

A P P R O V E D D A Y C A R E A S I T R E L A T E S
T O R E A D I N E S S , L E A R N I N G ,
P H Y S I C A L D E V E L O P M E N T ,
E M O T I O N A L A N D S O C I A L
B E H A V I O R O F C H I L D R E N
I N T H E F I R S T G R A D E

A DISSERTATION

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY IN CHILD DEVELOPMENT
AND FAMILY LIVING IN THE GRADUATE SCHOOL OF
THE TEXAS WOMAN'S UNIVERSITY

COLLEGE OF
HOUSEHOLD ARTS AND SCIENCES

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DENTON, TEXAS

AUGUST, 1969

Texas Woman's University

Denton, Texas

August 19 69

We hereby recommend that the dissertation prepared under
our supervision by Joy Belle Reas
entitled APPROVED DAY CARE AS IT RELATES TO READINESS,
LEARNING, PHYSICAL DEVELOPMENT, EMOTIONAL,
AND SOCIAL BEHAVIOR OF CHILDREN
IN THE FIRST GRADE

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

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A C K N O W L E D G M E N T S

The author wishes to acknowledge her indebtedness to those who inspired her to persist in the graduate program, and gave patient counsel and guidance throughout the research study. Sincere appreciation is expressed to those who contributed to the completion of the dissertation:

Dr. Jessie W. Bateman, Dean of the College of Household Arts and Sciences;

Dr. Dora R. Tyler, Professor of Child Development and Family Living;

Dr. Betty B. Alford, Assistant Professor of Nutrition Research;

Dr. Alice Milner, Associate Professor of Foods and Nutrition;

Dr. Bernadine Johnson, Assistant Professor of Home Economics Education.

The writer wishes to express gratitude and appreciation to Dr. Allen C. Hancock, President of Texas College, Tyler, Texas, who made possible the Study Grant which

enabled her to complete the graduate program at Texas Woman's University.

Tyler Public School Executives and Elementary School Principals who cooperated in the collection of data, and all the parents and children who participated in the study.

The author wishes to acknowledge her indebtedness to her husband, Carl Edward, who encouraged her throughout the study, and to her children, Mattye Belle and Carl Edward II who gave her the inspiration to undertake a study of young children.

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CHAPTER I

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

In discussing the old and new directions in child development, Stolz (77) covered the span of the past 45 years. Philosophies of the foremost personalities in the field were included. One theory was that children constitute the primary resource of a society, and the direction society will take depends in a large measure upon the kind of children society develops. Increased understanding of the causes of children's behavior and the way they learn is greatly needed. This requires social interaction, teaching and research.

According to Breckenridge and Murphy (8) all children have the following basic needs; physiological warmth, psychological warmth, security, health protection and immunity, dependence and independence, adequate nutrition, rest and activity, affection and social contacts, and an opportunity to develop intellectually.

Leeper, Dales, Skipper and Witherspoon (43) reported that the Bureau of Census indicated that in 1960 there were 55,786,000 children under 14 years of age in the United States. This number included 20,318,000 children under five

years of age. Predictions are that by 1970 this figure will have risen to 25,135,000 children under five years of age. In 1960 there were 24,146,000 women in the labor forces. The prediction is that the number will increase to 29,649,000 by 1970. McDermott (50) stated that while these mothers are gainfully employed outside the home to supplement the family's income in order to provide basic needs which otherwise could not be met, children under school age desperately need proper care. This is a universal problem in depressed areas among various ethnic groups. According to Jerdone (38) the American Indians on reservations are as much in need of day care as any other group in the nation. In industrial areas many Indian mothers are engaged in gainful employment outside the home.

Gyorgy (26) recommended preschool protection programs called "Crash" programs, to reach the preschool population in developing countries. Gyorgy suggested increasing the availability of protective foods, organizing programs for improved feeding of preschool children, and establishing an educational program geared to make the population at all levels aware of the problem and of the preschool protection program.

Since families in lower income brackets are less able to pay the fee required for child care at many private nursery schools and day care centers, Arnold (3),

Breckenridge and Murphy (8), Hosley (35), and McDermott (50) emphasized the challenge now being offered the Child Welfare Day Care Centers. The Child Welfare Amendment (3) of 1962, made it possible for states to request federal funds for the extension of welfare services in depressed areas. All needy children are not being reached, but greater efforts are being made to reach them. Under this amendment every state is required to provide some child welfare services by July 1, 1975. Todd and Hefferman (81), and Tyler (82) agreed that during the present decade greater emphasis has been placed on reaching the culturally deprived child. According to Leeper, Dales, Skipper and Witherspoon (43), Head Start is the most important advancement in childhood education since Comenius who advocated the mother school for the first six years of life in 1657, and wrote the first picture book for children in 1658.

Child Welfare Day Care Centers were of particular concern in this study. The centers were at one time looked upon as "keep" schools, or baby-sitting services, away from home. But, today day care centers are rapidly being improved.

The Minimum Standards for Day Care Center (74) as established by the State of Texas requires, among other things, that:

- 1) the facility be well staffed: one staff member to every 10 children over 2 years of age, and one to every 4 infants under 2 years of age,
- 2) buildings and equipment meet state and local ordinances for health and safety,
- 3) chairs, tables and cots for resting be of child size,
- 4) each child has a medical examination by a licensed physician before admission,
- 5) each child not previously immunized obtained immunizations for smallpox, diphtheria and other communicable diseases within 30 days of admission.

REVIEW OF LITERATURE

Early Childhood Education

Murkerji (53) emphasized the roots in early childhood education, especially of three and four year old children. The implication is that by starting early, children can get to a certain point faster, or can go farther in the educational process. Murkerji added that there is no scientific data to substantiate this; the belief is based on the following factors:

- 1) Psychological roots; the early childhood years are the root-forming years during which children meet the challenge of knowing who they are in relation to people outside their families.
- 2) Roots of concept formation; the early childhood years are root years in concept formation, according to Hunt (1964).
- 3) Roots of language; the early childhood years are the root years for language development. Although

there can be thought without language many kinds of thought are intimately linked with and dependent upon language.

- 4) Roots of creativity; the early childhood years are the root years for creativity. Creative imagination during the early years reaches a peak between four and four-and-a-half years of age, and is followed by a drop about age five when the child enters school. There are indications that this drop is due to man-made culture, rather than natural phenomenon.

Environment

Caldwell (9) reported that a careful preparation of the learning environment for the young child calls for a degree of thinking, commitment, and personal control. The rich experiences needed by the child are not always found in the natural environment, but arrangements can be made for the child to obtain enriching experiences away from home. In the case of working mothers the day care center may be the answer.

Research has shown that a clear relationship exists between early childhood experiences and formal learning. Rudolph and Cohen (68) and Fowler (23) suggested that kindergarten is almost too late, because many things have happened to the child which would influence his capacity to grow and achieve in school long before he is ready to enter school. Gott and Jones (24), in evaluating the Head Start Program, compared first grade children who had experiences

in Head Start with children who had not participated in Head Start. Results revealed that children who had experiences in Head Start scored higher in learning proficiency and in intellectual curiosity, and were less likely to become school drop outs than children who did not have Head Start experiences.

Rucker (67) investigated the environments of culturally deprived and of privileged children, and observed that the children from privileged homes had more experiences with selection and use of books than children from culturally deprived homes. Both groups were enrolled in preschool organizations, and had an average of six reading periods per week at school.

Anwar (2) studied parents' use of literature in the home and reported that 98 per cent of the parents believed that the child who saw his parents read was more likely to form the habit of reading than the child who saw little reading in the home. Parke (58) stated that to prepare the child for reading means giving him a broad background of experiences, such as going on trips, singing, dancing, building with blocks, playing housekeeping, using a wide variety of creative materials, including scissors, paper, paste, clay and other art media. The study of Crandall (16) revealed that environmental incentives were factors in learning.

Some four and five-year-old children learned to read where visual, verbal, and printed materials were used as stimuli.

King (40) found that young children were more inquisitive, and tended to talk more than older children. Neither intelligence nor sex was substantially related to curiosity. Techniques used to foster self-reliance include placing demands upon the child for self-control, high levels of performance, and independence in decision making and behavior. Baumrind and Black (5) observed that firm discipline in the home failed to produce conformity at nursery school. Boys from homes with firm discipline were the least conformists. Independence in girls was associated positively with parental demands, and negatively with high acceptance. Firm demands of parents were not associated with punitiveness, or lack of warmth.

