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An Analysis of the Effects of Selected Demographic Variables on the Readiness of Kindergarten Students.

Carolyn H. Harris

AN ANALYSIS OF THE EFFECTS OF SELECTED DEMOGRAPHIC VARIABLES ON THE READINESS OF KINDERGARTEN STUDENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Education in the Graduate School of Texas Southern University

By

Carolyn H. Harris, B.S., M.Ed.

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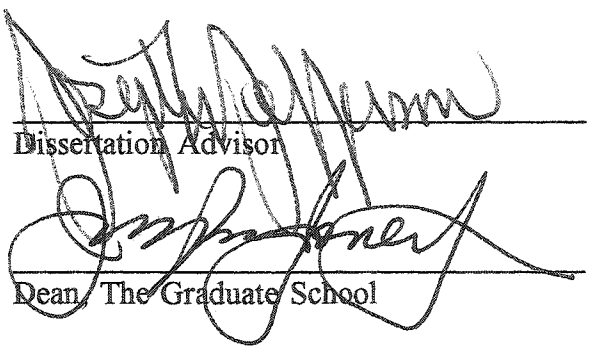

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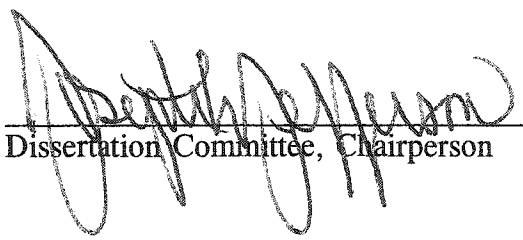

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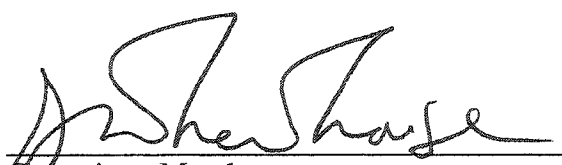

Committee Member — Date 4/1/98

Committee Member — Date

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VITA

July 31, 1947.....	Born - Austin, Texas
1970.....	B.S., West Texas State University Canyon, Texas
1972-90.....	Art Instructor Pasadena Independent School District, Pasadena, Texas
1982.....	M.A. Ed., Texas Tech Lubbock, Texas
1990-Present.....	Counselor Channelview School District, Channelview, Texas
Major Field.....	Counselor Education

DEDICATION

This study is dedicated to my wonderful family, colleagues and friends who always encouraged me and helped me overcome what seemed to be insurmountable odds. I will be eternally grateful.

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This important and current phase of education would never have been completed without the encouragement, guidance and support of numerous people. Many thanks to those who helped me complete this study. Dr. Irma T. Malloy, thank you for your never ending belief in my ability and continuous support. Special thanks to Dr. Butler for your statistical expertise and kindness. Sincere gratitude is extended to Dr. Geary D. Newhouse and Dr. Sandra D. Rouce for your constructive criticism and advise. Special thanks goes to Ms. Cannon for your understanding and knowledge of procedures.

Chapter 1

INTRODUCTION

Over the past few decades, teaching, learning and the quality of public education has been a great concern to parents, educators, civic leaders and politicians. To determine how children learn, it is helpful to understand school readiness, and those factors which influence school readiness. Children are considered natural learners and even though they each learn at a different pace, they are all learning machines. Readiness for school is a key factor in determining personal and professional success. During this period of limited resources it is vital for educators to identify and address factors which facilitate or thwart learning; hence, reducing the number of at-risk children.

The relationship between unsatisfactory school performance and poverty has been established by many studies, including the 1966 Coleman Report. Since children are learning machines and they seem to learn in direct relationship to their early experiences, the federal government has attempted to intervene and create a level playing field for low income children. The Economic Opportunity Act, passed in 1964 by the federal government, was enacted to provide funding for early educational intervention for economically disadvantaged students. Through this act, the Head Start program was created in 1965, with funds provided through The Elementary and Secondary Schools

Act. Head Start was established to address the school readiness of children who experience social, cultural and/or economic deprivation. The program was designed to assist these children with the development of language skills, the development of curiosity, and to increase their self-esteem; research supported readiness indicators. Additionally programs such as Head Start teach children of lower income families the affective, cognitive and linguistic skills they need to succeed in school, despite the fact that some educators think that this is too early for such learning.

Preschool education is based on the assumption that the child needs to be prepared to meet school expectations. Many children have been in school for years by the time they reach kindergarten, however; others do not have their first experience in school until kindergarten. With fewer members in the extended family to help with educating children, the trend is toward starting to school earlier and earlier. Additionally, not all the parents can teach a child for fourteen hours a day without help or relief and for working parents, preschool is a necessity. Some worried parents who are afraid their children might fall behind in mathematics and reading, place their children in preschool in an attempt to prevent this occurrence.

Usually the term `school readiness' is thought of in conjunction with pre-kindergarten and kindergarten. Actually school readiness applies to children of all ages from pre-kindergarten to college. Parental behavior determines the amount of academic commitment that children exhibit. Everything a parent does to help a student prepare for or advance in school can be considered school readiness. Habits which impact academic success are developed early and too many children have lost interest in reading by the

fourth grade due to learning differences that were not identified or the loss of excitement for learning early in their school lives according to Griggs (1995).

Statement of the Problem

As history has progressed, members of society have educated people in order to provide for the necessities of living and to satisfy society's artistic and creative requirements. In order to succeed in life, individuals have found it necessary to gain knowledge. Starting in the 19th century and continuing into the late 1960s the number of children in preschool programs in the United States greatly increased. This increase occurred for a while even though the number of children under age five was decreasing. Since 1985, the preschool population has been on the rise. The percentage of children enrolled in preschool programs rose from about 27 percent in 1966 to about 56 percent in 1991 (Grolier Multimedia Encyclopedia Electronic Publishing, Inc. 1995).

In a world of rapidly advancing technology and highly competitive job markets, education can be changed to meet individual requirements. These needs can be addressed earlier and more efficiently once factors determining readiness for school have been identified. Through the understanding and assessment of readiness, educators will be able to serve or meet the variety of needs of all children. The purpose of this study is to investigate whether gender, type of dwelling, number of siblings, parental economic status, family structure, type of transportation to and from school, and ethnicity influence school readiness.

The purpose of this study was to investigate the impact of selected demographic variables on kindergarten students' readiness scores for elementary school. This

investigation was conducted to determine if readiness differences depended on gender, type of dwelling, number of siblings, parental economic status, family structure, and type of transportation to and from school for kindergarten students. The answers to the following questions were sought:

(1) Does the variable type of family structure affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(2) Does the variable parents working status affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(3) Does the variable type of dwelling affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(4) Does the variable parents' economic status affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(5) Does the variable gender affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(6) Does the variable number of siblings affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(7) Does the variable ethnicity affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(8) Does the variable types of transportation affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

Significance of the Study

Educators have a special opportunity and responsibility to help students succeed. In the past few decades, their need for recognizing and understanding individual differences has grown. One factor which educators are exploring is school readiness. School readiness has been found to impact the student's overall academic success throughout school. The focus of this study was to examine readiness of kindergarten students as determined by the Phelps Kindergarten Readiness Scales along select demographic variables in regard to the traditional family versus nontraditional family, parental employment status, single family dwelling as opposed to multifamily dwelling, free lunch program versus non-free lunch program, male versus female, no siblings as opposed to having siblings, ethnicity, and type of transportation to and from school.

Statement of Hypotheses

The following null hypotheses were formulated and tested:

HO1: There is no statistically significant difference in the performance of those kindergarten students who are from traditional families and those from nontraditional families on the Phelps Kindergarten Readiness Scale.

HO2: There is no statistically significant difference in the performance of those kindergarten students due to parental employment status on the Phelps Kindergarten Readiness Scale.

HO3: There is no statistically significant difference in the performance of those kindergarten students who live in a single family setting versus those students who live in a multifamily setting on the Phelps Kindergarten

Readiness Scale.

HO4: There is no statistically significant difference in the performance of those kindergarten students who participate in the free lunch program versus those who do not participate in free lunch program on the Phelps Kindergarten Readiness Scale.

