. Children in the experimental group indicated a better cognitive foundation to absorb the material taught in the classroom. The experimental groups rated as having more friends and appeared to be generally happier. Underachievement on the California Achievement Test by the control group indicated that educational problems of deprived population groups may not be due to low intelligence but rather to the inability of these children to use their intelligence to absorb instruction.

Beller (4) found lower-class disadvantaged nursery school children performed below middle-class peers on intellectual tasks. Children studied performed consistently below average on a wide variety of language functions on The Illinois Test of Psycholinguistic Abilities. The children performed, according to the Auditory-Vocal Sequencing Subtest, better than was to be expected in respect to chronological age. Test results revealed the specific areas of greatest weakness and the areas of greatest strength. Beller also found that lower-class children, particularly boys, do not

experience stability in relationship with parents. The study shows that lower-class disadvantaged children differ from the middle-class children in personality dynamics; therefore, educational objectives and methods applied to middle-class children will be ineffective if used without modification for lower-class children.

## CHAPTER III

### P R O C E D U R E

#### PURPOSES OF THE STUDY

The purposes and procedures of the present study were mainly concerned with the effectiveness of an enrichment program for culturally deprived children. All areas of growth--physical, mental, social, and cognitive--must be considered. Psychologists Piaget (60), Bruner (13), and Hunt (39) stated that the roots of intellectual curiosity are laid early in life, thus emphasizing the importance of a compensatory program to help the child achieve his estimated potential. These research workers believe the public has vastly underestimated the culturally deprived children's ability to learn.

The purposes of the present study were twofold: 1) to preview recent research on culturally deprived children and on compensatory programs that are in operation at the present and 2) to evaluate and compare the effectiveness of two Head Start Programs, one organized in 1964 and one in 1968. A day Care Center that offered custodial care only was used as a control group.

The specific purposes developed to guide the present study were as follows:

- 1) To determine and compare the intelligence quotients of children attending three programs.
- 2) To test the listening comprehension ability of preschool children.
- 3) To test the preschool children's use of oral language.
- 4) To evaluate the progress or non-progress of the children participating in the study by means of a pretest and retest procedure.

The long range purpose of the study was to delineate some weaknesses of culturally deprived children in order to determine areas needing emphasis in a curriculum for a compensatory program.

#### THE SAMPLE

The experimental groups for the present study consisted of 50 preschool children enrolled in two Head Start Programs. Head Start Group I, located in Waco, Texas, was established in 1964. The program is a full-year Head Start Program funded by the Office of Economic Opportunity of the Federal Government. The program is primarily for children from age three years to the age when the child enters public school. Older children who have not entered school may be included if it has been determined that the program is appropriate for the child's needs and that the child is not presently attending public school.



At least 90 per cent of the children enrolled in a Head Start Program must be eligible under the family income standards set by the Government. The poverty index, as outlined by the Office of Economic Opportunity (35), shows those families which are considered to fall below the poverty line. (See Appendix A.)

Once a child enters the program he remains eligible until he becomes of age to enter public school. Children from a family that is on welfare are considered eligible even though the family income may exceed the poverty scale. Children of military personnel are entitled to the program if the total pay and allowances are within the eligibility guidelines.

The Office of Economic Opportunity requires that there be a door-to-door recruitment process which systematically selects the children from the most disadvantaged homes and encourages enrollment of eligible children from all races, colors, creeds and national origins. The community is permitted to determine the children who may be recruited into the program to form the remaining 10 per cent of the total enrollment.

The Waco Head Start Child Development Program consisted of 10 centers located in lower-income neighborhoods of the

city. Children from two Waco Centers participated in the study: the River Oaks Center and the New Hope Center. Each center accommodated 60 children ranging in age from four years 10 months through six years at the time the present study was initiated. The staff consisted of one director, three teachers, three aides, and two cooks. Four additional aides were supplied through the Concentrated Employment Program.

The centers opened at 7:00 A. M. and the children received breakfast. A compensatory curriculum was planned for all the centers by a central committee that met once a week and was composed of two members from each center and the two directors of the overall program.

At each Head Start Center the children were divided into groups according to age. Each group was limited to 15 children. The groups were provided with different play equipment and educational materials, but each was given a variety of typical nursery school materials and equipment. The Child Development Center program varied from day to day.

The second Head Start Child Development Center participating in the study was located in McKinney, Texas. This center opened in September, 1968. The program was funded by the Office of Economic Opportunity and was located in a grade school that was not used by the city schools at the time of the study. The children were picked up in front of their

homes by a bus in time to arrive at school by 9:00 A. M. The program was in operation from 9:00 A. M. to 2:00 P. M. At 2:00 P. M. the children were transported by bus to their homes.

The 100 children who participated in the program at McKinney, Texas, were selected through use of the Poverty Rating Scale (35). The children were divided into groups according to ages, with two groups of four-year old children and three groups of five-year old children. In September, 1968, the staff consisted of one director, five teachers, five aides, and two cooks.

The curriculum for the second Head Start Group was very structured and was similar to that offered at the first grade level. A snack was offered in the morning and a short rest period was observed following lunch. Children sat in small chairs and rested their heads on the table during the rest period.

The 25 children of the Control Group were enrolled in the Tabernacle Baptist Church and Day Care Center located in Dallas, Texas. The Day Care Center is located in the heart of West Dallas, a low income neighborhood. The center has been established for 20 years and is supported by the community. Some of the children were residing nearby and walked to school, some were picked up by a bus furnished by the Day

Care Center, and others were brought by their parents. A key attached to the clothing of some of the children provided the child a way to enter the house before the parents arrived home from work in the evening.

The building consisted of one large room, a small room used as an eating area, a small kitchen, and bath room facilities. Baby beds were provided in the church library as sleeping quarters for the children under two years of age. The other children were provided with individual cots for the afternoon rest period. Custodial care was provided for the children; but no planned, structured program was provided.

#### THE INSTRUMENTS

Three instruments were administered to collect information considered necessary to achieve the purposes of the study. The standardized instruments used were 1) The Peabody Picture Vocabulary Test, Forms A and B (23), 2) Language Facility Test (18), and 3) The Cooperative Primary Listening Test, Form 12A (2).

The Peabody Picture Vocabulary Test, Form A (23), was administered to all three groups of children as a pretest; Form B was administered as a retest five and one-half months later. The Peabody Picture Vocabulary Test developed by

Dunn was designed to furnish an estimate of the child's verbal intelligence through his hearing vocabulary. The test was given to each child in a room away from the other children enrolled in the two experimental groups. In order to insure as much privacy as possible in testing the Control Group, screens were set up in a corner of the room to provide a testing area. Three examples were shown to the children at the beginning of the actual testing to familiarize the children with the procedure. There was no time limit on the test. In case the child did not get the first six examples correct, the author reverted to easier questions in order that the child would have some experience of success. The Peabody Picture Vocabulary Test was administered to determine the intelligence quotient and the mental age of the children. Raw scores were converted to standard score equivalents (intelligence quotients) and age equivalents (mental age). The reliability coefficients for this test for age five and six years are 0.73 and 0.67, respectively.

The Language Facility Test (18) was administered in September, 1968, and again February, 1969. The instrument is a test of the ability to use oral language and provides a measure of language facility which is independent of vocabulary, information, pronunciation, and grammar. The test obtains a standardized sample of speech in 10 minutes or less by means

of having the children tell stories or describe a series of pictures. The test is a measure of how well a child uses language--the way he has been learning it. Dailey, the author of the test, regarded the test as a means of determining the child's ability to learn to read at a later age and as a tool useful for the early identification of the mentally retarded. The responses given by the child to each picture are scored on a nine-point scale according to the scoring criteria given on the test. The test was given to each child individually and scored by the present author and an assistant. In case of a difference in assessment of scores, a third party checked the tests.

In order to evaluate the three groups used in the study, The Language Facility Test (23) was given to test the oral language ability of the children. The test might be regarded as a test of the ability of the children to learn. The test was given to each child individually by having the child tell a story about a series of pictures. The test consists of three sets of pictures, each set containing three pictures. Each child was shown one set of three pictures, one at a time, and requested to tell a story about the picture. In each series of pictures, one picture was an actual photograph of preschool children with a teacher in a school for migrant farm workers. The teacher in the picture was Anglo-American

and the participating children were Anglo-American and Negro. The second picture in the series was drawn especially for the test and was free of background detail. The third picture in the series consisted of a scene by an old Spanish master and contained a maximum amount of shading and detail. The examiner used the following procedure:

- 1) What is your name?
- 2) How old are you?
- 3) Do you like to hear stories?
- 4) Could you tell me a story about a picture if I show it to you?
- 5) Good, tell me a story about this picture.  
If the child did not respond to the questions the examiner proceeded as follows:
- 6) Tell me what you see in the picture.
- 7) What are they doing in the picture?
- 8) What else can you tell me about the pictures?

The Language Facility Test can be administered by anyone experienced in association with children. Rapport is necessary to receive the best results. In testing five-year old children the entire response can be written instead of taped. The test is not timed, the children being given as much time as is needed.

The test scores indicated how well the individual was able to conceptualize and communicate in the chosen language.

The score is independent of vocabulary, enunciation, information, or grammatical exactness. The nine levels in the scoring of the test represent nine levels of maturity through which the child will progress as he grows in language development. According to Dailey (18), the author of the test, a five-year old child should be able to respond in single sentences. A mature five-year old child might be found to be functioning at the seven-year old level.