Odom (56) investigated the relationship of social class on development of problem solving strategies used by five- and six-year-old children from two socioeconomic backgrounds. Results showed that socioeconomic level and age made a significant difference in the kinds of strategies used. As socioeconomic and age levels increased, so did cognitive processes in problem solving. Blum and Adcock (6) observed that young children can pay attention, and are able to concentrate for a relatively long period of time if given the right setting and equipment. The young child

learns in terms of the concrete, or in terms of what he can manipulate. It might be that success in "games that teach," lies more in the child's manipulation and facilitation, of "trying out," and seeing what happens than in playing organized games.

Kilpatrick (39) reported that the Montessori Schools were first designed with the purpose of improving the lives of children in certain tenement dwelling houses in Rome. The schools caring for the children during the greater part of the day offered great assistance to families in the lower socioeconomic bracket. Kilpatrick stated that many parents had very low standards of living. The "Children's Houses," as they were called, gave much attention to personal cleanliness and dress. Many of the children who enroll in day care centers today come from homes with limited incomes and low living standards.

Preschool Programs

Hodges and Specker (34) stated that the traditional preschool programs produce only slight intellectual improvements in disadvantaged children, but those designed specifically to meet the needs of the disadvantaged children appear to produce greater gains. During the past 30 years, according to Hunt (36), many beliefs have changed. The following are some of the conceptions discussed by Hunt:

- 1) fixed intelligence is no longer tenable,
- 2) learning is not completely predictable,
- 3) what goes on between the ears is much less like a telephone switchboard or electric computer,
- 4) learning need not be motivated by painful stimulation; there is an intrinsic motivation which is inherent in information processing and action.

Mayes (49), in his philosophy on intelligence testing, disagreed with Plato's doctrine, that intelligence is fixed. Mayes concluded that intelligence is adaptable and can within limits be influenced by a beneficial environment.

Orem (57) stated that during the first decade of this century, Montessori became interested in education while working with defective children in a psychiatric clinic in Rome. Out of those experiences was devised a new approach to the education of normal children. Thus, the first Casa dei Bambini, "Children's House," was started to test this approach. Montessori broke away from traditional pedagogical practices by combining liberty with the organization of work. This was the first educational innovation to basically alter, in concept and in method, the timing and format of Western educational practices.

Spodek (73) pointed out that today's attempt to meet the needs of preschool children is not new. Early educators for more than half a century have viewed the nursery school and kindergarten as one answer to the needs of children.

Spodek further stated that unwittingly, parents may either impede or accelerate the progress of their children by the things they do, or fail to do. The school plays a part in the child's refinement of skills; but Cherry (13) asserted that during the preschool phase of development, the mold is set for future skills, abilities and emotional responses. Montessori (51) described how watching three to six-year-old children became a practical contribution to research and the development of The Montessori Method. "The interest and enthusiasm of the child," said Montessori, "necessitated determining what was an appropriate response to the eternal needs of a life in the process of development " (51). Thus, the teaching of young children was based on spontaneous interests of the children with complete freedom of choice of activities.

Language

Stern (76) emphasized that some day care center programs were structured to meet the language needs of the children. From observations in day care centers, and extensive review of subcultural differences in children's use of language, Cazden (11) concluded that the environment was a contributing factor. Taylor (80) asserted that children in preschool groups enjoy plays on words, the fun of repetition, and non-sense rhymes. Through repetition they learn the words without formal training. Margolin (46) found that children from low socioeconomic groups lacked the awareness

that the teacher expected when she asked a question. The children were not accustomed to being addressed, or treated as entities in their own rights. Berswenger (7) reported on Luria's experimental work, and pointed out the importance of language in increasing the human capacity to learn. In evaluating children at the end of their first school term, Perry (59) observed that the children were not only more secure in their achievements in painting, block building and climbing, but also in verbalization.

Rhine, Hill and Wandruff (64), evaluated responses of preschool children to cards with line drawings of children engaged in various activities. Some activities were commonly considered good and some bad, while others were considered neutral. These investigators observed that the verbal concept of "bad" appeared around the age of two, while the verbal concept of "good" appeared at the age of three or four.

Number Concepts

Pollach and Gensley (61) stated that throughout the nursery school years the child absorbs geometry in his play. Three dimensions of space are explored daily as the child sees, feels, crawls through, balances on, and climbs over forms, which in addition to other properties have geometric shapes. In public school the child learns to verbalize the concepts learned in nursery school. Rudolph and Cohen (68)

asserted that children gain some number concepts in learning about quantities, and develop skills in communication when making requests.

Role of Play

Sutton-Smith (79) reporting on the classical psychoanalytic and Piagetian theory, showed how play has a compensatory function. Play helps to reduce tension which might impede intellectual activities and permits the child to respond to fantasy even when he cannot respond to reality, and protects his sense of autonomy. Read (63) stated that play activities include the use of materials which the child learns to put away. At this level of development the child wants to be helpful. Hendrick (32) noted that play becomes meaningful work to the child.

Riley (65) reported that carpentry as a part of the child's play, is an enjoyable learning experience, but the child needs guidance and encouragement to help him follow through to a finished product. Riley added that sawing and nailing for sheer fun, learning to put away materials, and cleaning the area are important factors which will be reflected later in the child's life. Riley stated that the child should make his own choice in this activity, but he should be told what will be required. The child might be assisted in selecting a project in line with his skills.

Behavior With Peers and Adults

In the process of development the main function of parents and teachers is to provide conditions for behavior change in children. Vance (84) pointed out that specific training procedures must be provided for aiding children in development of new behaviors or modifying old behaviors. In observing the special programs for underprivileged children, Levens (44) reported that in the nursery school at Vassar, the children learned to accept the college physician and visitors. Scott, Burton, and Yarrow (71) observed that adult approval or disapproval was effective in controlling positive and negative responses of a four-year-old boy in a nursery environment.

Mason (47) studied the leadership characteristics in four-year-old children to identify behavior traits. Dilman and Adelbery (17) found that a high percentage of the children in child welfare day care centers learned to share, and that girls learned more quickly than boys. Nicolaysen (55) reported that adults, observing preschool children exhibiting possessiveness over toys or play areas, considered the behavior undesirable. Nicolaysen stated, however, that this is one aspect of the child's need to establish himself as an individual; to achieve security and mastery, and to participate in the world as he sees it. Gaining security enables the child to move on to significant social growth.

In the nursery school both Langford (42) and Read (63) stressed that the child is able to express his feelings of hostility in desirable ways. Samorijczyk (70) observed the responses of children who had preschool experiences and children who had no preschool experiences upon public school entry. Langford found no significant difference due to sex. Children with no kindergarten experience were more responsive to motivational instruction than children who had kindergarten experience. Charlesworth and Hartup's (12) investigation of social reinforcements in nursery school revealed that older children reinforced their peers at a significantly higher rate than the younger children. The amount of reinforcement given was positively related to the amount received. Hartup and Coats (29), Hartup, Glazer and Charlesworth (30), and Hartup (31) all concluded that children's behavior is influenced by their peers. Hartup (28) observed that children who received nurturance for 10 minutes just before performing two tasks, required more trials to achieve than did children who received five minutes nurturance followed by five minutes of withdrawal just before performing the same two tasks. Results indicated the development of independence in the nurturance withdrawal group, while the 10 minute nurturance group was less independent.

Teachers of Very Young Children

Regardless of the term used to describe the specific nursery school, Hosley (35), Levens (44), and Stolz (77) agreed that ultimately the individual teacher determines the quality of the program in the school. The teacher is the one who provides or fails to provide an inestimable service to the child by giving his parents an appropriate focus on his needs. Moore and Richards (52) emphasized that the teacher plans the rewarding and learning experiences, essential routines and activities that can best integrate the child into the total program. Collier (15) insisted that qualified teachers for nursery and kindergarten as well as elementary grades should be recognized as professionals in their fields.

Gross (25) set up the following basic inner qualities as needs for teachers of very young children.