HO5: There is no statistically significant difference in the performance of those kindergarten students who are male versus those students who are female on the Phelps Kindergarten Readiness Scale.

HO6: There is no statistically significant difference in the performance of those kindergarten students who have one to two siblings versus those who have more than two siblings on the Phelps Kindergarten Readiness Scale.

HO7: There is no statistically significant difference in the performance of those kindergarten students by ethnicity on the Phelps Kindergarten Readiness Scale.

HO8: There is no statistically significant difference in the performance of those kindergarten students who are car riders versus those students who are bus riders on the Phelps Kindergarten Readiness Scale.

Assumptions

This study was designed and developed within the framework of the following assumptions:

1. That the students will answer all questions honestly and in an impartial manner.

2. The students had not received formal instruction in academics at home before attending kindergarten.

Limitations

The following limitations can be observed throughout the study:

1. The population of this study was limited to kindergarten students from a school in a district located in an industrial area near Houston, Texas.
2. The study was limited to kindergarten students during the school year 1995-1996.

Definition of Terms

The following are the operational terms used in this study.

Kindergarten: A school for furthering the mental, moral, and physical development of young children by means of games and skills that make use of their natural tendency to express themselves in action. Kindergarten students range in age from four to six.

Readiness Scale: A test designated to determine or predict later school achievement.

Ethnicity: Pertaining to a particular group of people, racially or historically related, having a common and distinctive culture.

EOA: Economic opportunity act.

Head Start: Federally funded program created to help economically disadvantaged preschool aged students.

Pre-school Education: Refers to the level of education that children receive before entering the first grade of elementary school.

Gender: Refers to male/female.

Types of Housing: A type of housing, something serving as a shelter, single family, multifamily or homeless shelter.

Economic status: Determined by application for free and reduced price meals.

Traditional Family: Having two parents with family unity untouched.

Nontraditional Family: The family unit is broken by divorce, death or other circumstances.

Organization of the Study

This dissertation is organized into five chapters. Chapter One includes an Introduction of the Study, Statement of the Problem, Purpose of the Study, Significance of the Study, Research Questions, Hypotheses, Limitations, Definition of Terms, Assumptions, and Organization of the Dissertation. Chapter Two presents a Review of the Related Literature with specific focus on research reported in journals and articles that were recently completed in the area of readiness. Chapter Three presents the methodology used in the study, including the Design of the Study, the identification of the Population and Sample, the Instrumentation, the Validation of the Instrument, Data Gathering Procedures and Treatment of the Data. Chapter Four presents the Analysis of Data and the Implications of the Findings. Chapter Five includes the Summary, Findings, Conclusions, Recommendations for Implementation and Recommendations for Further Study.

Chapter 2

REVIEW OF RELATED LITERATURE

The primary purpose of this chapter is to explore and review the literature related to readiness of kindergarten school children, factors which influence readiness, and the readiness of at-risk school children. Contained within this chapter is a compilation of selected studies that relate significant and relevant research findings concerning academic readiness. The term `school readiness' is used in conjunction with pre-kindergarten and kindergarten levels, however; school readiness applies to learners of all ages from pre-kindergarten to college. Parental behavior determines the amount of academic commitment that children exhibit. Even though reading is of vital importance to overall school readiness, mathematics readiness needs to be addressed also. A relationship between inadequate school achievement and poverty levels was reported in the 1966 Coleman Report. Children are learning machines and they appear to learn in direct relationship to their early experiences.

Child development is a field of study covering all aspects of human growth from birth to adolescence. Included in this progression is the advancement of the child's skills, development of personality, which involves the complex interaction between psychosocial factors and the stage-by-stage development of the body. Another part of this development is socialization, the process by which children adjust to societal

demands. These factors have a direct impact on school readiness (Griggs, 1995).

According to Nurss (1997), both the instructional situation and the child are involved in what is referred to as readiness for kindergarten. Readiness means that which comes next. Children are expected to know the readiness skills of caring, sharing, taking turns, co-operative learning, fine and gross motor skills, visual and auditory differences of both objects and sounds and interests in relationships between written and oral language.

Previously a child's first school experience was a half-day of kindergarten used for social adjustment to school. The focus has changed from social to cognitive to academic full-day experiences. Kindergarten experiences vary by using concrete activities and learning centers , while others use structured pencil and paper activities involving mathematics and reading through workbooks that are coordinated as the primary level of the textbook series. The readiness of each child will depend on language, motor, perceptual and social skills expected by school systems.

Family Environment, School and Society

According to Zirpoli (1997), most parents think of writing and reading as school readiness, while the majority of kindergarten instructors want children to know primary colors and have the ability to write their own name as part of school readiness. A vast majority of kindergarten students lack the important readiness skills included in basic social ability. These children have not been taught at home to get along with siblings, to sit and listen to a parent reading or to listen and obey their parents or primary care givers.

A parent must be consistent every time a request is made so children are able to learn compliance. Immediate consequences or praise must follow every request so children learn that it is important to follow directions the first time they are given. Parents are the child's most important and first teachers so they help their children learn how to get along with peers and learn the needed social skills for school success.

According to Alexander and Entwisle (1988), children who adapt to the routine of schooling successfully in the first two grades have positive long-term implications for their cognitive and affective development. This study included research concerning home and school factors that either facilitate or hinder this process of adaptation to schooling. Their longitudinal study about cognitive performance for a large and diverse sample of youngsters for grades one and two was conducted in the Baltimore City Public Schools system. Report-card marks in reading and mathematic, and the scores on verbal and quantitative subtests of the California Achievement Test (CAT) battery were used over a two-year period for the basis of comparison. This study directed focused to a variety of social-structural information which included socioeconomic background, gender, ethnicity, and psycho-social (significant others and self-reactions) data that were all factors that could shape youngsters' intellectual development.

According to Zill, Collins, West, and Hausken (1995), nearly 98% of the children in America attend kindergarten before going to the first grade. With this increase in numbers has come a population widely diverse in language, income levels, parental education, types of family and different cultural, ethnic and racial backgrounds. American schools are supposed to react to these differences in children's readiness so all

children can have a good start in the learning process. More boys than girls had problems with speech, attention and small-motor skills. Hispanic preschoolers were found to have greater problems with health than African American or Caucasian children. Differences between ethnic groups in this report were accounted for by single parenthood, poverty and low maternal education.

Children entering kindergarten who had learning problems dealt with family risk factors including single parenthood, English as the second language of the mother, the family exists in a poverty level and the mother had less than a high school education. Literacy scores improved in children attending Head Start and Prekindergarten. This report revealed that although poverty was thought to be the main factor of educational problems, family structure, predominate language not English and low education of the mother were efficient predictors of students problems and accomplishments. With the wide variety of children's needs upon entering kindergarten, challenges are presented to communities, schools, teachers and families.

Racial comparisons kept by school year status (first vs. second) emphasized some very important differences in the change from part-time to full-time schooling. Alexander and Entwisle (1988) found that many social-structural and psycho-social factors influenced the gains on CAT scores were determined over the first year rather than the second and that fall to spring testing levels were more stable and more pronounced in the second year than in the first. This pattern was identified during the initial year of schooling. Minority and majority youngsters in this study began school with similar CAT averages; but by the end of the first year, African-Americans'

performances lagged noticeably behind the Caucasians, and the differences became wider as shown by the results from the second year. African-Americans students also received lower report-card marks than the Caucasians. This, along with smaller CAT gains, revealed that the transition to school is more problematic for African-American children than for Caucasian children. The social-psychological aspect early achievement patterns also differ by race: African American's achievements are less influenced by parent variables than are those of Caucasians, and African-American youngsters' self-expectations are less affected by the expectations held for them by their parents than are those of Caucasians. These results and others have implications for students' development and for what they reveal about social structure in relation to the early schooling process (Alexander and Entwisle, 1988).