The test was scored in the following manner:

- 9....A well-organized story with imagination and creativity. Need not be original. May use well-known fictional or historical characters.
- 8....A complete story, but not a well organized one.
- 7....An interpretation of some elements of implied action or intentions, as deducted from or suggested by the picture but not a complete story.
- 6....A detailed description of what is happening, but nothing about past or future action or intentions. At level six all or nearly all of the elements of the picture will be covered, in contrast to level five where only some selected elements will be covered.
- 5....A partial description consisting of two or more sentences with some description of movement or action as seen in the picture.
- 4....Two or more sentences describing persons or objects but no verb of action or indication of interaction between a person and an object.
- 3....A complete sentence that makes sense.



2....Compound responses, two or more words at a time, a single word describing action, or more than one single-noun response.

1....One single noun response.

0....No response--garbled speech, or only pointing at picture.

The Cooperative Primary Listening Test, Form 12A (2), is one of six parts of the Cooperative Primary Test. The other five parts are the pilot test, word analysis, mathematics, reading, and writing skills. The listening section used in the present study tested the listening comprehension ability of the children. The "listening" referred to in the test includes comprehension, recall, and interpretation. Distinctions are made between concrete and abstract words on the basis of objects or entities the child can see, as opposed to ideas, composites, actions, or descriptions. The test was scored by subtracting the number of test items missed from the number of test items given.

Prior to the initiation of the main study, a pilot study was conducted to evaluate the effectiveness of The Language Facility Test (18) and The Cooperative Primary Listening Test (2). The tests were administered to 10 children in a Head Start Child Development Center located in Waco, Texas. The 10 children were of similar age and background as the children used in the main study. The tests were administered to each child individually in a separate

room away from the other children. To gain the child's confidence and to establish rapport, the author initiated the testing period by showing the children pictures other than those included in the testing. During this period the author conversed with the children. The children enjoyed the testing procedure and were reluctant to leave the room at the end of the testing period.

As a result of the pilot study the author formulated the procedure for administering the tests:

- 1) A need for shortening The Cooperative Primary Listening Test, Form 12A (2), was evident. During the pilot study the children began to lose interest and began to guess the answers before the author had completed the statements pertinent to the test. As a result, based on these observations, the test was shortened from 50 to 30 test items.
- 2) Rapport was quickly established by giving The Peabody Picture Vocabulary Test (23) preceding The Language Facility Test (18). The children were more responsive after The Peabody Picture Vocabulary Test than when the order of the procedure was reversed. The author found some of the children began to guess on The Cooperative Primary Listening Test (2) when it was given immediately following The Peabody Picture Vocabulary Test.
- 3) The children responded better if given encouragement; therefore, encouragement was frequently given.

### TECHNIQUES OF DATA ANALYSIS

The "t" test was used to analyze data pertinent to the study. A comparison of the scores made on the pretest and retest were calculated and compared for each group. The groups were compared with each other. Correlation coefficients were calculated to determine the relationship or non-relationship of the variables within each group.

## CHAPTER IV

### P R E S E N T A T I O N   O F   D A T A   W I T H A N A L Y S I S   A N D   D I S C U S S I O N O F   F I N D I N G S

The study included 75 preschool children enrolled in two Head Start Child Development Centers and in one Day Care Center. The experimental groups were composed of 50 preschool children enrolled in the two Head Start Centers in which a definite curriculum was presented. The curriculum of the Head Start Program was planned as an attempt to compensate for the deprivation experienced by the children. Emphasis was focused on specific learning tasks designed to remediate learning deficits by promoting language and cognitive development. The program provided an environment which stimulates as well as provokes responses, and instills as well as elicits responses.

The ages of the children participating in the study were six years of age or under as of September 1, 1968. The ages of the children tested ranged from 58 months to 74 months (four years, 10 months, to six years, two months). Head Start Group I was comprised of 25 preschool children ranging in age from 58 months to 74 months with a mean age

of 66.5 months. Group II, the second Head Start Group participating in the study, consisted of 25 preschool children ranging in age from 61 months to 74 months with a mean age of 67.2 months. The Control Group, children attending the Day Care Center of the Tabernacle Baptist Church in Dallas, Texas, was composed of 25 preschool children with an age range of 59 to 74 months, and with a mean age of 64.6 months. The age ranges and mean ages are shown below:

<u>Group</u>	<u>Age in Months</u>	
	<u>Range</u>	<u>Mean</u>
Head Start Group I	58-74	66.5
Head Start Group II	61-74	67.2
Control Group	59-74	64.6

The overall mean chronological age of the 75 preschool children was 66.1 months. Both Head Start Group I and the Control Group had one child slightly over six years of age. Head Start Group I included two children, a boy and a girl,

whose ages were four years and 10 months, the youngest children tested.

Age in Months	Group		
	Head Start I (N=25)	Head Start II (N=25)	Control (N=25)
57-58	2	0	1
60-61	2	1	6
62-63	7	5	6
64-65	1	5	3
66-67	2	3	3
68-69	0	2	0
70-71	3	4	3
72-73	7	3	2
74-75	1	2	1

The mean age for the 38 boys participating in the study was five years and five months. The mean age for the girls in the study was five years and six months. The mean age of the boys in the Control Group was 5.2 months younger than the boys in Head Start Group II and 3.2 months younger than the boys in Head Start Group I. (See Table I.) The mean age of the girls in all three groups was very similar. The three groups consisted of 37 girls and 38 boys. The Control Group, comprised of 15 boys and 10 girls, had a mean age for boys of 63.6 months and a mean age for girls of 66.1 months. The girls in Head Start Group II had a mean age of 66.8 months and the boys a mean age of 68.8 months. For Head Start Group I, the mean age was 66.0 months for the girls and 66.8 months for the boys.

TABLE I  
DISTRIBUTION OF CHILDREN PARTICIPATING IN  
THREE GROUPS ACCORDING TO AGES

Group	Age in Months	Girls	Boys	Mean Age	
		Number	Number	Girls	Boys
Head Start Group I (N=25)	58-65	7	6	66.0	66.8
	66-74	7	5		
Head Start Group II (N=25)	61-65	7	4	66.8	68.8
	66-74	6	8		
Control Group (N=25)	59-65	5	11	66.1	63.6
	66-74	5	4		

The "t" test was used to statistically compare the chronological ages of the three groups. The only significant difference was between Head Start Group II and the Control Group ( $P < .05$ ) (Table II). The mean age for Head Start Group II was significantly higher than the mean for the Control Group.

### INTELLIGENCE QUOTIENTS

All of the children were from homes in which the annual income did not exceed \$3,200.00. Zigler (82) found that when the level of development is controlled there will be a difference in cognitive processes related to the intelligence quotient. Zigler further pointed out that performance on any experimental task is not the inexorable product of the subject's cognitive structure alone, but is also influenced by a variety of emotional and motivational factors as well. In 1958 Zigler and Stevenson (79) completed a study which indicated the child's failure to succeed on numerous tasks was directly related to the reinforcement for success received at home. These authors stated that the low expectancy of success stems from a high incidence of failure experiences that cause the culturally deprived children to make lower scores on tests. The children participating in the study were members of families of the lower socioeconomic



level. The chronological age and sex composition of the 75 preschool children are given below:

<u>Group</u>	<u>Chronological Age</u>	
	<u>Mean</u>	<u>Standard Deviation</u>
Head Start Group I	66.5	5.2
Boys (N=12)		
Girls (N=13)		
Head Start Group II	67.2	4.3
Boys (N=12)		
Girls (N=13)		
Control Group	64.6	4.4
Boys (N=15)		
Girls (N=10)		

The means for intelligence quotients of the three groups on the initial test are

<u>Group</u>	<u>Intelligence Quotient</u>	
	<u>Mean</u>	<u>Standard Deviation</u>
Head Start Group I	80.4	13.1
(N=25)		
Head Start Group II	80.6	13.9
(N=25)		
Control Group	75.3	17.9
(N=25)		

Three children of 30 tested initially had dropped out of Head Start Group II by February and two children previously attending Head Start Group II could not be located for retesting. Two children from Head Start Group I and

three from the Control Group who participated in the pre-testing were eliminated because of lack of ability in verbal communication. Thus a total of 25 children in each of the three groups participated in the overall study.

The data relating to the intelligence quotients of the children participating in the study were determined by The Peabody Picture Vocabulary Test (23) which provided an estimate of the child's verbal intelligence by measuring hearing vocabulary. Table III shows the comparisons between results of the pretest given in September, 1968, and the retest given five and one-half months later in February, 1969.

The children enrolled in Head Start Group I had a mean intelligence quotient of 80.3 on the pretest and 82.4 on the retest, a gain of 2.1 points. For Head Start Group II the mean intelligence quotient was 80.6 on the pretest and 81.6 on the retest, a gain of one point on the retest. The children in the Control Group had a mean intelligence quotient of 75.3 on the pretest and 75.8 on the retest, a very small difference. The time between the test periods was too short a period to make a significant difference between the intelligence quotient scores as revealed by pretest and retest data.