- 1) Enjoys learning.
- 2) Distinguishes between personal needs and those of others.
- 3) Knows how children learn.
Recognizes self discovery, room for error and the need for experience.
- 5) Gives supportive structure in child learning.
- 6) Has a comfortable open-ended personality.
- 7) Takes pleasure in working with parents.

In comparing the teacher's evaluation of the child against the child's self-evaluation, Dryer and Haupt (19)

reported that children with autonomous self-evaluation manifest more independence and achievement as well as more affiliative behavior. Cathcart and Brandhofer (10) observed a lack of communication between nursery schools and five elementary schools in which these children enrolled in first grade. In an effort to establish communication between the teachers, the investigators were able to demonstrate to the teachers how the gap could be bridged, and how the children could be helped to make a smooth adjustment from nursery school to public school.

Stein (75) suggested that the basic principles of good teaching include listening to parents' concerns, giving them supportive assurance, and helping them to utilize their own resources to the fullest in guiding children. Krown (11) after observing preschool programs in the United States gained information on planning preschool programs to meet the needs of the culturally deprived child, and how to involve parents of young children in the programs. Krown claimed that the experience would be valuable in planning programs for disadvantaged children in Israel, and would no doubt affect investigations at the Hebrew University and enhance the values.

Readiness and Achievement

Ames and Ilg (1) conducted extensive testing programs and concluded that the time for starting to school should be

Ames and Ilg (1) conducted extensive testing programs and concluded that the time for starting to school should be determined by the child's behavior rather than his chronological age. If the child is considered ready for kindergarten at age five he should be behaving like a five-year-old. These research workers found a correlation between school performance and prediction of readiness based on behavior tests.

Rossi and Wittrock (66) tested the recall of four-year-old children, and observed that the children tended to group stimuli into verbal categories. The examiners concluded results needed to be supported by further studies. Mason and Prater (48) evaluated kindergarten children who had completed a trimester of structured reading instructions for intelligence, readiness, personal-social adjustment and socioeconomic status. Results showed increased reading readiness scores over the controls. But teachers reported that the children found it difficult to make consistent progress, and that negative behavior in boys increased. Huttenlocker (37) reported that children were able to copy the order of a set of objects for the first time between the age of four and five. A special relationship was observed between the sample and the child's copy. When the child's copy was lined up one-to-one, the task was less difficult.

The results of three different reading programs for first-grade children were analyzed by Potts and Savino (62).

Results indicated that all three programs were significant at the 1.0 per cent level, but the program which used extensive phonetics training was most significant, while the program emphasizing "whole" word reading was least significant. Wollenberg (87) compared results of programmed materials with the basic reading series approach on first-grade children. No significant difference was observed between achievements in Scott Foresman's reading materials, Sullivan's Programmed Reading Series, and Gates' Primary Reading Tests. Cobbs (14) compared three groups of disadvantaged children as to reading readiness and achievement; no prekindergarten, eight-weeks prekindergarten, and 26 weeks of prekindergarten. Results indicated a significant difference in favor of the prekindergarten groups. The 26 week group was more significant than the eight-week group. Smith's study (74) revealed that the prekindergarten groups scored significantly higher on the Stanford-Binet and the Peabody Picture Vocabulary Tests than those with no prekindergarten, and supported Cobbs' findings.

Ditson (18) used a six-weeks visual training program with children who had learning disabilities. The conclusion was that the child learns through experiences, and the kind of experiences in which he participates depends upon his sensory-motor mechanism and actualization offered by his environment; that the child can be helped by those who intensely involve themselves in acceptance of him as an

individual, and those who strive to understand him as a person. Tyler (82) used Metropolitan Readiness scores to compare first-grade children who were enrolled in Title I Enrichment program nine months before entering first-grade. Results indicated that the preschool Enrichment Program was beneficial, but suggested further research, including the positive attributes of the culturally deprived child.

Statement of Problem

Never before in the history of civilization have parents and educators found the task of helping the child face a changing social order as serious as it is today. The child is born into an environment in which many mothers are employed outside the home. A great many of these young children are left to the care of relatives and friends, who provide little or no supervision. Others are placed in preschool organizations of varying degrees of competency. These organizations may or may not be staffed and equipped to meet the needs of the child. At the age of six years, whether the environment has prepared him or not, the child enters public school and has to compete with the more advantaged child. His six years of experiences may not have promoted good health and normal development which would equip him for learning.

Educators are interested in the value of state approved day care centers in helping the child bridge the gap between

early environment and public school. Adjustment and progress made by the child in school are related in many respects to early preschool experiences. State Supervisory Personnel in Child Welfare and Head Start have expressed the need for additional information on the value of day care experiences to the preschool child. Many studies have been conducted on child rearing practices, child behavior related to social class, ethnic groups, education, occupation, and religious background of parents. A careful search of the literature reveals a scarcity of information on the relationship of day care experiences in state approved centers to behavior patterns at first-grade level.

The present study was primarily concerned with the value of day care experiences as projected in the child's future adjustment and progress. The physical development, emotional and social behavior, school readiness and scholastic achievement of a selected group of first-grade children enrolled in the Tyler Public School System were studied. Children who were previously enrolled in The Day Nursery at Texas College and the Tyler Day Nursery were compared with an equal number of first-grade children who did not have day care experiences.

PURPOSES OF THE STUDY

The specific purposes of the present study were:

- 1.) To investigate the physical development, social and emotional behavior, school readiness and

scholastic achievement of first-grade children who previously attended a state approved day care facility;

- 2) To determine whether there was a relationship between experiences in a state approved day care center and physical development, social and emotional behavior, school readiness and scholastic achievements;
- 3) To compare the physical development, social and emotional behavior, school readiness and scholastic achievements of first-grade children who did not have day care experiences.

CHAPTER II

P L A N O F P R O C E D U R E

PURPOSES O F THE STUDY

The purposes and procedures of the present study are the result of the author's 19 years of experience with young children in the Day Nursery at Texas College in Tyler, Texas. The author's firm conviction that the early years of the child's life are most important, in that early experiences will be reflected in the child's future emotional and social behavior, as well as school readiness and scholastic achievement has prompted this investigation.

The purposes of the present study were to:

- 1) Review recent research on physical development, emotional and social behavior patterns, school readiness and scholastic achievements of first-grade children who had previously attended a state approved day care facility.
- 2) Determine whether or not a relationship existed between experiences in a state approved day care center and physical development, emotional and social behavior, school readiness and scholastic achievements.
- 3) Compare the physical development, emotional and social behavior, school readiness and scholastic achievements of first-grade children who previously had day care experiences with first-grade children who did not have preschool experiences.

Literature related to behavior patterns of children five to seven years of age was examined. Special attention was given to physical development, emotional and social behavior, school readiness and scholastic achievements of first-grade children.

Sample for the Study

The experimental group for the present study consisted of 56 first-grade children enrolled in the Tyler Public School System, who had previously attended Tyler Day Nursery (Caucasian) and the Day Nursery at Texas College (Negre). The control group consisted of 59 children who had no preschool experience. A personal interview was held with each child's mother or guardian as she completed the "Recall Instrument" designed by the author. During these conferences the author discovered that two of the children in the control group had attended kindergarten or nursery school before moving to Tyler; therefore, they were eliminated from the study. Three children in the experimental group and four in the control group transferred to schools in another school district before the achievement tests were administered; hence, they were eliminated from the study.

The final sample population in this investigation involved 91 families and two groups of children. Group I was

composed of 53 children who had preschool experience, and Group II included 53 children who had no preschool experience. The following qualifications were required for admission to either group:

- 1) Children whose school records indicated that they were physically and mentally normal.
- 2) Children's ages were within the range of five to seven years.
- 3) Children resided in Tyler, or in Smith County within the Tyler Public School District.

Instruments for the Study

Four instruments were used for the collection of data in the study:

- 1) Official school records showing scores on the Metropolitan Reading Readiness Tests, Form S.
- 2) Scores on the Metropolitan Achievement Tests, Form A, which were administered during the last half of the first year in school.
- 3) "Tyler Public School Health Growth Records" (Form Number 22) completed on first-grade children upon entering school.
- 4) "Parents' Recall Instrument" designed by the author to determine parents' impression of the child's responses to everyday problems; motor skills and coordination; intellectual level and emotional and social behavior.