Johnson (1996) investigated kindergarten student's readiness, using the Kindergarten Diagnostic Instrument (KDI) developed by Robinson and Miller in 1990. Data were collected for several years covering number skills, vocabulary and skill discrimination in a school district located in central area of Texas. During the first year no intervention was used, while during the second year teachers used CD-ROM-Interactive Intervention during variable time increments. The third year structured intervention for variable increments and structured consistent intervention was used by one instructor in charge of all students qualified for Title I and a subset of the entire kindergarten population. The third year students who had intervention showed very significant gains as opposed to the students from the first year who received no intervention. The students showed gains on the following subscales: Visual-Motor

Integration, Visual Memory and Discrimination and Gross Motor Skills. There were no significant differences found between ethnicity, gender or age in relation to benefits from intervention. This study showed an increase in readiness skills with structured consistent intervention.

Coulter (1992) explored the understanding of South Dakota kindergarten teachers' feelings regarding the National Education goal which indicates that all children will be ready to learn when they start school by the year 2,000. The teachers were questioned concerning collaboration, parental involvement, readiness and curriculum. Thirty factors were selected for use in the questionnaire. Two six-point Likert scales were used to determine the response pattern for each factor. Of the 355 teachers of kindergarten age students in South Dakota, 247 or 69 percent returned the survey. The teachers revealed a preference for a program that is integrated, covers various learning styles and is appropriate for individual development. A strong belief in preschool programs to increase readiness for all was expressed. Additionally, the kindergarten teachers wanted a program that encourages cooperation between public schools, social service agencies and parents, but did not believe this would happen nearly as much as they desired.

The Anderson (1989) longitudinal study reported the effects of public day-care in Sweden in which 119 Swedish children were followed from their first year of life up to the age of eight. They found that many children could be classified by (a) the kind of day-care children had during the initial seven years of life and (b) the initial time of entrance into day-care facilities. The children were administered an aptitude test at age eight and teachers rated the children on school performance, social and personal

development. The hierarchical regression analyses and multiple analysis of variance with co-variance (MANCOVAs) were used for statistical purposes. Children who entered day-care early (before the age of one) generally performed better and had a more positive rating than children who entered day-care late or had home care. Children with early child care had a more favorable outcome.

According to US Department of Education (USDE) (1997), readiness for learning is based upon a strong reading foundation increased by the amount of time spent by adults reading to children. This foundation can be strengthened through programs involving community libraries or businesses, religious or neighborhood centers and increased programs for reading in local schools.

Children from all ethnic backgrounds, various family sizes and different economic backgrounds can benefits from President Clifton's America Reads Challenge that strives to have everyone join together in helping parents and teachers increase readiness and skills used in reading for America's children. President Clinton believes that, by the year 2000, every 8-year-old child in America can read an appropriate book all by him or herself. The America Reads Challenge is supported by President Clinton and is based on the belief that reading is the academic achievement cornerstone and the most essential and basic to all the academic skills.

President Clinton (1997) emphasized that everyone, not just parents and educators have a responsibility to encourage readiness so children are able to use to the most advantage their God-given potential. Because new scientific research suggests dramatic increase during the first three years of life, children will develop and learn more easily

if parents, siblings or adults read, sing, talk and nurture them.

The President further emphasized the continuing necessity for Head Start programs in readiness for young children. He also praised the US Department of Education's "Ready, Set, Read" tool kit for use by parents and day-care instructors in reading to children up to age five (U.S. Department of Education, 1997).

Springate (1983) conducted a study in an effort to explore the relationship between reading readiness and familiarity with writing skills of three groups of children. A total of 48 young students were separated evenly into groups of three, four and five year olds. Children recognized and named letters and wrote with a pencil and used magnetic letters. The children followed the characters Maggie and Max who helped them solve problems of communications such as writing a letter, labeling and listing. To create tasks for writing forms, children placed letters horizontally on magnetic boards. Reading readiness was determined by selecting the item that matched the given letter sound. The highest score possible was nine. The children were then asked to look at 26 cards and correctly name letters on each of these cards. The best score on this part was twenty-six. All scores were better as the groups increased in age with the biggest improvement shown between groups of three and four year old children.

Chew (1986) explored the benefit of reading to children prior to school entry. Chew believes that children gain security from being close to the adult reader, as well as the beginnings of memory and discrimination and recognition of text, patterns of stories, rhyming and repetition that are all thought to be essential in learning to read. Similarities in story pattern with rhyming help the child to develop language and to be

entertained. Repetition, as long as it is not used so often that it becomes boring, can stimulate an interest in books and prevent at-risk learning situations. He postulated that a child can have an increased knowledge base by hearing an adult read books such as The Happy Egg, The Carrot Seed and The Very Hungry Caterpillar. Fun and experimentation with words are explored by Horton Hatches the Egg and McElligot's Pool. According to Chew, Chief of the Bureau of English/Reading Education reading to the young child can provide positive educational experiences for both the child and the adult.

Although school readiness is a factor in academic success, the literature shows that there are other factors which impact school success (i.e. teachers, schools and instructional methodology, etc.). In a recent study, Bressoux (1995) found that, at the elementary school age, learning to read takes children varying lengths of time depending on the class the child is in and also, to a much lesser degree, on the school itself. Furthermore, the performances from one class to another in the same school are not homogenous and the differences between schools are due to one or two classes with particularly good or bad levels of learning which tend to raise or lower the level within that school and prevent a global progression of all the classes together. These results, combined with the fact that there is a low level of homogeneity in teaching methods and expectations (testing) within one school, make the idea of the school as a strongly-formed entity difficult to accept. It would seem, given these results, that the school effect should be interpreted more as an aggregation of class effects than as the effect of the school as an entity. A number of elements might be used with a theory of organizational sociology

in order to explain the results.

The Bayder, Brooks-Gunn Bandar and Furstenberg (1989) study showed that the family environment, educational ability and career training were the factors used in predicting young adulthood literacy. Preschool intellectual and behavioral functioning were indicative of a high rate of literacy in teens, even when the effects of the home situation, including living arrangements, the quality of the home environment, education of the mother, and economics were controlled. Failing grades in elementary school were also associated with literacy, but this effect went away when all measures of preschool abilities were controlled. The factors in a family's situation that were predictive of literacy were the mother's level of education, the number of children in the family during a child's early childhood, marital status of the mother, and income levels during a child's middle childhood and early adolescence. These findings were found to have a positive correlation (Bayder, Brooks-Gunn Bandar, and Furstenberg, 1989).

Bradley and Caldwell (1984) who investigated and discovered that the scores on the HOME Inventory given during the first two years of living were highly correlated with the results of intelligence test scores at ages three and four and a half. In that investigation HOME scores from the original two years showed that some similar relations to Scientific Research Associates (SRA) Achievement Test scores existed during the first grade. For the most part, the results of this study were similar to those from the previous studies with the exception that the subscale of "maternal responsively" resulted in a weaker correlation to achievement than to IQ, while another "variety of stimulation" scale exhibited a stronger correlation. The HOME subscale, "play material"

resulted in the most possible correlation of any with the first-grade achievement scores. The results of the 12-month Bayley MDI scores, being partial out of the HOME achievement relationship, resulted in less reduction found in the magnitude of the correlation. However, when the three-year IQ or following HOME scores were partialed out, very little residual correlation was determined.

In a later study Bradley and Caldwell (1988), investigated the home environments of a group of 42, 10- and 11-year-old children who were first studied when they were very small students and once more during middle childhood. Significant correlations were found in the children achievement test scores as measured by the SRA, and the children's behavior in the classroom. The HOME environment instrument was given at the age of six months, was only slightly correlated with behaviors in the classroom. Partial Correlations were used in testing three models of environmental action: Model I (primacy of early experience), Model II (predominance of the contemporary environment) and Model III (cumulative effects in stable environments). The very strongest relationships were found for the contemporary environment. All three models had some support. Correlations between HOME scores and children's competence in middle childhood resulted in a complex portrait that could not be explained in reference to the single model of environmental action.