The results of The Peabody Picture Vocabulary Test (23) highlights the generally low intelligence quotients of these

TABLE III  
ANALYSIS OF DIFFERENCES IN INTELLIGENCE QUOTIENTS  
OF THREE GROUPS OF CHILDREN AS REVEALED BY  
PRETEST AND RETEST SCORES ON THE PEABODY  
PICTURE VOCABULARY TEST

Group	Mean	Standard Deviation	"t" Value	Significance
Head Start Group I (N=25)				
Pretest	80.3	13.1	.5384	N. S.
Retest	82.4	12.5		
Head Start Group II (N=25)				
Pretest	80.6	13.9	.2566	N. S.
Retest	81.6	12.5		
Control Group (N=25)				
Pretest	75.3	18.0	.1106	N. S.
Retest	75.8	16.3		

culturally deprived children. Kamii and others (42) found that culturally deprived children, three or four-years old, who did not attend a preschool program, had more limited vocabularies than those who had attended a preschool program.

Head Start Group I included two girls whose intelligence quotients measured 101, the highest for this group. Four children, one girl and three boys, attending Head Start Group II had intelligence quotients over 100 (101, 101, 103 and 107). The Control Group included a girl whose intelligence quotient measured 111, the highest of any child in the entire study. One boy in the Control Group had an intelligence quotient of 100 and another boy had an intelligence quotient of 101. The intelligence quotients of the three groups ranged from 35 points to 111 points, a range of 77 points (Table IV).

Figures 1, 2, and 3 graphically depict the relationship between the chronological age and the intelligence quotient of the 75 preschool children. Children of Head Start Group I varied in age from 58 to 74 months. This group ranged in intelligence quotients from 50 to 101, a range of 51 points. The two youngest children of Head Start Group I were four years and 10 months of age. One, a girl, had an intelligence quotient of 104. The other, a boy, had an intelligence quotient of 83. The oldest child in this group was six years and two months old and had an intelligence quotient of 65.

TABLE IV  
ANALYSIS OF DIFFERENCES IN INTELLIGENCE QUOTIENTS  
OF THREE GROUPS OF CHILDREN AS REVEALED BY  
THE PEABODY PICTURE VOCABULARY TEST

Group	Mean	Standard Deviation	"t" Value	Significance
Head Start Group I (N=25)	80.4	13.1	.0701	N. S.
Head Start Group II (N=25)	80.6	13.9		
Head Start Group I (N=25)	80.4	13.1	1.086	N. S.
Control Group (N=25)	75.3	18.0		
Head Start Group II (N=25)	80.6	13.9	1.121	N. S.
Control Group (N=25)	75.3	18.0		

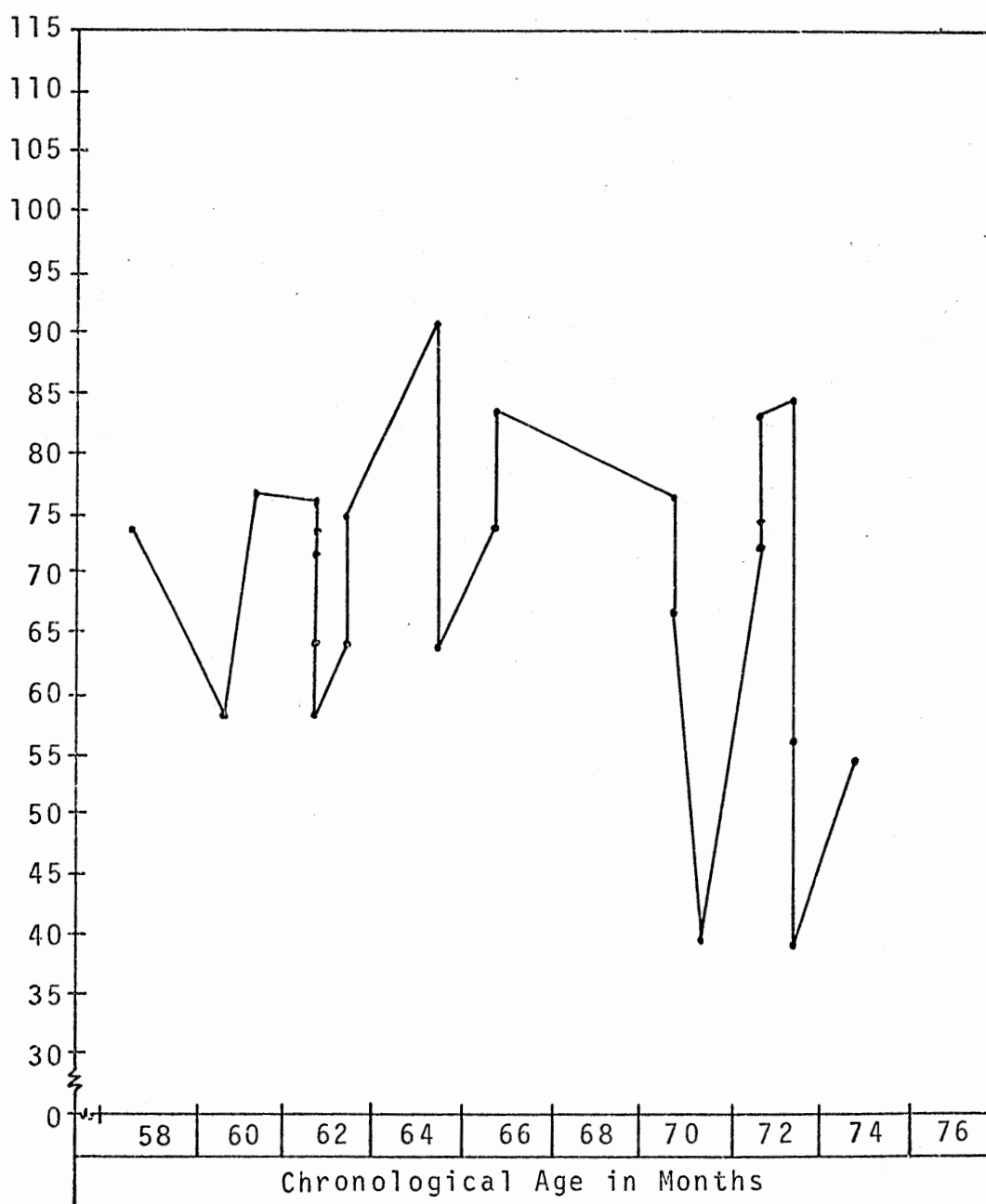


Figure 1

Distribution of Intelligence Quotients as Related  
to Chronological Age of 25 Preschool Children  
Enrolled in Head Start Group I

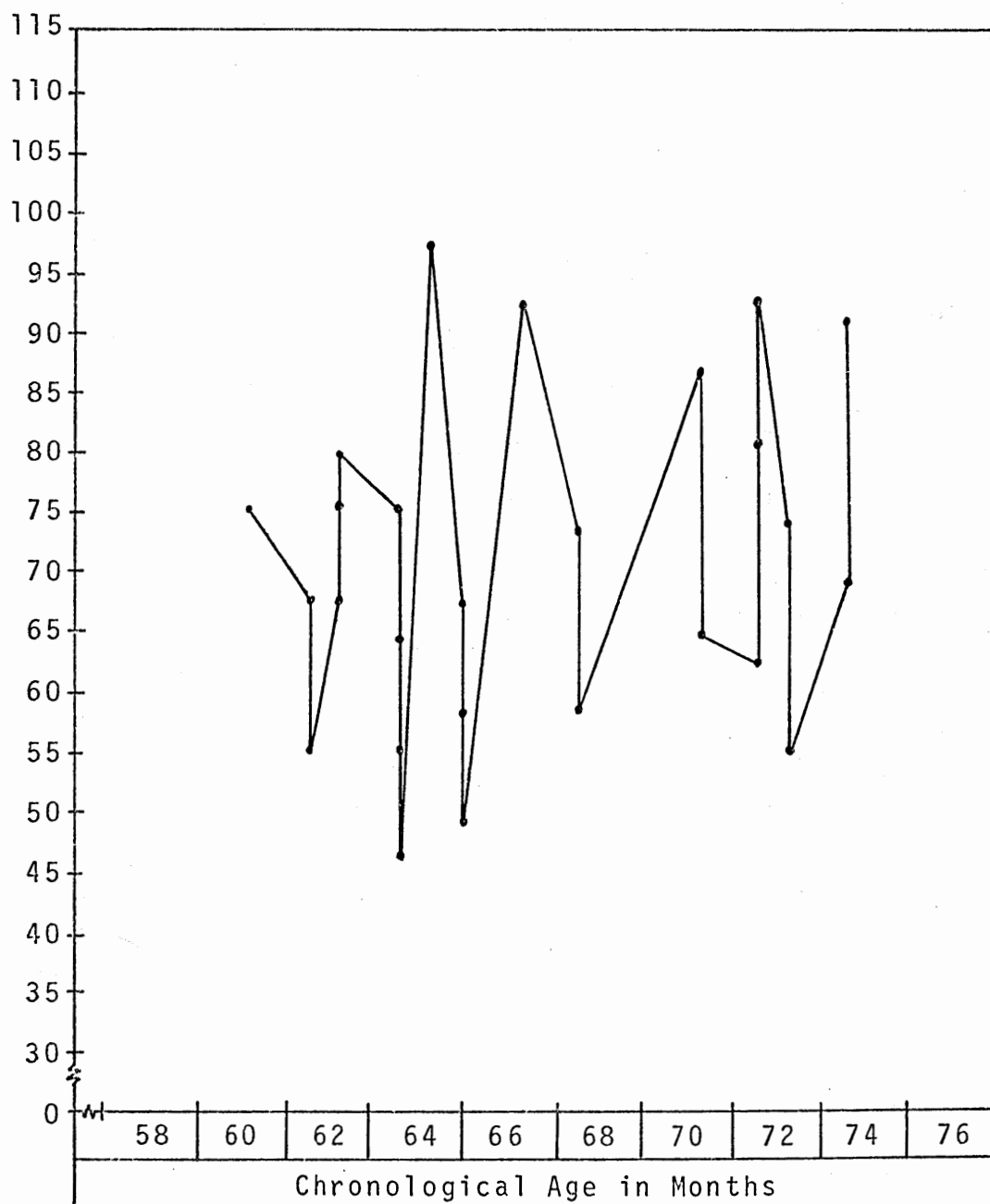


Figure 2

Distribution of Intelligence Quotients as Related  
to Chronological Age of 25 Preschool Children  
Enrolled in Head Start Group II