The Metropolitan Reading Readiness Tests, Form S (33) is a standardized test which is designed to measure achievements that contribute to readiness for first-grade instruction. The test is comprised of six parts: Word

Meaning; Sentences; Information; Matching; Numbers; and Copying (Appendix A). Hildreth and Griffith (33) stated that the progress young children make when they enter school depends to a large degree upon readiness for learning, and upon provisions made by the school for variations in readiness. Hildreth and Griffith added further that among the chief factors that contribute to readiness for school are linguistic attainments, aptitudes, visual and auditory perceptions, muscular coordination, motor skills, number knowledge, attentiveness and ability to follow directions. The beginner's advancement will depend upon his intelligence, home background, health and physical condition, degree of maturity, social adjustment and general background of experiences.

Metropolitan Achievement Tests, Form A (20) is a standardized instrument which includes a series of measurements in important skills and content areas of the elementary school curriculum. Primary I A, is for the latter half of the first grade. It consists of four tests: Word Knowledge; Word Discrimination; Reading; and Arithmetic Concepts and Skills (Appendix B).

The "Tyler Public School Health Growth Record" includes: age; height; weight; vision and auditory perception; condition of teeth; immunizations for smallpox; diphtheria and whooping cough (Appendix C).

The "Parents' Recall Instrument," designed by the author consists of physical maturity skills in handling everyday problems, motor skills and coordination, intellectual responses, emotional and social behavior (Appendix D).

Techniques of Data Analyses

The t-test was applied to scores on the Metropolitan Readiness Tests, Form S, (33) and the Metropolitan Achievement Tests, Form A (20) for both the experimental and control groups. Arithmetical means and degrees of freedom were computed for the following variables: 1) Reading Readiness; 2) Number Readiness; and 3) Total Readiness. Variables for Achievement Tests had t-test applied also. They are as follows: 1) Word Knowledge; 2) Word Discrimination; 3) Reading; and 4) Arithmetic Concepts and Skills.

Chi-square technique was utilized to analyze data from "Parents' Recall Instrument." The variables concerned were: 1) Every Day Problems; 2) Motor Skills and Coordination; 3) Intellectual Level; and 4) Emotional and Social Behavior Patterns. Chi-square was also applied to variables in the "Child's Health Growth Record:" 1) Visual Concepts; 2) Auditory Concepts; and 3) Condition of Teeth.

The population sample's height and weight were evaluated on the basis of Stuart Meredith's Height and Weight

Percentiles Tables as reported by Watson and Lowrey (86).

These research workers collected widely scattered materials on child growth and development, and presented information in readily available form for physicians, persons in public health, education and related fields. Watson and Lowrey stated that a number of research centers for the study of growth and development of children were established as early as the 1920's.

CHAPTER III

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

The study consisted of 106 first-grade children in the Tyler Public School System, Tyler, Texas. The experimental group included 53 first-grade children who were previously enrolled in the Tyler Day Nursery (Caucasian), and the Day Nursery at Texas College (Negro). The control group was composed of 53 first-grade children who did not have pre-school experience prior to entering first-grade.

Four instruments were utilized in collecting the data for the study: 1) Official school records showing scores on the Metropolitan Reading Readiness Tests, Form S (33), Hildreth and Griffith; 2) Metropolitan Achievement Tests, Form A, Durost, Bixler and Hildreth (20); 3) "Tyler Public School Health Growth Record, Form 22;" and 4) the "Parents' Recall Instrument" developed by the author.

Background Information Concerning Participants

The population samples were taken at random from 5 elementary schools in Tyler, Texas: 1) T. J. Austin; 2) Marsh; 3) Birdwell; 4) St. Louis; and 5) Mamie G. Griffin. The 106 children represented 91 families, including Negro,

Mexican-American and Caucasian parents. The children ranged in age from 5.5 to 7.7 years, with a mean age of 6.5 years. Group I, the experimental group, included 37 girls and 16 boys. Group II, the control group, consisted of 25 girls and 28 boys. Two of these boys had been retained in the first-grade.

Mean Reading Readiness

The t-test was utilized for comparison of reading readiness data (see Table I). Mean score for children who had preschool experience prior to enrolling in first-grade was 49.2. The mean score for children without preschool experience was 42.5. The standard deviation for children with preschool experience was 11.1, and for children without preschool experience, the standard deviation was 12.2. The t-value was 2.90, with 104 degrees of freedom, indicating a significant difference at 0.01 per cent level. These findings support earlier findings by Mason (48) and Tyler (82). According to Parke (58), the child should have a broad background of experiences to provide for enrichment and readiness. Grandall (16) insisted that environmental incentives were influencing factors in learning to read.

The Day Nursery at Texas College provides free periods for looking through books and pictures. The daily schedule included a story period when stories were read to the children from books, or shown on the screen. Some periods were

TABLE I
COMPARISON OF READING READINESS OF CHILDREN IN GROUP I--PRESCHOOL
EXPERIENCE, AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Population Sample	Mean	Standard Deviation	<u>t</u> -value	DF	Probability
Group I Preschool N = 53	49.2	11.1	2.90	104	P < 0.01**
Group II No Pre- school N = 53	42.5	12.2			

N = Number
** = Highly Significant

scheduled for creative story telling by the children. Many of these stories were recorded and played back to the children. The materials provided, including books and pictures, were comparable to those used in day care centers. Some of the children come into possession of their first story books after enrolling in nursery school. When children wish to share stories with the group, personal books are brought to school and the teacher reads the stories.

Number Readiness

The number readiness comparison of the experimental and control groups was determined and illustrated in Table II. The mean score for children with preschool experience was 13.5, and for children with no preschool experience, the mean score was 9.2. The standard deviation was 5.7 for the children enrolled in the experimental group, and 5.1 for children enrolled in the control group. The t -value was 3.96 with 104 degrees of freedom indicating a significant difference ($P < .05$). This was in agreement with Pollach and Gensley (61) who stated that the nursery environment encouraged exploration of three dimensions of space daily as the children climbed over, balanced on, and crawled through geometric forms. Other contributions to the growth and use of numbers in the day nursery at Texas College included counting objects such as the number of children seated at the table and the number of drinks to be served to children.

TABLE II

COMPARISON OF NUMBER READINESS OF CHILDREN IN GROUP I--PRESCHOOL
EXPERIENCE, AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Population Sample	Mean	Standard Deviation	<u>t</u> -value	DF	Probability
Group I Preschool N = 53	13.5	5.7	3.96	104	P < 0.01**
Group II No Pre- school N = 53	9.2	5.1			

N = Number

** = Highly Significant

Mean Total Readiness

Total Readiness scores on the Metropolitan Readiness Tests, Form S for children who had preschool experience, and children who did not have preschool experience are shown in Table III. The mean score for children with preschool experience was 68.0, and for children with no preschool experience, the mean was 55.5. The t-value was 3.51 which indicated a significant difference between the two groups ($P < 0.01$). Analysis of data on total readiness tended to substantiate Cherry's (13) contention that "in the preschool phase of development, the mold is set for future abc abilities."

Ratings on Total Readiness

Data pertaining to Readiness Status of the two groups of children were rated as "superior," "high normal," "average," "low normal," and "poor risk." In the experimental group 9.4 per cent of the children were rated as "superior," while 1.9 per cent of the children in the control group rated "superior." A total of 20.8 per cent of the children in the experimental group were rated as "high normal," but not any of the children in the control group rated "high normal." Fifty per cent of the children in the experimental group clustered around "average" and "high normal," while

TABLE III

COMPARISON OF TOTAL READINESS OF CHILDREN IN GROUP I--PRESCHOOL
EXPERIENCE, AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Population Sample	Mean	Standard Deviation	t-value	DF	Probability
Group I Preschool N = 53	68.0	17.7	3.51	104	P < 0.01**
Group II No Pre- school N = 53	55.5	18.3			

N = Number

** = Highly Significant

81 per cent of the controls clustered around "average" and "low normal." There were more children rated "poor risk" in the control group than in the experimental group. As indicated in Table IV, approximately 17 per cent of the first-grade children in the control group were rated as "poor risks" while 7.6 per cent of the children in the experimental group were classified in this group. The mean score for the experimental group was 68, for the control group, 55.5. The t-test indicated a highly significant difference between the two group means.