Reiner, movie director and television star, developed a special film in 1997 for ABC television revealing results of early stimulation of brain tissue to later success in learning abilities. Several programs are used by Head Start, as well as public and private schools nationwide. Spatial skills, used for success in computer skills, engineering,

science and math, increased in preschoolers participating in group singing and keyboard lessons. This was discovered by physicis,t Jordan Shaw of the University of California in Irvine and Frances Ranscher, psychologist of the University of Wisconsin located in Oshkosh. Professional artists trained in early childhood education worked with small groups of preschool children to explore repetition, pattern and change. This preschool program increases school readiness through gains in language development and cognitive skills of those children living in South Philadelphia in a housing project across the street from the 87-year-old Settlement Music School.

In another program to increase school readiness, life skills and basic academics are taught to preschool children through arts activities. The children's caretakers obtain training in the Wolf Trap Institute for Early Learning through the Arts in Vienna, Virginia and increase successful learning through wiring of children's brains via role-play, drawing, dancing, singing and communicating.

According to Redtah, Dudley-Marling, and Murphy (1997) stated that Both Canadians and Americans possess a strong belief in the ability of education to overcome any difficulties developing from a child's experience or background. This belief is the center of the cultural notion that through good education and hard work all citizens with a readiness to learn can hope to reach some degree of economic and social success. In some cases, hard work and education are unable to overcome the effects of gender, religion and poverty. Reading Recovery operates in non-disruptive ways; in other words, the program adjusts to the characteristics of the existing school and it's systems. Failure is found with each individual, not the school system as a whole. Readiness for

differences discovered in learners are based upon gender and cultural identities. Creating room for diverse behavior means accepting difference. In order to reach certain efforts to improve short-term betterment, this program sees the necessity to explore and find ways to improve social success .

In a study conducted by Halle and de Boysson-Bardies in 1992, the beginnings of word recognition by infants with no extra linguistic cues were identified using a specific head-turn paradigm. The familiar words were read, along with rare words, to compare preference in 11 to 12-month-old French infants. Psycholinguists reported that children understood much more than they produced. Two groups of infants were used in this study. Five girls and seven boys were in the group of 11-month-old infants and five girls and seven boys were in the group of 12-month-old infants. Results from several subjects were not used because one child fell asleep, three cried and could not be calmed and the experimental procedure had errors in another instance. The total gaze duration for familiar words was described with D(F) and the length of gaze for rare words was described with D(R). Using paired t-tests, the 11-month-old infants displayed a significant difference between D(F) and D(R) of ($t(11) = 2.67$, p less than .03 and the 12-month-old group was highly significant with ($t(11) = 3.74$), p was less than .004. Differences in individuals total attention span might account for variance. By the age of 12 months, infants showed a clear preference for familiar words. Hence parent interaction with word usage may be the first step for coding and production of word shapes that leads to reading readiness (Halle and De Boysson-Bardies, 1992).

In a recent study by Morisset, Barnard, and Booth (1995), gender differences in

the association between environmental risk and language development were examined using a longitudinal study of 54 high-social-risk families. Measures of the environment included information about family stress and coping, opportunities for cognitive and linguistic stimulation, the nature of learning experiences and the affective quality of the infant-mother relationship. Despite apparently similar family conditions and early experiences, there were significant gender differences favoring girls on observational measures of spontaneous language production at 20 and 30 months of age. For the group as a whole, gender differences on standardized tests at 24 and 36 months of age were nonsignificant. In addition, relations between aspects of the learning environment and children's language performance differed for boys and girls, leading to a moderate support of these findings.

The federal government, as well as the state governments, are concerned with school readiness and early academic performance. In the State of Texas, Governor Bush (1996) proposed a goal that all children will be reading on grade level by the third grade. According to Moses (1996), Commissioner of the Texas Education Agency (TEA), reading is needed to learn in daily life, at work and in school. He postulates that a struggle follows children who do not become efficient readers in first and second grade. The Texas Reading Initiative (TRI) was created to increase readiness of at-risk students in primary schools in Texas.

According to Katz (1991), reported that in the summit meeting of the National Governor's Association and the President of the United States in 1990, six goals and three objectives were developed from concerns dealing with all children's need to have

the readiness to gain from experiences in school. In order to meet the goal that every child will begin school prepared with the background to learn, preschool programs must be developed. Parents must be encouraged through support and training to spend time with their preschool children in the learning process and families need to provide proper health care and nutrition so children arrive for classes with healthy bodies and minds. Readiness for school, what, how and how much is learned depends on a child's cognitive, emotional and physical well-being. Increasing numbers of children have inadequate health care and poor nutrition, live in single-parent households and deal with poverty. Goals for school readiness will focus upon the support of families in helping children prepare for school and enabling schools to be aware and respond to the differences in experiences, backgrounds and levels of development (Katz, 1991).

Bruck and Genesee (1995) conducted a survey with English-speaking children ($n = 91$) who were attending French schools. The bilingual group was given a battery of phonological awareness tests in kindergarten and in grade one. At the time of kindergarten testing the mean age of the children was 5.9 Their performance was compared to age-matched English-speaking children ($n = 72$) attending English schools (monolingual group). The bilingual children showed heightened levels of phonological awareness skills in kindergarten in the area of onset-time awareness. At the beginning of first grade, the pattern of group differences was more complex. The monolingual and bilingual children performed similarly on onset-rime segmentation tasks. The monolingual children had higher phonics awareness scores than their French-schooled peers. This result was interpreted to reflect the role of literacy instruction on phonics

awareness and readiness development. In comparison, the bilingual children had higher syllable segmentation scores than their monolingual peers. It was quite obvious that a second language provided increased phonological awareness in bilingual children.

Hanson and Farrell (1995) conducted a follow-up to their 1986 study. This study assessed the educational history and current reading proficiencies of a large number of high school seniors (n = 3,959) in 24 school districts from 10 States in America. The purpose was to examine the effects, if any, of receiving formal reading instruction in kindergarten. Over one-third of these students attended elementary schools that implemented a carefully developed beginning reading program in their kindergarten classes in 1973. Although the study included kindergarten students from all backgrounds, those from at-risk backgrounds were overly represented. Three types of information were combined for each student to create the database for this study: (a) the amount of kindergarten reading instruction received; (b) family background and educational history variables assessed, as a high school senior; and (c) reading interests and competencies assessed as a high school senior. A series of comparative analyses was presented that examined the relationship between kindergarten reading instruction and various effects of the variables describing the students' subsequent schooling experiences and reading competencies as high school seniors. Results showed that clear, consistent, and positive differences were associated with receiving kindergarten reading instruction.

Huba and Ramisettymikler (1995) individually matched early and nonearly readers and compared them in terms of their language concepts and skills, as well as their reading achievement in kindergarten through second grade. The early readers,

particularly those who learned to read before kindergarten, were found to be superior to nonearly readers on preschool measures of general language development, verbal intelligence, and phonics segmentation measured using an invented spelling task. These measures were significant predictors of reading achievement through second grade for both early and nonearly readers. Early readers maintained their advantage in reading achievement throughout the grades studied. The early readers did not perform in a homogeneous fashion on certain tasks, nor did they differ from the nonearly readers in their performance in kindergarten on the phonemic segmentation task.

MacDonald and Cornwall (1995),conducted a follow-up study of 24 teenagers, 11 boys and 13 girls with the mean age of 17 years. These students had participated in a study of phonological analysis and reading and spelling abilities 11 years earlier, when they were enrolled in kindergarten. The results indicated that phonological awareness ability assessed via Auditory Analysis Test (AAT) during kindergarten was a significant predictor of word identification and spelling skills 11 years later, when both socioeconomic status and vocabulary development were controlled. In contrast, socioeconomic status, vocabulary development, word recognition, and spelling achievement assessed at kindergarten were not significantly correlated with reading and spelling achievement 11 years later. Results regarding the relative stability of phonological awareness and the importance of this awareness as a precursor to the development of word identification and spelling skills were investigated.

Research conducted by Majsterek and Ellenwood (1995) used an experimental phonological synthesis and analysis task to administer to children in the spring preceding

their kindergarten entry. Three levels, end-of-kindergarten, end-of-first-grade, and end-of-second-grade measures of beginning reading, were collected for the group of 76 children consisting of 39 boys and 37 girls. Screening data for the these children were correlated with interim measures and standardized reading-performance measures that were administered at the end of second grade. The first experimental task, a phonological-synthesis task (sound blending), were significantly related to most of the interim and outcome measures. The phonological analysis task (rhyme defection) was related to fewer measures of beginning reading.