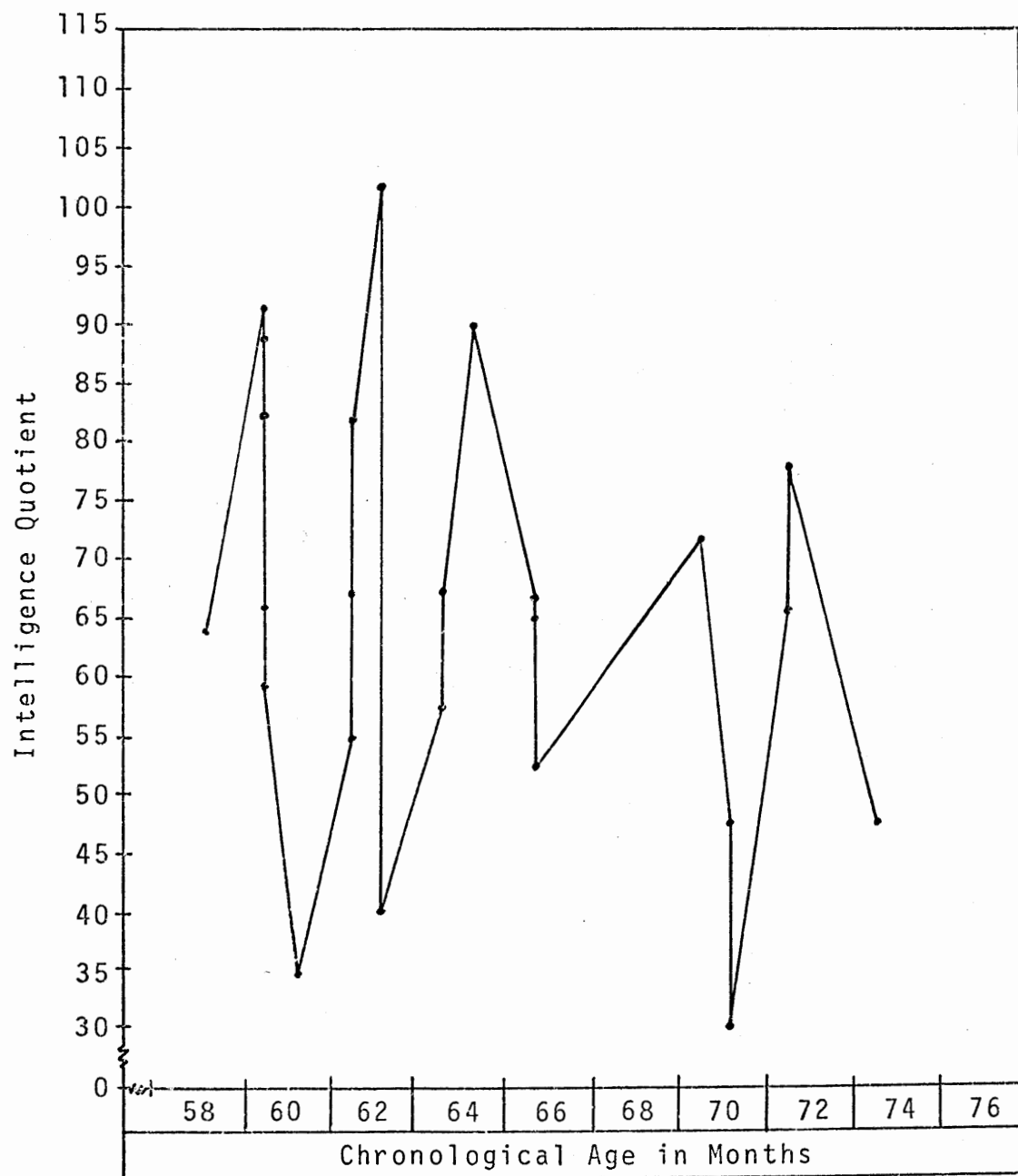


Figure 3

Distribution of Intelligence Quotients as Related  
to Chronological Age of 25 Preschool Children  
Enrolled in the Control Group



Children enrolled in Head Start Group II ranged in age from five years and one month to six years and two months of age. The intelligence quotients of this group ranged from 57 to 107 points, a difference of 50 points.

The children participating in the Control Group had an age range of 61 to 74 months. The intelligence quotients of the 25 preschool children participating in this group ranged from 35 to 111 points, a difference of 76 points. The range for this group was much greater than for the other two groups. The lowest intelligence quotient, a score of 35, was made by a child five years and 11 months of age.

The intelligence quotients were used to classify each of the children according to the following five learning categories as set forth by The Peabody Picture Vocabulary Test (23):

Very rapid learners. . . .	. Intelligence quotient of 125 or above.
Rapid learners . . . .	. Intelligence quotient of 110 to 124.
Average learners . . . .	. Intelligence quotient of 90 to 109.
Slow learners. . . . .	. Intelligence quotient of 75 to 89.
Very slow learners . . .	. Intelligence quotient below 75.

The data (Table V) revealed that 40 per cent of the children in the Control Group had an intelligence quotient below 75 points, classifying them as "very slow learners." For Head Start Group II, 36 per cent of the children were classified as "very slow learners"; for Head Start Group I, 32 per cent were classified in this category. The classification of "slow learner," representing an intelligence quotient of 75 to 89 points, accounted for 36 per cent of the children enrolled in the Control Group, 40 per cent of the children from Head Start Group II, and 48 per cent of the children from Head Start Group I. For Head Start Group II, six children 24 per cent, were classified as "average learners." Five children in each of the other two groups were categorized as "average learners." Only one child, a child from the Control Group, was classified as a "rapid learner," having an intelligence quotient of 111. None of the 75 children were classified as "very rapid learners." In a previous study conducted by the present author (69) in January, 1968, 43 per cent of the children tested in another of the child development centers located in Waco, Texas, were classified as "very slow learners" as determined by the scores on The Peabody Picture Vocabulary Test (23). In the previous study the mean age of the children was 71.3 months and the mean intelligence quotient, 80.4. The children participating in Head Start Group I of the present study,

TABLE V  
DISTRIBUTION OF CHILDREN PARTICIPATING IN THREE GROUPS  
ACCORDING TO CLASSIFICATION OF LEARNING ABILITY

Learning Classification	Intelligence Quotient	Children	
		Number	Per cent
<u>Very rapid learners</u>	125 and above		
Head Start Group I		0	0.0
Head Start Group II		0	0.0
Control Group		0	0.0
<u>Rapid learner</u>	110 to 124		
Head Start Group I		0	0.0
Head Start Group II		0	0.0
Control Group		1	4.0
<u>Average learners</u>	90 to 109		
Head Start Group I		5	20.0
Head Start Group II		6	24.0
Control Group		5	20.0
<u>Slow learners</u>	75 to 89		
Head Start Group I		12	48.0
Head Start Group II		10	40.0
Control Group		9	36.0
<u>Very slow learners</u>	Below 75		
Head Start Group I		8	32.0
Head Start Group II		9	36.0
Control Group		10	40.0

tested in September, 1968, were not the same children as were tested in January, 1968, but both groups were residing in the same community and attending Head Start Centers in Waco.

Table VI shows the results of the statistical analysis of the data related to mental age. The "t" test was used to determine the statistical significance between scores on the pretest given in September, 1968, and the retest given in February, 1969. Children of Head Start Group I had a mean mental age of 50.4 in September, 1968, and a mean mental age of 56.6 months on the retest given in February, five and one-half months later. This difference was significant at the .05 level of confidence.

The 25 preschool children enrolled in Head Start Group II had a mean mental age of 51.2 months on the pretest and a mean mental age of 58.1 on the retest, a difference that was non-significant. Weihart (76), in a survey of current preschool programs for disadvantaged children, pointed out the difficulty of making meaningful comparisons and evaluations of the preschool child.

The children enrolled in the Control Group had a mean mental age of 47.6 months on the pretest. The retest, given five and one-half months later, revealed a mean mental age of

TABLE VI  
ANALYSIS OF DIFFERENCES IN MENTAL AGES OF THREE GROUPS  
OF CHILDREN BY PRETEST AND RETEST SCORES ON THE  
PEABODY PICTURE VOCABULARY TEST

Group	Mean	Standard Deviation	"t" Value	Significance
Head Start Group I (N=25)				
Pretest	50.4	9.5	2.0452	P<.05
Retest	56.1	9.9		
Head Start Group II (N=25)				
Pretest	51.2	11.8	1.9538	N. S.
Retest	58.1	12.3		
Control Group (N=25)				
Pretest	47.6	12.8	1.2235	N. S.
Retest	51.9	10.7		

51.9 months, a difference of 4.3 months. This difference was non-significant.