COMPARISON OF ACHIEVEMENTS OF CHILDREN WITH AND
WITHOUT PRESCHOOL EXPERIENCE

Word Knowledge Achievement

Information obtained relating to Word Knowledge Achievement was analyzed as shown in Table V. The mean score for children in Group I was 48.9. Children in Group II with no preschool experience had a mean score of 39.3. The standard deviations for the two groups were 9.8 and 8.6 respectively. The t-value was 5.30 which indicated a highly significant difference ($P < 0.01$). These findings tend to support Taylor's (80) assertion that preschool children enjoy play on words and learn words as a part of fun in play. The Day Nursery at Texas College has a sufficient number of staff members and student assistants to give attention to the

TABLE IV

RATINGS ON TOTAL READINESS SCORES OF CHILDREN IN GROUP I--PRESCHOOL
EXPERIENCE, AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Levels:	Group I Preschool Experience		Group II No Preschool Experience	
	Frequencies	Per Cent	Frequencies	Per Cent
Superior	5	9.42	1	1.87
High Normal	11	20.75		
Average	16	30.15	18	33.95
Low Normal	17	32.08	25	47.17
Poor Risk	4	7.60	9	16.99

TABLE V

COMPARISON OF WORD KNOWLEDGE ACHIEVEMENT OF CHILDREN IN GROUP I--PRESCHOOL
EXPERIENCE, AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Population Sample	Mean	Standard Deviation	t-value	DF	Probability
Group I Preschool N = 53	48.9	9.8	5.30	104	P < 0.01**
Group II No Pre- school N = 53	39.3	8.6			

N = Number

** = Highly Significant

children's concern about words. Children feel free to ask questions because teachers are willing to give them an answer. Word repetition is often used in games, and the children are able to learn many words as a part of the fun in the game.

Word Discrimination Achievement

A significant difference was observed between the two groups in Word Discrimination achievement. As illustrated in Table VI, the mean score for children with preschool experience was 51.5, and for children with no preschool experience, the mean score was 40.1. The standard deviation for the experimental group was 9.3, and for the control group the standard deviation was 8.0. The t-value was 6.64 with 104 degrees of freedom. The difference between the group means was highly significant ($P < 0.01$). These results agreed with the findings of Gott and Jones (24) who reported that first-grade children with Head Start Program experience scored higher in learning proficiency and curiosity than did children who did not have Head Start experience.

Reading Achievement

Data obtained on Reading Achievement were analyzed and illustrated in Table VII. Children who were previously enrolled in day nursery had a mean score of 52.7, while children who had no preschool experience had a mean score of 43.7.

TABLE VI
COMPARISON OF WORD DISCRIMINATION ACHIEVEMENT OF CHILDREN IN GROUP I--PRESCHOOL
EXPERIENCE, AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Population Sample	Mean	Standard Deviation	<u>t</u> -value	DF	Probability
Group I Preschool N = 53	51.5	9.3	6.64	104	P < 0.01**
Group II No Pre- school N = 53	40.1	8.0			

N = Number
** = Highly Significant

TABLE VII
COMPARISON OF READING ACHIEVEMENT OF CHILDREN IN GROUP I--PRESCHOOL
EXPERIENCE, AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Population Sample	Mean	Standard Deviation	<u>t</u> -value	DF	Probability
Group I Preschool N = 53	52.7	10.0	4.75	104	P < 0.01**
Group II No Pre- school N = 53	43.7	9.2			

N = Number

** = Highly Significant

The standard deviation for Group I was 10.0, and for Group II, 9.2. The t-value was 4.75 with 104 degrees of freedom. Results were highly significant ($P < 0.01$). These results supported the findings of Smith (72), that disadvantaged children who did have preschool experience scored higher on the Stanford-Binet and Peabody Picture Vocabulary Tests than disadvantaged children who did not have preschool experience. Both groups in the present study included some disadvantaged children.

Arithmetic Concepts and Skills

A comparison of Group I and Group II with respect to Arithmetic Concepts and Skills revealed a significant difference between achievements of children with preschool experience and children with no preschool experience. The mean score for Group I was 53.2 and for Group II the mean was 45.1. The standard deviation for Group I was 9.3, and for Group II the standard deviation was 8.5. As shown in Table VIII, there were 104 degrees of freedom, and a t-value of 4.63 which indicated a highly significant difference. According to Pollach and Gensley (61), the child learns in public school to verbalize the number concepts that he learned in nursery school. The findings seem to support Pollach and Gensley's report (61).

TABLE VIII

COMPARISON OF ARITHMETIC CONCEPTS AND SKILLS OF CHILDREN IN GROUP I--PRESCHOOL
EXPERIENCE, AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Population Sample	Mean	Standard Deviation	<u>t</u> -value	DF	Probability
Group I Preschool N = 53	53.2	9.3	4.63	104	P < 0.01**
Group II No Pre- school N = 53	45.1	8.5			

N = Number

** = Highly Significant

PARENTS' RECALL OF CHILD'S
BEHAVIOR PATTERNS

A personal interview was held with the mother or guardian of each child selected to participate in the study. Twenty-five guardians including 12 grandparents, four aunts, six sisters, and three brothers responded.

Achievements with Everyday Problems

Interviews revealed that three children in the control group dawdled at meals, one sucked bread, two children required assistance with fastening simple fasteners, three children were still announcing toilet needs when they enrolled in first-grade, and one child occasionally wet himself. Eight children in the control group had to be reminded to rest quietly after going to bed, two children took a favorite toy to bed, but soon stopped after starting to school. Chi-square analysis on the "yes" and "no" responses may be seen in Table IX.

In comparing the two groups it was observed that children in the experimental group showed greater maturity, as measured by the parents' recall on children's behavior patterns, than did children in the control group. One child dawdled at meals, one child required assistance with simple fasteners, five children in the experimental group had to be reminded to

TABLE IX

PARENTS' RECALL OF 106 CHILDREN'S BEHAVIOR PATTERNS

Items	Group I Preschool N = 53		Group II No Preschool N = 53		Statistical Analyses		
	Yes	No	Yes	No	χ^2	DF	Probability
Achievement of Everyday Problems	400	41	324	100	32.34	1	P < 0.01**
Motor Skills and Coordination	248	22	234	41	6.09	1	P < 0.05*
Intellectual Performance	555	17	527	52	18.44	1	P < 0.01**
Emotional and Social Behavior	162	1	150	5	2.93	1	N.S.

N = Number

* = Significant

** = Highly Significant

NS = Non-significant

be quiet after going to bed. Group I had a score of 400. Chi-square value was 32.34, with one degree of freedom which indicated a highly significant difference at the 1.0 per cent level.

Motor Skills and Coordination

No deformities were found in either group of children. Motor skills of the experimental group were superior to motor skills of children in the control group. Five children in the control group could not ride a bicycle, however, this could have resulted from the lack of an opportunity to learn. Four children in the control group could not skip when they enrolled in first-grade, eight children did not stand erect, or as is commonly used with children, "stand tall." One child was not alert in play activities, and enjoyed playing alone. Parents and guardians reported that 10 children could not tie their shoe strings when they entered first-grade.

Two children in the experimental group could not ride a bicycle; again this could be due to lack of an opportunity to learn. Three children did not stand erect or "stand tall." All the children in the experimental group were active in play and enjoyed playing with other children. Children in day nursery have a long rest period, at which time most of them take a nap. Each child learns to tie his shoe strings

by age five-and-a-half years from the daily routine. "Yes" responses for the experimental group totaled 248, and for the control group the number was 234. The chi-square value of 6.09 was significant ($P < 0.05$) as shown in Table IX.

Intellectual Performance

According to parents' evaluation, the attention span of two children in each group was short. All children in Group I knew their names, ages, birthdates, parents' names and addresses. Learning one's own birthdate, home address, and parents' names is another part of the day nursery curriculum. One boy was referred to the day nursery at the age of four when his doctor found nothing physically wrong with him, but had been unsuccessful in getting the boy to talk. This child enjoyed play, and through group play and story telling, began showing signs of progress in six weeks. By the end of the first year in nursery school, this child was as curious and inquisitive as other boys of the same age. All children in the experimental group responded to music, enjoyed listening to stories, telling parts of stories, looking at pictures and coloring.