Beals and Tabors (1993) conducted a study to explore children's use of rare words following usage by their mothers. Children learn approximately nine new words every day before age six. Hearing a word just once in conversation can lead to a child's knowledge of that word (Carey, 1978, 1982; Carey and Bartlett, 1978; Dickinson, 1984; Dollaghan, 1985). In addition, Carey (1978) refers to the first, but not complete, semantic representation as fast mapping. Complete mapping occurs throughout school years as writing and reading abilities develop. The words used in the study were gathered from 84 children in 82 families participating in the study of social precursors to development of language in English-speaking families with low incomes. The project was called the Home-School Study of Language and Literacy Development. Data for the study were collected from children from a variety of ethnic backgrounds. Twenty-three (27.4 percent) were African-American, fifty-five or (65.5 percent) were Caucasian and six (7.1 percent) were Hispanic. The 43 females and 41 males came from families in the low-income range based on Head Start qualification. Almost half (48.8 percent) of

the mothers earned a high school diploma, while close to a quarter (25.0 percent) quit before finishing high school and the other quarter (26.2) percent) continued education beyond high school graduation. More than two adults were part of eleven families, two adults were part of thirty-nine families and the remaining twenty-eight families had only the mother.

The Beals and Tabors study procedures included collecting data twice from the children during home visits at ages three and then four. Mother's were requested to read the favorite book of the child and also The Very Hungary Caterpillar, by Eric Carle. In addition, the parent was requested to relate a recent interesting event. The third activity was the playing with toys provided by the home visitors. Every conversation was recorded during guided activities and mealtime. The word lists were created by using computer software titled Child Language Analyses (CLAN) and Codes for the Human Analysis of Transcripts (CHAT). Most words were gathered during the sessions with toys. Correctional analysis was used with the Peabody Picture Vocabulary Test and a measure created by Snow (1990) to ascertain word meaning by the child and the frequency of usage for rare words. A book of choice read to a child provided the most exposure to rare words. Vocabulary was broadened to a lesser degree during the play with toys. The study showed an association between rare word usage and future vocabulary achievement (Beals and Tabors, 1993).

In another study, Hale and Windecker (1992) examined the possible connection between cognitive abilities of preschoolers and the behavior of parents while reading to their children. Interaction between children and parents during reading may provide a

nurturing environment for learning and gaining language. Additionally, Donachy (1976) found that preschool children gain more cognitive ability and language than any other time in their life. He also found that more progress toward language growth was made by those children receiving more attention from their parents. In addition, Bus and Van Ljendoorn (1988) discovered that the beginning skills of literacy are related to sharing books between parents and children. Not only the act of reading, but also the quality during that time was found to make a difference by Teale (1981). In a study conducted by Whitehurst et al. (1988), children scored higher on tests for expressive language if parents asked more open-ended questions and always had a positive reaction when a child responded. This feedback may influence the way a child thinks about his or her ability to learn.

Twenty-one children with a mean age of four years and nine months attending a pre-school were chosen to participate in the Hale Windecker study. Nine boys and 12 girls completed the Information and Vocabulary portions of the Wechsler Primary Preschool Scale of Intelligence-Revised, the Circus Test of Creativity and the Perceived Competence and Social Acceptance Scale by Harter and Pike (1984). Reading interaction was taped and assessed on nine levels for both the simple and difficult stories read. The parents also completed a questionnaire used to determine quality of reading. The interactions were coded and used to find reliability of interim an interrater. An alpha coefficient for the easy story was .87 and .90 for the difficult story. Children's Peabody Picture Vocabulary Test (PPVT) scores were significantly related to reading quality of parents. There was a positive relationship between the child's belief in cognitive ability

was related to amount of reading by the parents to the child (Hale and Windecker, 1992).

Haynes, Harris, Knuckle and Comer (1983) conducted a study in an effort to determine if field trips with pre and post activities had an impact on intellectual and social skills of young children. Although field trips were thought to reinforce learning by providing for actual experiences using the senses, not much earlier research had actually taken place. The PPVT was used as a measure to determine whether or not African-American preschoolers were effected in a positive way by field trips. Also investigated were whether or not pre and post activities for field trips providing a more structured experience resulted in better effects upon their receptive language skills.

The subjects participating in this study were fifty-two African-American four and five-year-old children from two preschools located in a metropolitan area. The two groups were matched by income, education, parental occupations and age. Information were gathered from a questionnaire designed by authors to collect demographic data. Over six weeks, children in a comparison group and an experimental group were taken on field trips once a week. The experimental group talked about the field trips prior to and after completion and also acted out and drew pictures relating to their experiences. No pre or post activities were provided for the control group. Form A of the Peabody Picture Vocabulary Test was given to all children during the first part of the experiment. Every child was given the Peabody Picture Vocabulary Post Test after six weeks. Although all children in the study improved receptive language ability, the experimental group had a higher mean number of responses that were significantly greater than the control group. The results were similar to those found by Zedpeda-de-Kane (1975),

whose study indicated increased complex sentence usage and more verbalization by children who drew and talked about their experiences (Haynes, Harris, Knuckle and Comer, 1983).

Summary of Review of Related Literature

As education strives to reach a goal of learning success and elimination of behaviors due to at-risk directives, research indicates structured preschool experiences have an influence on school readiness. Predictors of academic success include verbal, perceptual, tactile and auditory processing, as well as language expression, sequencing and memory. Additional areas of research concerning readiness and family, school environment, societal environments and learning disabilities have been conducted with varied results.

Chapter 3

DESIGN OF THE STUDY

The primary purpose of this study was to determine the impact of the variables such as type of dwelling, gender, number of siblings, economic status, ethnicity, family structure, parents employment status, and type of transportation to and from school on school readiness of kindergarten children as measured by the Phelps Kindergarten Readiness Scale. This chapter is organized into sections including Design, Population, Sampling Procedure, Data-gathering Instrument, Collecting Procedures, and Statistical Techniques and Summary.

Type of Design

The descriptive method research design was used in this study. In this type of research, hypotheses are tested or questions about the way things are and they are investigated by gathering data and the findings then confirming the current status. One of the problems with descriptive research is lack of response to questions. This was addressed by gathering information from an educational computer data base.

Population

The sample used in this study consisted of kindergarten students from a school located in an industrial area east of the city of Houston, Texas. The school was built in

1985 and is categorized as a Chapter I school, meaning the majority of students are of a lower socioeconomic status. The school serves approximately 700 students. The population consists of about 3% African-American, 40% Hispanics, about 1% Asians and 56% Caucasian. Basically about 60% of the students participate in the free or reduced lunch program, with students age ranging between four and nine years. Approximately 45% of students were males and 55% females. The school has five grade levels, consisting of two Prekindergarten, six kindergarten, six first grade, six second grade, six third grade classes, one bilingual class and one behavioral adjustment class. The school has one principal, one assistant principal, one school counselor, twenty-six teachers, six teacher aides, one nurse, one school secretary, and one librarian.

Sample

After obtaining approval from the school principal, the kindergarten students were used as participants in this study. The incidental sampling method was used in this study. The sample consisted of the entire kindergarten population for the 1995-96 school year, including the six available kindergarten classes, which used the Phelps Kindergarten Readiness Scale.

Instrumentation

The Phelps Kindergarten Readiness Scale (PKRS) was utilized as a measure to assess readiness. Demographic information was collected from a school database with regard to variables such as race, gender, types of dwelling, number of siblings, parental economic status, family structure, methods of transportation to and from school, and

parental employment status.

The PKRS was used to determine the academic readiness of students preparing to enroll in kindergarten. This instrument was designed to evaluate three areas that are predictive of later academic achievement. They are (1) Verbal Processing Domain, (2) Perceptual Processing Domain and (3) Auditory Processing Domain. Subtests and domains were selected based upon extensive research by LeAdelle Phelps in 1990's. This scale can be used to help school personnel identify preschoolers who have developmental delays that might result in academic difficulties. The test was given on an individual basis and required approximately 20 minutes to administer.