Table VII discloses the statistical analysis of the data concerning differences between groups. The mean mental age for Head Start Group I was 50.3 months. The mean chronological age for this group was 66.5 months, a difference of 16.2 months. For Head Start Group II, the mean mental age was 51.2 and the mean chronological age, 67.2, a difference of 17.0 months. The "t" test was employed to determine the significance of the differences in the mental age for the three groups. There were no significant differences between the groups.

#### LANGUAGE FACILITY

Basic communication skills are essential for the child to succeed in school. McAfee (48) found the language deficit that exists when the child enters school not only tends to persist, but actually increases with each year that the child stays in school. Culturally deprived children need training in language development: learning words and phrases which describe their perceiving time, space, and size relationships. The children need experiences with things, places, and using materials. The deprived children's homes are

TABLE VII  
ANALYSIS OF DIFFERENCES IN MENTAL AGES OF THREE GROUPS  
OF CHILDREN AS REVEALED BY THE PEABODY  
PICTURE VOCABULARY TEST

Group	Mean	Standard Deviation	"t" Value	Significance
Head Start Group I (N=25)	50.2	9.5	.2920	N. S.
Head Start Group II (N=25)	51.2	11.8		
Head Start Group I (N=25)	50.2	9.5	.7835	N. S.
Control Group (N=25)	47.6	12.8		
Head Start Group II (N=25)	51.2	11.8	.9733	N. S.
Control Group (N=25)	47.6	12.8		

characterized by few objects, few pictures, few books, few magazines--a scarcity of everything except people and noise.

The language facility scores of the 75 preschool children participating in the study were determined by The Language Facility Test (18). The data were statistically analyzed by the use of the "t" test. Table VIII reveals the comparison between results of the pretest given in September, 1968, and the retest given in February, 1969, five and one-half months later.

The children enrolled in Head Start Group I had a mean language facility age of 62.0 months on the pretest and 61.6 months on the retest, a non-significant difference. The mean chronological age for the children enrolled in this group was 66.5 months. There was a difference of about four and one-half months between the language facility age and the chronological age of the children in this group. A score of six was the lowest score made by a child enrolled in Head Start Group I. This child's answers consisted of one sentence, compound responses and a single noun response.

The answers were as follows:

Picture 1 . . . Little boy, girl, another boy  
and another boy. They are  
playing.



TABLE VIII  
ANALYSIS OF DIFFERENCES IN LANGUAGE AGES OF THREE  
GROUPS OF CHILDREN AS REVEALED BY PRETEST AND  
RETEST SCORES ON THE LANGUAGE FACILITY TEST

Group	Mean	Standard Deviation	"t" Value	Significance
Head Start Group I (N=25)				
Pretest	62.0	39.8	.0423	N. S.
Retest	61.6	21.8		
Head Start Group II (N=25)				
Pretest	36.5	19.2	1.6319	N. S.
Retest	45.5	18.1		
Control Group (N=25)				
Pretest	50.8	29.8	.6992	N. S.
Retest	46.0	14.0		

Picture II. . . . A tree, a cloud, a lady.

Picture III . . . Dog, boy, house, little boy  
looking at the dog.

The highest score for a child from Head Start Group I was 20 points, made by a Negro boy. His answers were as follows:

Picture I . . . . The boy and the lady and the boy and the baby. They start to play. So many children I have to cry for at night.

Picture II. . . . Once upon a time there is a little boy and a mother and Jesus. A little baby wave at the dog and Jesus look at him.

Picture III . . . The cat and the boy looked at him and he saw three houses and he want to go in them. So he went in one and came out and locked the door and he went in another one and went out and come to the tree and said this is my house, this is my house.

Children enrolled in Head Start Group II had a mean language facility age of 36.5 on the pretest and a mean of 45.5 on the retest, a gain of 9.0 months. However, this gain on the retest was not sufficient to be significant.

Four children enrolled in the above group scored very low on the test; therefore, the language facility age for

these children, determined by the scoring method given in the Test Administrator's Manual for 1966, was zero. An example of the answers follows:

Picture I . . . . Girl, boy, girl.

Picture II. . . . Boy, basket, dog.

Picture III . . . . Cat, tree, house.

The highest score was made on The Language Facility Test (18) by a girl enrolled in Head Start Group II. The score was 12 and the answers were as follows:

Picture I . . . . Three boys, a girl, a lady, and another boy. Leaving their mama. Boy holding a book. Boy standing on the corner. Girl playing with mama. Mama holding her little girl.

Picture II. . . . Lady, little boy, dog and a hat and a man. Baby laying on the daddy. Daddy holding his knee up. Dog looking up. Mama looking up and holding her finger up.

Picture III . . . . Tree with a cat in it. Three houses, boy sitting down.

The Control Group had a mean language facility age of 50.8 on the pretest and 46.0 on the retest, a difference of 4.8 months. This difference between the two test scores was non-significant.

The lowest score on The Language Facility Test (18) by the children enrolled in the Control Group was six. Sixteen children or 64 per cent of this group made a score of six. An example of the type of answers given at this level follows:

Picture I . . . . A house.

Picture II. . . . A horse.

Picture III . . . A boy, a plane.

The highest score made by a child enrolled in the Control Group was 18. Her answers were as follows:

Picture I . . . . The boy going to school. The girl crying for her mother. The boy he was crying.

Picture II. . . . The little girl was playing with the dog. The little girl told the daddy to pick her up. The lady is fixing to feed the dog.

Picture III . . . The little boy was crying because he thought the cat was going to jump on him and scratch him, so he pointing at the cat and the cats going "Mew, mew."

A comparison of the language facility age of the three groups used in the study was analyzed by the use of the "t" test. Table IX indicates that there was a significant difference between the language facility age of the children enrolled in the two Head Start Groups ( $P < .01$ ). The mean language facility age for Head Start Group I was 62.0 months,

TABLE IX  
ANALYSIS OF DIFFERENCES IN LANGUAGE AGES OF THREE  
GROUPS OF CHILDREN AS REVEALED BY THE LANGUAGE  
FACILITY TEST

Group	Mean	Standard Deviation	"t" Value	Significance
Head Start Group I (N=25)	62.0	39.8	2.7681	P<.01
Head Start Group II (N=25)	36.5	19.2		
Head Start Group I (N=25)	62.0	39.8	1.0845	N. S.
Control Group (N=25)	50.8	29.8		
Head Start Group II (N=25)	36.5	19.2	1.9261	N. S.
Control Group (N=25)	50.8	29.8		

while the language facility age for Head Start Group II was 36.5, a difference of 25.5 months. The program for Head Start Group I was initiated in 1964. There is a possibility that some of the children of Head Start Group I that were participating in the study were enrolled in the program in the fall, 1967. This would possibly account for the higher score made by the children in Head Start Group I on The Language Facility Test (18). The program for Head Start Group II began in September, 1968; therefore, the children apparently had not attended a Head Start Program before that date. The differences between the groups were non-significant in each comparison.

#### LISTENING ABILITY

Inability to make auditory discrimination of speech sounds has been found to be one of the most important frequently occurring factors in poor reading. Clark (14) found a significant deficiency in auditory discrimination in culturally deprived children. The deprived child's experiences have often been limited as a result of the restricted use of language in the deprived home.

Riessman (66) found that culturally deprived children tend not to listen to adults. Parents and children seldom converse together except to exchange particular information or to give commands. The children do not know how to

concentrate in a classroom situation. The author stated the children have to be taught to listen.

The present author used The Cooperative Primary Listening Test (2) to test a skill basic to future development in reading. The test is designed to include comprehension in the types of situations the child will meet every day. The test distinguishes between concrete words and abstract words. The test provides the teacher with a measure of the child's skill and concepts basic to future development in reading.

The 75 preschool children in the study were tested individually. Each child was given a pretest in September, 1968, and a retest in February, 1969, five and one-half months later. To establish greater rapport, The Cooperative Primary Listening Test (2) was given following The Peabody Picture Vocabulary Test (23) and The Language Facility Test (18). Since there was no time limit on the listening test, the child was given ample time on each item of the test.

The instructions for the test were as follows:

We are going to play a listening game. I will read something to you and you show me the picture that goes best with it. Sometimes it will not be so easy.

Previous to the actual administration of the test, the child is shown the first row of pictures. The examiner says,

Now let's begin. Look at the pictures. Which picture goes best with the word "fly"? A bird flies, so the picture of the bird goes best with the word "fly."

Following this sample test item the examiner proceeds with the actual test by saying, "Now look at the next row of pictures. I am going to say a word. Show me which picture goes best with the word."

The pilot study revealed the complete test of 50 questions was too long for the children participating in the study. As a result, the test was shortened to 30 questions. The child's listening score was determined by subtracting the number of questions missed on the test from the total number of questions used in the testing. Questions 1, 2, 3, 5, 6, 10, 11, 12, and 14 required a concrete word for the answer, for example:

The examiner pronounced the word "artist."  
The three pictures given for the child to choose from consisted of an artist, a policeman, and a secretary. After the completion of the



fifteenth question the examiner said,

Now I am going to read some sentences. Listen very carefully to each one because I am going to read it just once. Show me the picture that goes best with it. (Emphasis is given to the word.)