Five children enrolled in the control group could not give parents' names and home address. One child failed to show interest in music, stories or art activities. He was

very active, and the mother reported that he was the "out door" type. An interview with the mother revealed that the child had spent a great deal of time in the country with his grandparents. Scores on intellectual performance are shown in Table IX. The mean score for the experimental group was 555, and for the control group, the mean score was 527. The chi-square value was 18.44 which indicated a highly significant difference. Intelligence scores were not available at the time these data were collected from the schools; hence, test scores for first-grade children were not compared. However, the findings supported Leeper, Dales, Skipper and Witherspoon's (43) contention that there is a wide variation in intellectual development of children of the same age.

Emotional and Social Behavior

Children participating in the experimental group were accustomed to sharing toys, taking turns at play equipment, playing fair with others, and enjoying playing with other children. Two boys in the group had to be reminded of the rights of others occasionally. Parents reported that two children in the control group did not get along well with peers. One mother stated that she was partly responsible for her child's behavior. The mother had not enrolled him in nursery school, neither had she arranged for social

contacts. The mother insisted that children would fight this child. Most of the children in the experimental group were able to relate well with peers, and enjoyed playing with children. Table IX illustrates the difference between the emotional and social behavior patterns of children in the experimental group, and children in the control group. The difference was not significant.

According to Nicolaysen (55) a child needs an opportunity to establish himself as an individual, to achieve security in group relations, and gain mastery by participating in his world as he sees it. Nicolaysen stated that gaining security enables the child to move on to significant social growth. The nursery environment provides a climate in which the child is able to achieve growth at his own rate. These findings did not agree with Dilman and Adelbery's (17) observation, where they reported that only 12 per cent of the children in a welfare day care center exhibited sharing.

EVALUATION OF SELECTED PHYSICAL DEVELOPMENTS

Visual Concepts

Information obtained on visual concepts of children studied indicated that three children who had preschool experience had some visual defects when they enrolled in first-grade. Only one with no preschool experience had visual

defects when enrolled in first-grade. The author was not able to account for this difference. However, the difference was not statistically significant.

Children enrolled in the Day Nursery at Texas College, and the Tyler Day Nursery have the advantage of visual and auditory screening tests in the spring. Any child found with defects is referred to his physician for examination. This happened with two of the children in the study who had visual defects. After the screening of tests, these two children were fitted with glasses before enrolling in first grade.

Analysis of data on visual concepts is found in Table X. Chi-square value was 1.09 with one degree of freedom which indicated no significant difference between the groups. The importance of good vision has been duly recognized by eminent authorities in the field of child development. The child's visual sensory equipment must be healthy if he is able to cope with the tasks society has set for him.

Auditory Concepts

Responses obtained on auditory tests upon enrolling in first-grade revealed that three children in Group I, and four children in Group II had some type of auditory defects. Two other children no doubt would have been in the

TABLE X
COMPARISON OF SELECTED PHYSICAL DEVELOPMENTS OF CHILDREN IN GROUP I--
PRESCHOOL EXPERIENCE, AND CHILDREN IN GROUP II--
NO PRESCHOOL EXPERIENCE

Items	Group I Preschool N = 53		Group II No Preschool N = 53		Statistical Analyses		
	Good	Poor	Good	Poor	χ^2	DF	Probability
Visual Concepts	50	3	52	1	1.09	1	N.S.
Auditory Concepts	50	3	49	4	0.15	1	N.S.
Condition of Teeth	32	21	19	34	6.39	1	P < 0.05*

N = Number
DF = Degrees of Freedom
* = Significant
NS = Non-significant

defective group had they not been screened at nursery school. As a result of screening, the two children were referred to their physicians. Each child had a tonsilectomy at five-and-a-half years of age. These two children passed the auditory test with no trouble. Results of data analysis are shown in Table X. A chi-square value of 0.15 was non-significant indicating no real differences between auditory concepts of children who had preschool experience, and children who did not have preschool experience.

Condition of Teeth

Data collected on the condition of teeth of first-grade children who had previously attended day nursery and children who had not attended the day nursery revealed that 32 children in the experimental group, and 19 children in the control group had teeth in good condition when they enrolled in public school. Twenty-one children in the experimental group, and 34 children in the control group had teeth in poor condition when they enrolled in public school. Table X shows a chi-square value of 6.39 indicating a significant difference between the groups.

Day nursery children at Texas College and Tyler Day Nursery have as supplements to their dietaries:

- 1) Two or more cups of milk.
- 2) One serving of meat, fish, or poultry.
- 3) One or more servings of green, leafy, or yellow vegetables.
- 4) One fruit or vegetable salad.
- 5) One serving of starchy vegetable.
- 6) One serving of fruit juice.
- 7) One or more servings of enriched bread with each meal (sandwiches are made with enriched bread for afternoon snacks).
- 8) One or more servings of fruit or ice cream (desserts made with milk and eggs are served frequently).
- 9) One weekly serving of dried beans prepared with ground beef.

Gyorgy (26) recommended in preschool protection programs the increased availability of protective foods and improved feeding programs for preschool children. Findings of the present study indicate an advantage in supplementing the dietary of these preschool children. Another important factor is the teaching of cleanliness at the nursery school. Children are taught to wash their hands with soap before meals, and after outdoor play. The children are taught to brush their teeth regularly. Quite often the Public Health Nurse leaves samples of toothpaste and tooth brushes to be distributed to the children. A collection of health posters from the local Tuberculosis Association is used in connection with teaching cleanliness, and prevention of spreading germs when sneezing or coughing.

Height Percentile Ratings

Percentile rating is one of two methods commonly used in the measurement of children's height and weight. The other method is mean value, and one or more deviations. The author chose to use the percentile method. According to Watson and Lowrey (86) the number of percentiles indicates the position which a measurement holds in a typical series of 100 per cent. Height ratings for girls and boys in this study are shown in Table XI. Analysis indicated that 64.8 per cent of the girls with preschool experience fell between the 10th and 90th percentiles; 64 per cent of the girls with no preschool experience fell between the 10th and 90th percentiles. Fifty per cent of the boys with preschool experience fell between the 10th and 90th percentiles, while 60.7 per cent of the boys with no preschool experience fell between the 10th and 90th percentiles. Children in both groups tended to cluster around the 97th percentile, with boys being somewhat taller than girls of the same age. This is a normal trend for this age group; however, girls go into the preadolescent spurt earlier than boys, and height will increase over boys for a period of time.

Weight Percentile Ratings

Analysis of data pertaining to weight, illustrated in Table XII, revealed that 75.7 per cent of the girls who had

TABLE XI
HEIGHT PERCENTILE RATINGS OF CHILDREN IN GROUP I--PRESCHOOL EXPERIENCE,
AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Percentiles	10th	25th	50th	75th	90th	97th	Per cent be- tween 10th & 90th Percen- tiles
Girls:	Per cent Falling on Each Percentile						
Group I N = 37	--	2.7	21.6	24.3	16.2	35.2	64.8
Group II N = 25	--	8.0	12.0	20.0	24.0	26.0	64.0
Boys:							
Group I N = 16	--	6.2	12.5	18.8	12.5	50.0	50.0
Group II N = 28	3.6	14.3	10.7	7.1	25.0	39.3	60.7

TABLE XII

WEIGHT PERCENTILE RATINGS OF CHILDREN IN GROUP I--PRESCHOOL EXPERIENCE,
AND CHILDREN IN GROUP II--NO PRESCHOOL EXPERIENCE

Percentiles	10th	25th	50th	75th	90th	97th	Per cent between 10th & 90th Per- centiles
Girls:		Per cent Falling on Each Percentile					
Group I N = 37	--	10.8	18.9	24.3	21.7	24.3	75.7
Group II N = 25	4.0	4.0	20.0	28.0	32.0	12.0	88.0
Boys:							
Group I N = 16	--	12.5	18.8	37.5	6.2	25.0	75.0
Group II N = 28	--	--	32.2	46.4	17.8	3.6	96.4

preschool experience fell between the 10th and 90th percentiles. Eighty-eight per cent of the girls with no preschool experience fell between the 10th and 90th percentiles. Seventy-five per cent of the boys who had preschool experience fell between the 10th and 90th percentiles, while 96.4 per cent of the boys who had no preschool experience fell between the 10th and 90th percentiles.