The PKRS was comprised of eight sections. These sections were combined into three domains. The Verbal Processing Domain was composed of Analogies, Verbal Reasoning and Vocabulary. The first section had 14 items and dealt with vocabulary. The second section had 10 items and dealt with verbal reasoning. The third section had 10 items and dealt with analogies. The Perceptual Processing Domain was a combination of Visual Discrimination and Perceptual Motor subtests. The fourth section had 10 items and dealt with visual discrimination. The fifth section had 9 items and dealt with perceptual motor. The third domain had three subtests including Auditory Discrimination, Auditory Digit Memory and Memory for Sentences/Stories. The sixth section had 15 items and dealt with auditory discrimination. The seventh section had 10 items and dealt with auditory digit memory. The eighth section had 20 items and dealt with memory for entrances and stories. The total readiness score was determined by adding the three processing domain scores. This total raw score was converted to a

standard score that had a mean of 100 and a standard deviation of 15.

Validity and Reliability

Reliability was established by using both the Kuder-Richardson 20 formula and test-retest methods. The KR-20 Coefficients for Verbal Processing were .94 for 34 items, for Perceptual Processing , .91 for 19 items, for Auditory Processing, .91 for 45 items and for Total Readiness .97 for 98 items. Because every item above the ceiling was assumed to be answered incorrectly these coefficients may be inflated. A total of 61 children were tested a second time three to nine weeks after the initial test to obtain test-retest data for reliability. Test-retest reliability for Verbal Processing was 83, for Perceptual Processing was .61, for Auditory Processing was .66 and for Total Readiness was .87.

Validity was measured by internal consistency, predictive validity and concurrent validity. Intercorrelation coefficients among the Total Readiness Score and the three domain scores were calculated to determine internal consistency. Verbal and Perceptual intercorrelation was .48, Verbal Auditory was .66 and Verbal and Total Readiness Score was .86. Perceptual and Auditory was .44 and Perceptual and Total Readiness Score was .70. Auditory and Total Readiness Score was .84. To establish concurrent validity, 279 of the children who were given the PKRS were also given the Missouri Kindergarten Inventory of Developmental Skills within a three-month time span. Correlation between total PKRS and total KIDS was .75. Predictive validity was assessed with several studies. First, 32 of the children tested in the fall with the PKRS were given The Woodcock-Johnson Psycho-educational Battery, Part Two. Tests of Achievement

following a 9-month time frame revealed a validity correlation between the readiness score and knowledge of .78. In another study 59, children were given the Stanford Achievement Test with a correlation of .62.

Method of Collecting Data

A letter requesting permission to use the test results was sent to the school Principal. The request was made to use the scores of the Phelps Kindergarten Readiness Scale. The Phelps Readiness Scales was given on an individual basis and required approximately 20 minutes to administer. The test was easily given by a variety of educational personnel because instructions and directions were clearly stated in the Test Record Booklet. The instrument was administered individually to each kindergarten student. To insure anonymity, numbers were assigned to students.

Variables

For this investigation, the independent variables were gender (male and female), number of siblings (how many children in the family), economic status (this is a qualifier for free lunch, based on the federal government guidelines for earnings and number of dependents in the family), ethnicity (racial heritage), family structure (number of parents living in the household), parents employment status (number of parents employed), and dwelling (whether the family lives in a house, apartment or trailer). These variables were assumed to have some effect on the dependent variable of the Phelps Kindergarten Readiness Scale which was test performance.

Statistical Techniques

To analyze the interval data, the researcher used the t-test procedure in order to determine if a difference existed between the dependent variable of Phelps Kindergarten Readiness Scale Scores and independent variables of gender, type of dwelling, economic status, family structure, ethnicity, number of siblings and type of transportation to and from school. A one-way Analysis of Variance was used to determine the differences between groups on the dependent variable of Phelps Kindergarten Readiness Scale Scores and independent variable of parents employment status.

Summary

Presented in this chapter are the design of the study, including elements such as the description of the population, sampling procedures, demographics of the sample, data-gathering instrument, variables, data-gathering procedures and statistical techniques used in analyzing the data.

Chapter 4

ANALYSIS OF DATA

The purpose of this study was to determine whether or not there were significant differences between groups of kindergarten students as determined by gender, dwelling, number of siblings, economic status, ethnicity, family structure, parents employment status and readiness as measured by student performance of the Phelps Kindergarten Readiness Scale. This chapter will present answers to the research methodology; it is organized into sections including population, sampling procedure, data gathering instrument, data-gathering procedure, statistical techniques, and summary. The specific questions answered in this investigation were:

(1) Does the variable type of family structure affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(2) Does the variable parents' working status affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(3) Does the variable type of dwelling affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(4) Does the variable parents' economic status affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(5) Does the variable gender affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(6) Does the variable number of siblings affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(7) Does the variable ethnicity affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

(8) Does the variable type of transportation affect the performance of kindergarten students on the Phelps Kindergarten Readiness Scale?

The hypotheses were tested using the t-test and the ANOVA procedures. Presented in this chapter is information regarding demographics, analysis of data, and a summarized discussion of Results.

Demographic Profile of the Participants in the Study (Kindergarten Students)

The sample selected for this study consisted of 104 kindergarten students. Table 9 represents the demographic characteristics of participants in this study. There were 41 (39.4%) 5-year-old and 63 (60.6%) 6-year-old kindergarten students; 53 (51.0%) qualified for the free lunch program, and 51 (49.0%) students paid regular price for lunches. There were 49 (47.1%) male and 55 (52.9%) female kindergarten students. The students living in houses numbered 64 (61.5%), and 40 (38.5%) lived in an apartment or a trailer.

Forty students (38.5%) had one or two siblings, whereas 64(61.5%) had more than two siblings. The students riding in a car to school numbered 28 (26.9%), and 76 (73.1%) rode a bus. There were 93 (89.4%) living in a traditional family structure and

11 (10.6%) living in a non-traditional family structure. There were 76 (73.1%) Caucasian and 28 (26.9%) Hispanic kindergarten students. In 44 (42.3%) of the families only the father worked; in 13 (12.5%) of the families, only mothers worked; in 41 (39.4%) of the families both parents worked, and in only 6 (5.8%) families neither parent worked.

Testing the Hypotheses

The following null hypotheses were formulated and tested at .05 in this study:

HO_1: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who are from a traditional family and those who are from a non-traditional family.

The result of the t-test comparison between the readiness scores of students living within a traditional family structure and those living in a nontraditional family structure is presented in Table 1. The mean readiness score for the traditional group was 90.72 (SD = 14.13), and the mean readiness score for the non-traditional group was 92.38 (SD= 15.24). The differences between the two means for unequal numbers were found not to be significant at the .05 level. The t-value of -.37 (df = 102, $P > 0.05$) was reported, and, therefore, the Hypothesis One was not rejected. It was concluded that there was no significant difference in the performance on the PKRS of those kindergarten students who were from a traditional family and those who were from a nontraditional family.

Table 1

t-test Comparison Between Kindergarten Students Living in a Traditional Family Structure and Those Living in a Non-traditional Family Structure and Performance on the PKRS

Variable	No. of cases	Mean (SD)	Mean Diff	S.E. Diff	t-value	Level of Sign
Traditional	93	90.7211 (14.136)				
Non-traditional	11	92.3671 (15.24)	-1.6598	4.546	.72	NS

Critical value =1.980 Alpha =0.05

HO_2: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who have one parent working and those who have both parents working.

The results of the one-way Analysis of Variance for parents' employment status are shown in Table 2. The sum of squares for between groups was 824.1983 and for within-groups was 2,2571.1478. In addition, the mean squares for between-groups was 274.7328 and for within-groups was 225.7115. The F value of 1.2172 (3/103, $P > .05$) was reported. The computed F-ratio was 1.2172; the critical value was 2.68. Because the F-value was less than the critical value at the 0.05 level of significance, Hypothesis Two was not rejected, thus, there was not a significant difference between kindergarten

children who have one parent working, those who have both parents working, and those students who have no parents working as far as the children's performance on the PKRS was concerned.