Six of the sentences in the last half of the test, sentences 16, 17, 18, 21, 23, and 25, demonstrate the child's ability to grasp the comprehension of the sentence. Sentences 19, 20, 22, and 24 test the child's ability to interpret the meaning of sentences.

Analysis of the differences in the listening ability of the three participating groups was determined by the use of the "t" test (Table X). Head Start Group I had a mean listening score of 15.8 points on the pretest and 14.2 points on the retest, a difference of 1.6 points. The statistical analysis failed to indicate a significant difference. Head Start Group II had a mean listening score of 14.2 points on the pretest and 12.6 points on the retest, a difference that was significant ( $P < .05$ ). Differences between pretest and retest means for the Control Group were non-significant with a mean listening score of 14.0 on both the pretest and the retest.

Data concerning the listening ability of the 75 pre-school children were analyzed according to differences between groups (Table XI). Differences between groups were

TABLE X  
ANALYSIS OF DIFFERENCES IN LISTENING ABILITIES OF  
THREE GROUPS OF CHILDREN AS REVEALED BY PRETEST  
AND RETEST SCORES ON THE COOPERATIVE  
PRIMARY LISTENING TEST

Group	Mean	Standard Deviation	"t" Value	Significance
Head Start Group I (N=25)				
Pretest	15.8	3.2	1.6400	N. S.
Retest	14.2	3.0		
Head Start Group II (N=25)				
Pretest	14.2	2.8	2.0229	P<.05
Retest	12.6	2.5		
Control Group (N=25)				
Pretest	14.0	3.3	.0930	N. S.
Retest	14.0	2.5		

TABLE XI  
ANALYSIS OF THE DIFFERENCES IN LISTENING ABILITIES  
OF THREE GROUPS OF CHILDREN AS REVEALED BY THE  
COOPERATIVE PRIMARY LISTENING TEST

Group	Mean	Standard Deviation	"t" Value	Significance
Head Start Group I (N=25)	15.8	3.2	1.8023	N. S.
Head Start Group II (N=25)	14.2	2.8		
Head Start Group I (N=25)	15.8	3.2	1.8975	N. S.
Control Group (N=25)	14.0	3.3		
Head Start Group II (N=25)	14.2	2.8	.2215	N. S.
Control Group (N=25)	14.0	3.3		

non-significant. Head Start Group I had a mean listening score of 15.8; Head Start Group II had a score of 14.2, and the Control Group had a mean listening score of 14.0. Almy (1) found

Young children are notoriously erratic in their responses in almost any sort of testing situation. This fact could impose serious limitations in interpreting the data gained from the interview. Further complexities arise from the difficulty of determining whether a change in response from one interview to another represents random behavior in one or both situations, learning attributable to practice, a consequence or maturation, or some combination of these factors.

Passow (58) theorized that early childhood education programs that are narrowly focused or designed primarily for acceleration in a particular area will have little beneficial effect on later intellectual development. In order for the curriculum to benefit a particular group of children, the teacher needs to know as much as possible concerning the child's ability.

The responses of the children enrolled in the two Head Start Centers and a Day Care Center as to recognition of concrete words and abstract words and sentence comprehension were determined by The Cooperative Primary Listening Test (2).

The examiner made a statement that the child answered by pointing to one of three pictures. The examiner said, "I'm going to say a word. Point to the picture that goes best with it." For example, the sentences required one of the concrete words listed below for an answer:

tree	bandage
horse	pebbles
ocean	magnet
web	grain
artist	

The range of correct answers for the 75 preschool children enrolled in the three groups is shown below.

Number of Correct Responses	Groups		
	Head Start I (N=25)	Head Start II (N=25)	Control (N=25)
0-1	4	0	0
2-3	11	1	7
4-5	9	12	12
6-7	1	10	5
8-9	0	2	1

In Head Start Group I, four children recognized one or less words. Eighty-five per cent of the 25 children enrolled in this group recognized from two to five words. The total number of correct responses for this group was 76 or 33 per cent of the total 225 possible points.

In Head Start Group II, no child recognized less than two words and only one child was in the range of two to three correct responses. Eighty-eight per cent of these children recognized from four to seven words. Two children were classified in the range of from eight to nine correct responses. The children of Head Start Group II knew 142 or 63 per cent of the correct answers.

No child in the Control Group was in the range of from zero to one but 76 per cent of the children ranged from two to five correct responses. For this group five children ranged from six to seven correct words and one child knew eight correct responses. The total score for the Control Group was 133 words or 59 per cent of the total possible correct answers.

A comparison of the scores made on The Cooperative Primary Listening Test (2) concerning the concrete words, the abstract words, and the comprehension of sentences is shown in Table XII. The children of Group I had a total score of 76 or 33 per cent of the scores right out of a possible 225 points on the pretest, and 115 or 51 per cent correct on the retest, a gain of 18 per cent. The children of Head Start Group II had a total of 142 points or 63 per cent of the answers correct on the pretest and 154 or 68 per cent of the answers correct on the retest, a gain of 5.0 per cent. The Control Group had 133 or 59 per cent of the

TABLE XII  
ANALYSIS OF DIFFERENCES IN COMPREHENSION OF THREE  
GROUPS OF CHILDREN AS REVEALED BY PRETEST AND  
RETEST SCORES ON THE COOPERATIVE  
PRIMARY LISTENING TEST

Group	Test Area		
	Concrete Words	Abstract Words	Sentences
Head Start Group I (N=25)			
Pretest	76	76	51
Retest	115	80	54
Head Start Group II (N=25)			
Pretest	142	63	52
Retest	154	67	53
Control Group (N=25)			
Pretest	133	72	15
Retest	135	80	30

of the answers correct for the concrete words on the pretest and 135 or 60 per cent on the retest. This represents a gain of 1.0 per cent on the retest. Children of Head Start Group I made the lowest total score on the pretest but this group made a much larger gain on the retest than either of the other two groups.

Table XIII shows the comparison of the results of The Cooperative Primary Listening Test (2) according to the number of concrete and abstract words and sentence comprehension of the three groups. Children of Head Start Group I had the lowest score, 76, for concrete word recognition. For Head Start Group II, the score was 142, and for the Control Group the score was 133. Since children of all groups were from the lower socioeconomic level, it is difficult to determine why the total score for one group was so much lower than for the other two groups.

The three groups made similar scores on the sentences requiring abstract words for answers. Children of Head Start Group I had a total score of 76 or 50 per cent out of a possible 150 points. Head Start Group II had a score of 63 or 42 per cent. The Control Group had a score of 72 or 48 per cent. Children of Head Start Group I had 8.0 per cent more correct answers than did children of Group II and 20 per cent more correct responses than did those in the Control Group.



TABLE XIII  
ANALYSIS OF DIFFERENCES IN COMPREHENSION OF THREE  
GROUPS OF CHILDREN AS REVEALED BY THE  
COOPERATIVE PRIMARY LISTENING TEST

Groups	Concrete Words	Abstract Words	Sentences
Head Start Group I (N=25)	76	76	51
Head Start Group II (N=25)	142	63	52
Head Start Group I (N=25)	76	76	51
Control Group (N=25)	133	72	15
Head Start Group II (N=25)	142	63	52
Control Group (N=25)	133	72	15

Analysis of sentence comprehension revealed that children of Head Start Group I had 51 or 34 per cent of the answers correct out of a possible 150 points. For Head Start Group II, the number was 52 or 34.6 per cent; and for the Control Group the number was 15 or 10 per cent. Very little difference was shown between the two Head Start Groups.

#### ETHNIC GROUPS

A comparison of the three ethnic groups participating in the study was made to denote the differences between intelligence quotients, language facility ages, and listening abilities of the three groups. Children enrolled in Head Start Group I and the Control Group were all of the Negro race. Head Start Group II was composed of three ethnic groups, Spanish-American, Anglo-American, and Negro as shown below:

<u>Ethnic Group</u>	<u>Sex</u>	
	<u>Boys</u>	<u>Girls</u>
Spanish-American	4	6
Anglo-American	6	1
Negro	2	6

Therefore, only the children enrolled in Head Start Group II were used for comparison between ethnic groups.

Six girls and four boys were of Spanish-American descent. Six boys and one girl were of Anglo-American heritage, and six girls and two boys were of Negro descent. Table XIV shows a comparison between the pretest and retest mean scores of the three ethnic groups.

The 10 Spanish-American children had a mean intelligence quotient of 75.3 points on the pretest and 76.7 points on the retest given five and one-half months later. This was a gain of 1.4 points for the five and one-half month period. The mean language facility age on the pretest for this group was 38.8 points and 38.0 on the retest. The mean listening score on the pretest was 13.3 points and 11.4 points on the retest, a difference of 2.9 points.

The Anglo-American children participating in the study, one girl and six boys, had a mean intelligence quotient on the pretest of 85.0 points and 88.8 points on the retest, a gain of 3.9 points for the five and one-half months between test periods. The language facility age of Anglo-American children was 32.8 points on the pretest and 55.7 points on the retest, a difference of 12.9 points. The mean listening score for this group was 17.7 on the pretest and 13.7 on the retest, a difference of four points.