Watson and Lowrey (86) suggested that 80 per cent of the weight measurements of children at a given age may be expected to fall between the 10th and 90th percentiles. Three boys in the control group were above the 97th percentile in weight and height, and one girl in the control group was above the 97th percentile in weight. The average boy in the control group was taller and heavier than the average boy in the experimental group, but boys in the experimental group achieved greater than those in the control. Greater physical maturity does not mean greater intellectual and scholastic achievements

Watson and Lowrey (86) insisted that in any group of children's measurements, weight is probably the best index of nutrition because it sums up all the increments in size. Watson and Lowrey advised that a careful evaluation be given to any tendency toward obesity. Complete evaluations of nutritional status were not made upon school entrance, but

information gained indicated that girls and boys with no preschool experience were heavier than girls and boys who had previously attended a day care facility.

Children in the experimental group had wholesome supplements to their dietaries at regular scheduled periods, which would normally promote good physical, social and emotional development. With many mothers employed outside the home, no effort was made to determine what the children in the control group consumed. The tendency toward overweight could be the result of an unbalanced dietary and irregular meal patterns.

CHAPTER IV

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 present study was an outgrowth of the author's 19 years of experience working with very young children in an approved day care center, and her firm conviction that:

- 1) The early years of the child's life are the most important.
- 2) Early experiences will be reflected in the child's physical development, school readiness, learning proficiency, emotional and social behavior patterns.
- 3) The environment should meet the basic needs of the child.

The study was based on the assumption that environmental factors are determinants of the child's future development and adjustment in later life. After a period of years in observing achievements of children who had attended the day nursery, the author was inspired to make an intensive investigation to determine if day care experiences contribute toward:

- 1) Better physical development.
- 2) Greater emotional and social adjustment.
- 3) Higher scholastic achievements of first-grade children.

Specific objectives of the study were to:

- 1) Review recent research on physical development, emotional and social behavior patterns, school readiness, and scholastic achievements of first grade children who previously attended a state approved day care facility.
- 2) Determine whether or not a relationship existed between experiences in a state approved day care center and physical development, emotional and social behavior patterns, school readiness, and scholastic achievements.
- 3) Compare the physical development, emotional and social behavior, school readiness and scholastic achievements of first-grade children who previously had day care experiences with children who did not have preschool experiences.

The sample consisted of 106 first-grade children enrolled in five elementary schools located in Tyler, Texas. These children represented 91 Caucasian, Negro, and Mexican-American families. The children ranged in age from 5.5 to 7.5 years, with a mean age of 6.5 years. Children in the experimental group had attended a day care facility. The group consisted of 37 girls and 16 boys. The control group had no preschool experience, and was composed of 25 girls and 28 boys.

The four instruments that were used in collecting data for the study are as follows:

- 1) Metropolitan Reading Readiness Tests, Form S (33).
- 2) Metropolitan Achievement Tests, Form A (20).

- 3) "Tyler Public School Health Growth Record, Form #22."
- 4) "Parents' Recall Instrument," designed by the author.

Data obtained were analyzed in accordance with purposes of the study. Metropolitan Reading Readiness Tests, Form S (33), scores were used to measure the achievement of the child beginning in school that contribute to readiness for first-grade instruction. Areas of particular concern were word meaning, sentences, information, matching, numbers and copying. Children who had attended a day care nursery school prior to enrolling in first-grade had a higher mean score than children who had no preschool experience. More children with preschool experience rated "superior" and "high normal" than did children with no preschool experience.

Statistical analysis of the data on Metropolitan Achievement Tests, Form A (20) revealed that children who had preschool experience scored higher in Word Knowledge, Word Discrimination, Reading, and Arithmetic Concepts and Skills, than first-grade children who had no preschool experience. Information gained from "Parents' Recall Instrument" indicated that children who attended day nursery prior to enrolling in first-grade scored significantly higher in achievements of Everyday Problems, Motor Skills and Coordination, and Intellectual Performance than

children with no preschool experience. No difference was found between the groups in Emotional and Social Behavior.

Statistical analysis of data obtained on selected physical developments indicated no significant difference between the experimental and control groups in visual and auditory concepts. There was, however, a significant difference in the condition of teeth.

The Percentile Method was utilized for treatment of heights and weights of the children in the study. Height ratings of girls in the two groups studied were similar. Boys in the control group tended to be taller than boys in the experimental group. Some children in each group tended to cluster around the 97th percentile, but boys were taller than girls. Percentile ratings on weight revealed that girls and boys in the control group tended to be heavier than girls and boys in the experimental group.

The following conclusions were based on analysis of information obtained on first-grade children with and without preschool experience:

- 1) Children who had day care experience prior to enrolling in first-grade had a better foundation for first-grade instruction than children who had no preschool experience.

- 2) Children with day care experience scored higher on Metropolitan Reading Readiness Tests, Form S than children with no preschool experience.
- 3) Children with day care experience achieved higher scholastic attainment in first-grade than children with no preschool experience.
- 4) No significant difference existed between emotional and social behavior of children with day care experience and children with no preschool experience.
- 5) No significant difference existed between visual and auditory concepts of children with day care experience and children who did not have preschool experience.
- 6) The teeth of children who had day care experience were in better condition than teeth of children with no preschool experience.
- 7) No difference existed between height percentile rating of girls in the two groups.
- 8) A greater percentage of boys in the control group fell between the 10th and 90th height percentiles, but 50 per cent of the boys in the experimental group fell at the 97th percentile.
- 9) Girls and boys with no preschool experience tended to be heavier than girls and boys who had day care experience, but failed to score as high on Metropolitan Reading Readiness Tests, Form S (33), and Metropolitan Achievement Tests, Form A (20) as girls and boys who had preschool experience.

It is recommended that additional research be undertaken to verify the findings in this study:

- 1) A larger sample of first-grade children with and without preschool experience should be studied.
- 2) A variety of standardized instruments should be utilized, such as: Bonham (4) Maturity Level for Entrance and Reading Readiness; Pintner-Cunningham Primary Tests (60); Harrison-Stroud (27) Reading

Readiness Profile (27); SRA Tests of General Ability, Form K-2 (22); California Short Test of Mental Maturity, Sullivan, Clark and Tieggs (78); and Murphy-Durrell Reading Readiness Analysis (54).

- 3) Follow-up studies be conducted on the same children from year to year through elementary school.
- 4) Some of the research centers that have developed better methods of understanding and promoting human development should be contacted; such as Iowa Child Research Station, Brush Foundation at Western Reserve University, Yale Clinic of Child Development, Child Health Division of Harvard School of Public Health, Child Research Council of Colorado, and Fels Institute for the Study of Human Development.

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A P P E N D I C E S

A P P E N D I X A

METROPOLITAN READINESS TESTS

FORM S

TEXAS WOMAN'S UNIVERSITY
LIBRARY

Metropolitan Readiness Tests

BY GERTRUDE H. HILDRETH, Ph.D., AND NELLIE L. GRIFFITHS, M.A.

TEST : FORM S



NAME _____ BOY _____ GIRL _____ DATE OF TESTING _____
Year Month Day
 TEACHER _____ SCHOOL _____ DATE OF BIRTH _____
Year Month Day
 CITY _____ COUNTY _____ STATE _____ PUPIL'S AGE Yes No Months
 GRADE _____ NUMBER OF MONTHS KINDERGARTEN TRAINING _____

TEST	RAW SCORE
1. WORD MEANING	X
2. SENTENCES	
3. INFORMATION	
4. MATCHING	
Total Tests 1-4	
5. NUMBERS	
6. COPYING	
Total Tests 1-6	

This space is to be used for drawing a man.