Table 2

Analysis of Variance Summary Table
Parents' Employment Status and Kindergarten Students' Performance on the PKRS

Source	df	Sum of Squares	Mean Squares	F	Level of Sign
Between groups	3	824.1983	274.7328	1.2172	NS
Within groups	100	22571.1478	225.7115		
Total	103	23395.3462			

Critical Value = 2.68 Alpha = 0.05

HO_3: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who live in a single-family dwelling and those kindergarten students who live in a multifamily dwelling.

The results of the t-test comparison between students who lived in a single family setting versus those students who lived in a multifamily settingwith regard to their performance on the PKRS are presented in Table 3. The mean score and standard deviation for students living in a single family dwelling were 91.9219 and 14.615

respectively; they were 92.6750 and 15.952 respectively for students living in an apartment or a trailer. The t-value of -.24 (df = 102, P > 0.05) was reported. When the t-value was compared with the critical value of 1.980, the null hypothesis was not rejected. It was concluded that there was no significant difference between the performance of those kindergarten students who live in a single-family dwelling and that of those kindergarten students living in a multifamily dwelling.

Table 3

t-test Comparison Between Kindergarten Students Living in a Single Family Dwelling and Kindergarten Students Living in a Multifamily Dwelling and Performance on the PKRS

Variable	No. of cases	Mean (S.D.)	Mean Diff	S.E. Diff	t-value	Level of Sign
House	64	91.9219 (14.615)				
Apt/Trailer (15.952)	40	92.6750	-.7531	3.114	-	.24 NS
Critical value =1.980			Alpha =0.05			

HO_4: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who participate in the free lunch program and those students who do not participate in the free lunch program.

The results of the t-test comparison of the PKRS scores of students who participate in the free lunch program versus those who do not participate in the free lunch program are presented in Table 4. The mean score and standard deviation for students participating in the free lunch program were 95.4906 and 13.549 respectively; they were 88.8039 and 15.930 respectively for students who do not participate in the free lunch program. The t-value of 2.30 (df = 102, P > 0.05) was reported. When the t-value was compared with the critical value of 1.980, the t-value was smaller than the critical value and was thus found to be non-significant. Therefore Hypothesis Four was supported, and it was concluded that there was no significant difference in the PKRS performance of those kindergarten students who participate in the free lunch program and those kindergarten students who do not participate in the free lunch program.

Table 4

t-test Comparison Between Kindergarten Students Participating in Free Lunch and Those Kindergarten Students Not Participating in Free Lunch and Performance on the PKRS

Variable	No. of cases	Mean	Mean Diff	S.E. Diff	t-value	Level of Sign
Free lunch	53	95.4906 (13.549)	6.6866	2.905	2.30	NS
Non-free lunch	51	88.8039 (15.930)				

Critical value =1.980 Alpha =0.05

HO_5: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who are male and those kindergarten students who are female.

The results of the t-test comparison between the PKRS scores of those of the students who are male versus those students who are female are presented in Table 5. The mean score and standard deviation for female students were 90.1636 and 16.214 respectively; they were 94.5102 and 13.471 respectively, for male students. The t-value of -1.48 ($df = 102$, $P > 0.05$) was reported. When the t-value was compared with the critical value of 1.980, the t-value was smaller than the critical value; therefore, it was found to be non-significant. Consequently Hypothesis 5 was supported, and it was concluded that there was no significant difference in the performance as measured by the PKRS of those kindergarten students who are male and those kindergarten students who are female.

Table 5

t-test Comparison Between Kindergarten Students who are Female and Those Kindergarten Students who are Male on Performance on the PKRS

Variable	No. of cases	Mean	Mean Diff	S.E. Diff	t-value	Level of Sign
Female	55	90.1636 (16.214)				
Male	49	94.5102 (13.471)	-4.3466	2.913	-1.48	NS

Critical value =1.980 Alpha =0.05

HO_6: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who have two or fewer siblings and of those who have more than two siblings.

The results of the t-test comparison of PKRS scores of students with one or two siblings and students with more than two siblings are presented in Table 6. The mean score and standard deviation for students with one or two siblings were 95.0250 and 13.271 respectively; they were 90.4531 and 15.942 respectively for students with more than two siblings. The t-value of 1.58 ($df = 102$, $P > 0.05$) was reported. When the t-value was compared with the critical value of 1.980, the t-value was smaller than the critical value. As a result, the former was found to be non-significant. Therefore, Hypothesis Six was supported, and it was concluded that there is no statistically

significant difference in the PKRS performance of those kindergarten students who have two or fewer siblings and those who have more than two siblings.

Table 6

t-test Comparison Between Kindergarten Students With One or Two Siblings and Those Kindergarten Students With More Than Two Siblings and Performance on the PKRS

Variable	No. of cases	Mean	Mean Diff	S.E. Diff	t-value	Level of Sign
1 or 2 siblings	40	95.0250 (13.271)				
More than two siblings	64	90.4531 (15.942)	4.5719	2.894	3.58	NE

Critical value =1.980 Alpha =0.05

HO_7: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of kindergarten students by ethnicity.

The results of the One-Way Analysis of Variance for ethnicity are shown in Table 7. The mean and standard deviation readiness scores for Caucasian students were 95.1842 and 14.516 respectively, the mean and standard deviation for Hispanics, were 84.1429 and 13.740 respectively. In as much as the F-value is greater than the critical value of 1.98, Hypothesis Seven was rejected. It was concluded that there was a

significant difference in the PKRS performance of those kindergarten students who are Hispanic and those kindergarten students who are Caucasian.

Table 7

t-test Comparison Between Hispanic Kiindergarten Students and Caucasian Kindergarten Students and Performance on the PKRS

Variable	No. of cases	Mean	Mean Diff	S.E. Diff	t-value	Level of Sign
Caucasian	76	95.1842 (14.516)				
Hispanic	28	84.1429 (13.740)	11.0414	3.085	3.58	S

Critical value =1.980 Alpha =0.05

HO_8: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who ride in a car to and from school and those kindergarten students who ride in a bus to and from school.

The results of the t-test comparison between the PKRS scores of car riders and bus riders are presented in Table 8. The mean score and standard deviation for students riding a car were 89.4286 and 16.527 respectively, and they are 93.2368 and 14.479 respectively for students riding a bus. The t-value of -1.08. ($df = 102$, $P > 0.05$) was reported. When the t-value was compared with the critical value of 1.980, the t-value

was smaller than the critical value; therefore, the t-value was found to be non-significant. Accordingly, Hypothesis Eight was supported. It was concluded that there was no significant difference between PKRS performance of those kindergarten students riding in a car to and from school and that of those kindergarten students riding in a bus to and from school.

Table 8

t-test Comparison Between Students Who Ride a Bus to and From School and Those Students who Ride a Car to and From School and Their Performance on the PKRS

Variable	No. of cases	Mean	Mean Diff	S.E. Diff	t-value	Level of Sign
Car	28	89.4286 (16.527)				
Bus	76	93.2368	-3.8083	3.537	-108	NS

Critical value =1.980 Alpha =0.05

Discussion of the Results

To answer the research questions posed in this study regarding the effects of the variables gender, dwelling, number of siblings, economic status, ethnicity, family structure, parents' employment status on student performance on the Phelps Kindergarten Readiness Scale. The researcher tested eight hypotheses and analyzed the resulting data by the application of the t-test and the One-Way Analysis of Variance.

The analysis of data revealed that the hypothesis related to the students' ethnicity was statistically significant. The t-test result related to ethnicity revealed that the mean scores of Caucasian students were significantly higher (95.1842/76) than those of Hispanics (84.1429/28). There were no African-American children identified in the sample. There were no significant differences in the hypotheses regarding family structure, parents' employment status, living status, lunch program status, gender, number of siblings, and transportation status. A comprehensive analysis of data collected on the subjects' demographic information yielded the following findings.