TABLE XIV  
 DIFFERENCES IN MEAN SCORES FOR INTELLIGENCE QUOTIENT,  
 LANGUAGE AGE, AND LISTENING ABILITY OF 25 PRESCHOOL  
 CHILDREN PARTICIPATING IN HEAD START GROUP II  
 ACCORDING TO ETHNIC GROUPS

Race	Intelligence Quotient	Language Facility Age	Listening
Spanish American (N=10)			
Pretest	75.3	38.8	13.3
Retest	76.7	38.0	11.4
Anglo American (N=7)			
Pretest	85.0	32.8	17.7
Retest	88.8	55.7	13.7
Negro (N=8)			
Pretest	83.5	36.8	13.6
Retest	81.5	45.3	13.2

The mean intelligence quotients of the Negro children, six girls and two boys, was 83.5 points in September, 1968, and 81.5 points on the retest given in February, 1969, a difference of two points. The Negro children had a mean language facility age of 36.8 months on the pretest and 45.3 months on the retest, a difference of 8.5 months. The listening score for this group was 13.6 points on the pretest and 13.2 points on the retest.

All of the participating children enrolled in Head Start Group II were from culturally deprived homes. The comparison of the intelligence quotients of this group are shown below:

<u>Ethnic Group</u>	<u>Mean Intelligence Quotient</u>
Spanish-American (N=10)	75.3
Anglo-American (N=7)	85.0
Negro (N=8)	83.5

Poussaint (63) found a large group of Negro youth and their parents had high educational and occupational aspirations which were not manifested in achievement levels. The author found that Negro persons have managed to achieve little proficiency in forms of behavior rewarded by white culture. Differences in intelligence test performances were

attributed to this factor rather than to inherent differences in intelligence.

Nimnicht (52) found that Spanish-American children tend to fall further and further behind in each grade until they drop out of school. The most critical years of human development are the early ones. The author found that the seeds of creativity, inquiry, critical thinking, effective problem solving, independence, emotional stability, and security were planted and cultivated during the early years. By providing the "New Nursery School" for these children, Nimnicht expects the two-year program of training to do more than give the children an advantage in the first few grades. The anticipated results will actually increase the child's ability to learn and make him more capable throughout life.

Bereiter (6) found that a five-year old child with an intelligence quotient of 85 may be said to be about nine months retarded in the overall relevant learning. An intelligence quotient of 90 at the age of five represents six months' retardation and an intelligence quotient of 95, three months' retardation. The children enrolled in Head Start Group II had a mean chronological age of 67.2 months, five years and seven months. According to Bereiter's findings (5) and the intelligence quotient of the children, the children

participating in the present study are considerably below the normal children of the same age group.

#### RELATIONSHIP BETWEEN VARIABLES

Correlation coefficients were calculated to determine the possible relationship between factors investigated within the three groups. Tables XV, XVI, and XVII show data analysis for the 75 preschool children enrolled in the three groups. For Head Start Group I five correlation coefficients were significant: intelligence quotient and listening ability ( $P < .05$ ), intelligence quotient and the knowledge of abstract words ( $P < .05$ ), intelligence quotient and the knowledge of abstract words ( $P .05$ ), listening ability and ability to comprehend the meaning of sentences ( $P < .05$ ), and listening ability and the knowledge of concrete words ( $P < .01$ ). In all of the above calculations the correlation coefficients were positive, indicating that higher intelligence quotients were associated with greater listening ability and knowledge of abstract words. As the child's listening ability increases, the knowledge of concrete words and the ability to comprehend sentences also increases. A significant negative correlation was found between the language age of the child and the knowledge of abstract words ( $P < .05$ ).

TABLE XV

COEFFICIENTS OF CORRELATION BETWEEN VARIABLES FOR HEAD START GROUP I

Variables	Intelligence Quotient	Language Facility	Listening Ability	Concrete Words	Abstract Words	Sentence Comprehension
Chronological Age	-.2553	.1982	.2463	.1983	-.1202	.3160
Intelligence Quotient		-.0496	.3619*	.0264	.4268*	-.1504
Language Facility			.0719	.1615	-.3414*	.2110
Listening Ability				.5473**	.1472	.4181*
Concrete Words					-.1434	.0102
Abstract Words						-.1485

\*Significant at .05 level

\*\*Significant at .01 level



TABLE XVI  
COEFFICIENTS OF CORRELATION BETWEEN VARIABLES FOR HEAD START GROUP II

Variables	Intelligence Quotient	Language Facility	Listening Ability	Concrete Words	Abstract Words	Sentence Comprehension
Chronological Age	.3683*	.3880*	.0382	.3152	.1697	.0771
Intelligence Quotient		-.3752*	.2035	.5018**	.2389	.2284
Language Facility			-.3506*	-.1043	.0870	-.1806
Listening Ability				.3431*	.2029	.0788
Concrete Words					.1122	.2713
Abstract Words						.1238

\*Significant at .05 level

\*\*Significant at .01 level

TABLE XVII

COEFFICIENTS OF CORRELATION BETWEEN VARIABLES FOR THE CONTROL GROUP

Variables	Intelligence Quotient	Language Facility	Listening Ability	Concrete Words	Abstract Words	Sentence Comprehension
Chronological Age	-.3236	.2467	.1382	.2126	.2808	.1814
Intelligence Quotient		.0524	.1923	-.1881	-.2377	.2406
Language Facility			-.2541	-.0834	.0488	.0580
Listening Ability				.6535**	.0280	.4245*
Concrete Words					.1834	.0586
Abstract Words						.1822

\*Significant at .05 level

\*\*Significant at .01 level

For Head Start Group.II four correlation coefficients were significant, all positive: chronological age and language age ( $P<.05$ ), intelligence quotient and the knowledge of concrete words ( $P<.01$ ), and listening ability and the knowledge of concrete words ( $P<.05$ ). The data indicate that older children were able to use language more fluently. The higher the intelligence quotient of the child, the greater the child's knowledge of concrete words. Listening ability was related to the children's knowledge of concrete words. The data revealed significant negative correlations between the language age and the ability of the child to listen ( $P<.05$ ) and between intelligence quotient and language facility.

Data analysis for the Control Group revealed two correlation coefficients that were significant, both positive: the listening ability of the children and the children's ability to recognize concrete words ( $P<.01$ ), and listening ability and ability to understand the meaning of sentences ( $P<.05$ ).

## CHAPTER V

### S U M M A R Y , C O N C L U S I O N S , A N D R E C O M M E N D A T I O N S

The study was concerned primarily with an enrichment program for 75 culturally deprived preschool children enrolled in two Head Start Child Development Centers, the Experimental Groups, and one Day Care Center as the Control Group. Data were gathered with a variety of test materials, including pictures of familiar toys and play activities and visual and auditory equipment. Basic oral communication skills, language development, concept formation, and motivation and learning sequences were measured.

The present study was based on a pretest administered in September, 1968, and a retest administered five and one-half months later in February, 1969. The study included three groups of preschool children: Head Start Group I, consisting of 25 culturally deprived children enrolled in a Head Start Child Development Center started in 1964 in Waco, Texas; Head Start Group II, composed of 25 preschool children enrolled in a Head Start Child Development Center started in 1968 in McKinney, Texas; and the Control Group, consisting of 25 culturally deprived preschool children enrolled in

the Tabernacle Baptist Church Nursery and Day Care Center located in Dallas, Texas.

The purpose of the study was to compare the three groups initially and following a period of five and one-half months. The following factors were investigated: 1) the progress made by the preschool children, 2) the intelligence quotients of the children, 3) the listening comprehension ability, and 4) the ability to use oral language.

Three instruments used to secure the data were 1) The Peabody Picture Vocabulary Test (23), 2) The Language Facility Test (18), and 3) The Cooperative Primary Listening Test (2). The Peabody Picture Vocabulary Test was given to determine an estimate of the child's mental age and intelligence quotient. The raw score made by the child on The Peabody Picture Vocabulary Test was used to provide an index of the level of development of the children.

The Language Facility Test (18) provided a measure of the language facility which is independent of vocabulary, information, pronunciation, and grammar. The Cooperative Primary Listening Test (2) evaluated understanding and ability to think in addition to memory and matching skills. The test determined the listening ability of the children.

The sample included 75 preschool children, 37 girls and 38 boys. The ages of the children ranged from 58 months to 74 months with a mean age of 66.1 months. Data analysis revealed the mean age (67.2 months) for children of Head Start Group II was significantly higher ( $P < .05$ ) than the mean age (64.6 months) for the Control Group.

The Peabody Picture Vocabulary Test (23) was used to procure pertinent data relative to determining the intelligence quotients of the children. The children enrolled in Head Start Group I had a mean intelligence quotient of 80.4 on the pretest and 82.4 on the retest, a gain of 2.0 points. The children attending Head Start Group II had a mean intelligence quotient of 80.6 on the pretest and 81.6 points on the retest, a gain of 1.0 points. The children enrolled in the Control Group had a mean intelligence quotient of 75.3 points on the pretest and 75.9 points on the retest. No group showed a significant change in intelligence quotients from one test period to the next as a result of cognitive achievement factors. Data indicate that the change in intelligence quotients that did occur in the short period of time was not a result of cognitive development, but rather an indication that by the end of the year the children would be capable of using their knowledge in a school situation. Failure to find a relationship between the initial

intelligence quotient and improvement following a Head Start experience is somewhat inconsistent with recent findings obtained in testing culturally deprived children. The results of the study suggest the low intelligence quotient scores of the children could be the result of the environment rather than heredity.