READING READINESS

SUM OF SCORES TESTS 1-4	LETTER PACING	READING READINESS STATUS

NUMBER READINESS

SUM OF SCORES TESTS 5-6	LETTER PACING	NUMBER READINESS STATUS

TOTAL READINESS

SUM OF SCORES TESTS 1-6	LETTER PACING	INITIAL READINESS STATUS	PERCENTILE RANK

DRAWING A MAN
TEST

RATING

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REV. 3-21

Metropolitan Readiness Test

(Results)

Form S

Group Sex	Reading			Numbers			Total Readiness			
Name-Age	Sum of Scores Tests 1-4	Letter Rating	Reading Readiness Status	Score Test-5	Letter Rating	Number Readiness Status	Sum of Scores Tests 1-6	Letter Rating	Total Readi- ness Status	Percen- tile Rank

A P P E N D I X B

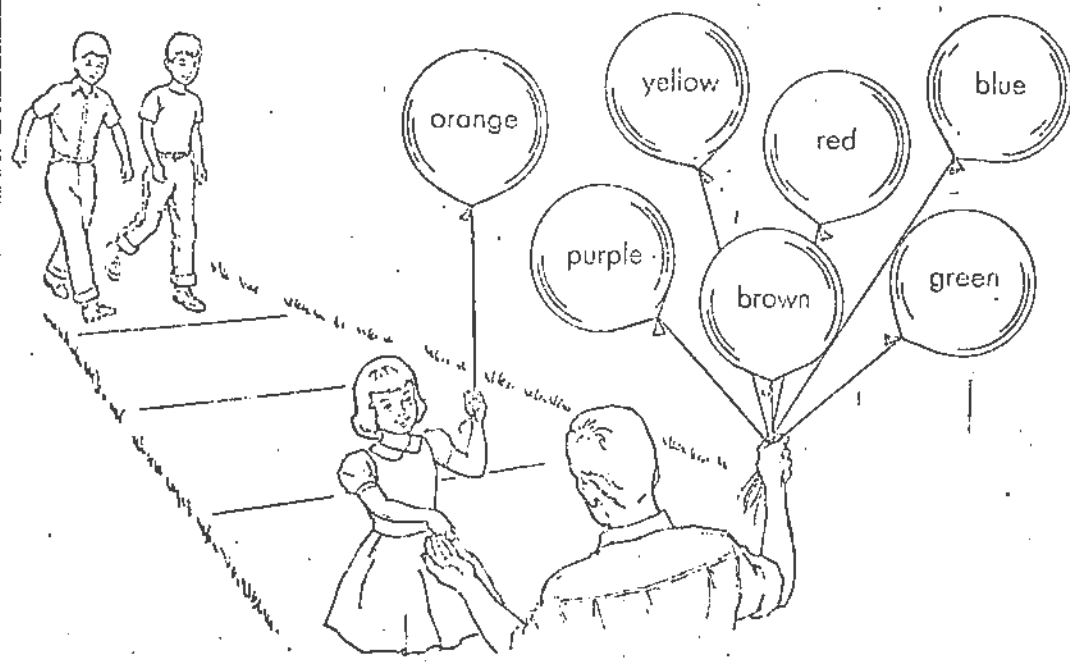
METROPOLITAN ACHIEVEMENTS

TESTS FORM A

FORM A / PRIMARY I BATTERY

FORM A
PRIMARY
I
BATTERY

My name is _____



My name _____

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Metropolitan Achievement

Grade 1, latter half Form A

Group Sex		Word Knowledge			Word Discrimination			Reading			Arithmetic Concepts and Skills		
Name	Age	Standard Score	Grade Equiv.	Rank Percen- tile	Standard Score	Grade Equiv.	Rank Percen- tile	Standard Score	Grade Equiv.	Rank Percen- tile	Standard Score	Grade Equiv.	Rank Percen- tile

A P P E N D I X C

TYLER PUBLIC SCHOOL

HEALTH GROWTH RECORD

° FORM 22

HEALTH GROWTH RECORD

[illegible]

Form #22 CODE: 1—Good 2—Fair 3—Poor P—Passed F—Failed N—Needs Medical Care W. G.—Wears Glasses

A P P E N D I X D

PARENTS' RECALL INSTRUMENT

(Experimental and Control Groups)

P A R E N T S ' R E C A L L I N S T R U M E N T

CHILD'S PHYSICAL MATURITY SKILLS

SOCIAL AND EMOTIONAL BEHAVIOR PATTERNS

Child's Name

Age:

Place an X under Yes or No

	Yes	No
A. How child deals with everyday problems		
1. Eating-		
a. Usually first to finish his meal		
b. Eats steadily but not the first to finish his meal		
c. Usually the last to finish eating		
2. Sleep or Rest-		
a. Lies quietly at once		
b. Needs help to relax		
c. Takes favorite object to bed		
3. Toileting-		
a. Independent with toilet routine		
b. Announces his need to go to the toilet		
c. Wets himself occasionally		
4. Dressing-		
a. Independent in dressing if clothes are laid out		
b. Can fasten and unfasten simple fasteners		
c. Can lace, tie and untie own shoe strings		
5. Removing Wraps-		
a. Removes wraps without being reminded		
b. Hangs wraps in proper place		
c. Throws wraps down any place		

		Yes	No
B. Motor Skills and Coordination			
1.	Body Posture-		
	a. Stands erect with ease		
	b. Stands relaxed		
	c. Deformity affects posture		
2.	Coordination-		
	a. Runs and skips with ease		
	b. Runs or skips with much concern		
	c. Unable to run and skip		
3.	Equilibrium-		
	a. Rides a bicycle with ease		
	b. Rides a bicycle with much concern		
	c. Unable to ride a bicycle alone		
4.	Play Activities-		
	a. Plays vigorously at all times		
	b. Enjoys playing with others		
	c. Plays alone most of the time		
C. Intellectual Level			
1.	Attention Span		
	a. Able to give attention for a reasonable length of time		
	b. Attention span very short		
	c. Unable to give attention		
2.	Speech-		
	a. Speech clear and distinct		
	b. Speech is not very clear		
	c. Used many gestures (Pointing, etc)		
3.	Stories-		
	a. Enjoys listening to stories		
	b. Repeats simple stories		
	c. Repeats only parts of simple stories		
4.	Interest in Music-		
	a. Enjoys listening to music		
	b. Enjoys singing		
	c. Attempts to sing		
5.	Interest in Pictures-		
	a. Enjoys looking at pictures		
	b. Pays little attention to pictures		
	c. Likes to draw pictures		

	Yes	No
6. Interest in Colors (art)-		
a. Enjoys painting or using colors		
b. Does not express interest in coloring		
c. Attempts to paint when asked		
7. Knowledge-		
a. Knows own name, age and address		
b. Knows parents' name		
c. Unable to give home address		
D. Social Behavior Pattern		
1. Friendships-		
a. Has many friends		
b. Has few friends		
c. Has no favorite friends		
2. Fair Play-		
a. Plays fair with peers		
b. Unfair with peers at times		
c. Plays unfair most all the time		
3. Sharing-		
a. Takes turns most of the time		
b. Takes turns sometimes on his own		
c. Never wants to take turns		

V I T A

Joy Belle Ross

Mrs. Joy Belle Sinyard Ross is the daughter of the late Reverend and Mrs. Q. H. Sinyard. She was born in Oklahoma City, but was brought to Texas at the age of four. After the death of her mother she was reared by an aunt, Mrs. Rosa A. Calhoun at Bryan, Texas.

Joy Belle completed her high school training at Prairie View Academy; she completed the undergraduate program at Prairie View A and M College with a major in general Home Economics. She later completed advanced work at Kansas State University, Manhattan, Kansas, for the Master's Degree with a major in Nutrition and a minor in Child Development and Family Life.

Mrs. Ross began her teaching career in the rural schools of Central Texas. She taught the first three grades her first year, general science and Homemaking I and II her second year. She served as County Home Demonstration Agent in Smith County before marrying Carl Edward Ross, a high school and college classmate. Since earning the advanced degree she has taught at Prairie View A and M State College, Tillotson College, Austin, Texas, and

Texas College in Tyler, Texas, from which she is now on sabbatical leave to complete the Doctoral Program at Texas Woman's University.

Upon completion of the graduate program, Mrs. Ross will return to Texas College where she plans to improve the day care center and develop a Child Development Research Center. Emphasis will be placed on training nursery and kindergarten teachers. She is the mother of two children; Mattye Belle who is a French instructor at Tuskegee Institute, Alabama; and Carl Edward II, a student at Prairie View A and M College majoring in Architecture.