The Peabody Picture Vocabulary Test (23) was used to obtain pertinent data relative to the learning experiences of the children participating in the study. The learning ability of the children was classified into five categories according to the intelligence quotient scores made on the test. The Control Group had one child classified as a "rapid learner" with an intelligence quotient of 111. For Head Start Group II, 24 per cent of the children were classified in the "average learner" category, while for the other two groups 20 per cent of the children were classified as "average learners." The fourth category, "slow learner," accounted for 48 per cent of the children of Head Start Group I, 36 per cent of the children of Head Start Group II, and 40 per cent of the children of the Control Group. The classification of "very slow learner" accounted for 32 per cent of the children of Head Start Group I, 36 per cent of the children of Head Start Group II, and 40 per cent of the children of the Control Group.

The mental ages of the children participating in the study were determined by the raw scores made on The Peabody Picture Vocabulary Test (23). The children of Head Start Group I had a mean mental age of 50.3 months on the pretest and 56.1 months on the retest. The difference between the two means was significant ( $P < .05$ ). The children of Head Start Group II had a mean mental age of 51.2 months on the pretest and 58.1 months on the retest, a difference of 6.9 months. This difference was non-significant. For the Control Group, the mean mental age was 47.6 on the pretest and 51.9 months on the retest. The difference between the means was non-significant. The children participating in Head Start Group I had a mean chronological age of 66.5 months and a mean mental age of 50.3, a difference of 6.2 months. For Head Start Group II, the mean chronological age was 67.2 months and the mean mental age, 51.2, a difference of 6.0 months. The children of the Control Group had a mean chronological age of 64.6 months and a mental age of 47.6, a difference of 17.0 months. The data indicate a greater difference between chronological age and mental age for the Control Group than for either of the other two groups.

Language has been generally accepted as one of the crucial problem areas in the education of the culturally deprived child. In order to evaluate and plan a program, a



test of the ability to use oral language was needed. The Language Facility Test (18) was used to determine the language age of the child. The children of Head Start Group I had a mean language age of 62.0 months on the pretest and 65.6 on the retest. For Head Start Group II, the mean language age was 36.5 months on the pretest and 45.5 on the retest, a difference of 9.0 months. The children participating in the Control Group had a mean language age of 50.8 months on the pretest and a mean of 46.0 months on the retest. Since there was no planned structured program for the Control Group during the five and one-half months between the two testing periods, the mean language score did not improve on the retest. None of the differences between the pretest and the retest scores for language age were significant. The mean language age for Head Start Group II, the group organized in 1968, was significantly lower than that for Head Start Group I, started in 1964 ( $P < .01$ ). The mean for Head Start Groups I and II were not significantly different from that for the Control Group.

The results of The Cooperative Primary Listening Test (2) revealed a very slight loss in listening comprehension for all three groups between the pretest and the retest; however, the differences in scores were non-significant. Test results revealed the number of concrete and abstract words recognized by the children as well as sentence

comprehension. The children of Head Start Group I made the lowest score for concrete words on the pretest but showed the greatest gain on the retest. Some of the parents of the children in this group worked as aides in the center and possibly the mothers were beginning to recognize the importance of education for the children. There were no significant differences between the three groups insofar as the recognition of the abstract words was concerned. The low scores on the test emphasized the inability of the children to comprehend the meaning of sentences. The children of Head Start Group I had a mean score of 52 and the Control Group had a mean score of 15. The Cooperative Primary Listening Test (2) provides the teacher with a knowledge of the words and sentences that present the greatest problems in comprehension.

The three ethnic groups, Spanish-American, Anglo-American, and Negro, participating in Head Start Group II were compared. The data revealed that the Spanish-American children made the lowest mean score on the intelligence test, a mean of 75.3, and the Anglo-American children had the highest mean score, 85.0. The Anglo-American children showed a gain of 22.9 months on the language retest and the Negro children a gain of 8.5 months. There was a small loss for the Spanish-American children. Most of these children

hear Spanish spoken in the homes, whereas the teachers for the group were Anglo-American and the aides were Negro. The educational problems of these children may be attributed to the inability of the children to comprehend language used in the Head Start Program rather than to low intelligence.

The data were analyzed by the use of correlation coefficients to determine the relationship between variables within each group. The data revealed a significant positive relationship between the intelligence quotient and listening ability ( $P < .05$ ) and intelligence quotient and knowledge of abstract words ( $P .05$ ) for Head Start Group I. Intelligence quotient and knowledge of concrete words was highly significant ( $P < .01$ ) for Head Start Group II. Data revealed a significant negative correlation for Head Start Group I between language facility and knowledge of abstract words ( $P < .05$ ) and between intelligence quotient and language facility for Head Start Group II ( $P < .05$ ). Listening ability was the only variable that was significantly related to another variable within each of the three groups. For Head Start Group I, listening ability was shown as being highly related to knowledge of concrete words ( $P < .01$ ); for Head Start Group II, listening was significantly related to knowledge of concrete words ( $P < .05$ ). For both Head Start Group I and the Control

Group, a positive relationship between listening ability and sentence comprehension ( $P < .05$ ) was noted. The data indicated that the older children in Head Start Group II had higher intelligence quotients and more use of oral language. The listening ability was found to be significantly related, in a positive direction, to the concrete word comprehension for all three groups.

Conclusions based on information compiled from the study disprove the hypothesis that the culturally deprived preschool children enrolled in Head Start Group I would show a greater improvement during the five and one-half months interval than would either the children of Head Start Group II or the children enrolled in the Control Group. The data revealed similar mean intelligence quotients for each group considerably below the mean intelligence quotient of middle-class children as determined by the author in an earlier study (69).

Analysis of the data led to the inference that there was no significant difference between the groups either initially or at the conclusion of the study. The results can be viewed as: 1) failure of a five and one-half month training period in the Head Start Programs as an effective intervention force in the lives of the experimental children, 2) failure of the measuring instruments to register

differential changes in functioning over a five and one-half month period, 3) evidence of too short an interval between the pretest and retest periods, and 4) failure to utilize instruments inclusive enough to measure the effectiveness of a Head Start Program.

The tests revealed the specific area of greatest weakness of the children. The data indicated the children needed opportunities for sensory experiences with objects and people to enable the children to bring all of their senses into play in order to get accurate perception. The children need experiences in connecting objects to words in order to build a verbal framework to express feelings and experiences. Numerous experiences in listening are desirable to foster curiosity and enlarge the children's experiences. Training to increase the appropriate vocabulary might considerably facilitate the later development of logical thinking of the child.

Although forced to reject the research hypothesis as especially applied to the study and the Head Start Program, the author does not reject the general hypothesis concerning the value of a Head Start Program. There are implications that the lower socioeconomic children respond to specific teaching techniques and that compensatory programs should start earlier and continue for a longer period of time.

There is still a need for research concerning the nature-nurture interaction and the most efficient period to begin intervention.

The following factors should be considered before culturally deprived children can be evaluated:

- 1) Each effort of the child should be encouraged.
- 2) Each child needs more individualized attention than the middle-class child.
- 3) The goals of the Head Start Program are not the achievement of independence and self-reliance but of interaction and of learning to be a person who has value.
- 4) In testing children from subgroups the examiner should consider that the child might have very little motivation to do well in most test situations, while under certain conditions or special kinds of materials the child might have a relatively high level of motivation. The culturally deprived child's score might be difficult to reconcile and interpret.
- 5) A culturally deprived child may show a considerable degree of verbal facility in oral communication with his peers but make a very low score on a test that stresses academic vocabulary.
- 6) More use should be made of everyday behavior as evidence of the abilities and competences of children from disadvantaged homes.
- 7) The predicted validity of test scores for culturally deprived children is dependent upon an adequate understanding of the social and cultural backgrounds of the children.
- 8) A child is more apt to respond favorably to a test situation if the test is administered by an adult with whom he has had prior positive experiences.

The author recommends that more research be conducted in the area of the influence of family background on the child's language patterns and his academic achievement. Additional research should be undertaken on the developmental stages of the growth of children to determine the most effective timing of an enrichment program and the feasibility of additional enrichment for deprived children through the elementary school days.

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A P P E N D I C E S



A P P E N D I X   A

OFFICE OF ECONOMIC OPPORTUNITY

INDEX OF POVERTY

OFFICE OF ECONOMIC OPPORTUNITYINDEX OF POVERTY (35)

Family Size	Non-Farm	Farm
1	\$1,600	\$1,100
2	2,600	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
13	7,800	5,400

A P P E N D I X B

DAILY SCHEDULE FOR TWO  
HEAD START CENTERS

DAILY SCHEDULE FOR TWO HEAD START CENTERS

## HEAD START GROUP I

7:00- 8:00	Breakfast period
8:00- 8:45	Free play
8:45- 9:00	First group discussion
9:00- 9:30	Music-story hour
9:30- 9:45	Snack period
9:45-10:45	Activity period
10:45-11:00	Outdoor play
11:00-11:30	Preparation for lunch
11:30-12:15	Lunch period
12:15- 2:00	Rest period
2:00- 2:15	Snack period
2:15 . . .	Outdoor play

## HEAD START GROUP II

9:00	Arrive
9:00- 9:15	Salute to flag and singing
9:15- 9:45	Work with numbers and number games
9:45-10:15	Snack period--outdoor play
10:15-10:30	Art
10:30-10:45	Music
10:45-11:30	Language and language games
11:30-12:15	Lunch
12:15-12:30	Outdoor play
12:30- 1:00	Rest heads on table
1:00- 1:30	Story and drama
1:30- 2:00	Free play