1. Of the total of 76 Caucasian students 40 (52.6%) were female, and 36 (47.4%) were male. Of 28 Hispanic students, 15 (53.6%) were female, and 13 (46.4%) were male. The gender distributions within both groups were approximately the same.
2. Of the total of 76 Caucasian students, 40 (52.6%) were on regular lunch, and 36 (47.4%) were on reduced lunch. Of 28 Hispanic students, 13 (46.4%) were on regular lunch, and 15 (53.6%) were on free lunch. The ethnic distributions within both groups were approximately the same.
3. Of the total of 76 Caucasian students, 47 (61.8%) lived in a house, and 29 (38.2%) lived in an apartment or a trailer. Of 28 Hispanic students, 17 (60.7%) lived in a house, and 11 (39.3%) lived in an apartment or a trailer. The type of dwelling distributions within both groups were approximately the same.
4. Of the total of 76 Caucasian students, 33 (43.4%) had one or two siblings, and 43 (53.6%) had more than two siblings. Of 28 Hispanic students, 7 (25.0%) had

one or two siblings and 21 (75.0%) had more than two siblings. Caucasians had smaller families than did Hispanics.

5. Of the total of 76 Caucasian students, 16 (21.1%) rode in a car to school, and 60 (78.9%) rode the bus to school. Of 28 Hispanic students, 12 (42.9%) rode in a car to school, and 16 (57.1%) rode the bus to school. The majority of Caucasian students were bus-riders.
6. Of a total of 76 Caucasian students, 29 (11.8%) lived in a nontraditional family, and 67 (88.2%) lived in a traditional family. Of 28 Hispanic students, 2 (7.1%), lived in a nontraditional family, and 26 (92.9%) lived in a traditional family. The majority of the students lived in a traditional family setting.
7. Of a total of 76 Caucasian students, 29 (38.2%) lived in a family where only the father worked; 10 (13.2%) lived in a family where only the mother worked; 31 (40.8%) lived in a family where both parents worked, and 6 (7.9%) lived in a family where no one worked. Of 28 Hispanic students, 15 (53.6%) lived in a family where only the father worked; 3 (10.7%) lived in a family where only the mother worked; 10 (35.7%) lived in a family where both parents worked, and no one lived in a family where neither parent worked. A majority (40.8%) of the Caucasian students lived in a family where both parents worked, whereas over 53% of Hispanic students lived in a family in which only the father worked.

Summary

With regard to the formulated hypotheses, this study indicated that the variables traditional or nontraditional family structure, parents' employment status, students who

lived in single- or multi-family dwellings, students who participated in a free lunch program and those who did not participate in a free lunch program, gender, number of siblings, and transportation methods did not have a significant effect on the performance of the kindergarten students as determined by the Phelps Kindergarten Readiness Scale. This study indicated that the variable ethnicity did have a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten Readiness Scale.

Chapter 5

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

The primary purpose of this study was to examine the effects of a kindergarten student's type of dwelling, gender, number of siblings, parents' economic status, ethnicity, family structure, parents' employment status, and methods of transportation to and from school on their readiness scores as measured by the their performance on the Phelps Kindergarten Readiness Scale. This study attempted to establish and provide baseline information about the probable success of kindergarten students' readiness preparation. Data were collected about 104 kindergarten students attending a school located in an industrial suburb east of Houston, Texas.

The following null hypotheses were tested at 0.05 level of probability in this investigation:

HO_1: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who are from a traditional family and those who are from a nontraditional family.

HO_2: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who have one parent and those who have both parents working.

HO_3: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who live in a single family dwelling and those students living in a multifamily dwelling.

HO_4: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who participate in the free lunch program and those students who do not participate in the free lunch program.

HO_5: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who are male and those who are female.

HO_6: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who have two or fewer siblings and those who have more than two siblings.

HO_7: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students by ethnicity.

HO_8: There is no statistically significant difference in the performance on the Phelps Kindergarten Readiness Scale of those kindergarten students who ride in a car to school and those students who ride in a bus to school.

Summary of the Findings

According to the results of the statistical analysis, the following summary is

presented for each of the hypotheses:

1. The variable traditional or nontraditional family structure did not have a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten Readiness Scale.
2. The variable parents' employment status did not have a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten Readiness Scale.
3. The variable students who lived in a single- or a multi-family setting did not have a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten Readiness Scale.
4. The variable students who participated in a free lunch program and those who did not participate in a free lunch program did not have a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten Readiness Scale.
5. The variable of gender did not have a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten Readiness Scale.
6. The variable number of siblings did not have a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten Readiness Scale.
7. The variable of ethnicity had a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten

Readiness Scale.

8. The variable transportation methods did not have a significant effect on the performance of kindergarten students as determined by the Phelps Kindergarten Readiness Scale.

Conclusion

This study was designed to examine the effects of kindergarten students' type of dwelling, gender, number of siblings, economic status, ethnicity, number of parents, and parents' employment status on readiness as determined by the Phelps Kindergarten Readiness Scale. Based on the findings of the study, the researcher reached the following conclusions:

1. Kindergarten students' readiness scores were not affected by the status of the family structure, whether traditional or nontraditional.
2. Kindergarten students' readiness scores were not affected by the status of the parents' employment, including whether or not the parents were employed or unemployed.
3. Kindergarten students' readiness scores were not affected by the type of dwelling that the students were living in such as apartments, houses, or trailers.
4. Kindergarten students' readiness scores were not affected by the family's economic status, including those students who participated in a free lunch program versus those who did not.
5. Kindergarten students' readiness scores were not affected by the

students' gender; no significant difference was found between readiness scores of males and those of females.

6. Kindergarten students' readiness scores were not affected by the number of siblings; having one or two siblings or having more than two siblings did not make any significant difference in readiness scores.
7. Kindergarten students' readiness scores were affected by the ethnicity of the students. There was significant difference between Caucasian students' readiness scores and those of Hispanics.
8. Kindergarten students' readiness scores were not affected by the students' transportation methods to and from school; methods of transportation such as riding a bus or a car to and from schools did not affect the readiness scores.

Implications for Counseling

One of the findings of this study supports previous research in that ethnicity may affect school readiness (Hollins, 1996). The results indicate that Caucasian kindergarten students will perform better on the Phelps Kindergarten Readiness Scale than will Hispanic kindergarten students. These results suggest that school teachers and administrators need to be ready to offer the needed intervention for minority educational development. With ever-growing numbers of at-risk minority students in combination with financial constraints, administrators, principals, counselors, and teachers need to be creative and efficient in determining the most effective ways of increasing the possibility of a successful educational experience for every student.

Students come to school with a diversity of backgrounds, including value systems, various levels of proficiency in understanding the English language, social and psychological behaviors, dialects, and perceptions of life. The basis for learning originates long before formal education begins. Although America is known as a melting pot for its great diversity in religions, beliefs, ethnicity, politics, economics, and individuals' rights that are protected by the US Constitution, this very diversity continues to raise difficulties in the educational system as a result of educators' efforts to address the individual student's needs. The history of America has promoted the accepted practice of the Euro-American culture as the accepted national culture. In this culture success and competition are two highly rated values. According to Bellah et al. (1985), community service and pleasure in work equal success. In other cultures these values may not be emphasized in the same manner.

Various ethnic groups arrived in America from all over the world with differing group values, beliefs, and ideologies. These societal beliefs are used to create schools, as is seen in the use of ability grouping and similarities of curriculum and discipline in schools across the nation. Teachers need to be aware of individuals' beliefs concerning ethnicity and culture and recognize the differences that exist in response to students from different cultural backgrounds. Even if the same language is spoken in the classroom, education may not be fully promoted because of existing differences. A student's academic success and life are greatly influenced by his school system's attitude and input. How a student learns or feels about himself in many cases depends on the feelings received from the school environment.

The literature supports the fact that students have various learning and life experiences, both negative and positive, and view their schools in different ways. A student's educational development is influenced by the use of pre-school values to broaden the scholastic climate. Children might not bring to school the needed skills or knowledge to achieve success within the school system. A child may not have learned the needed social skills for positive interaction with either instructors or classmates. In spite of the fact that this study showed the lack of significance of family structure, parents' working status, type of dwellings, parents' economic status, gender, number of siblings, and type of transportation to and from school, there is a need to provide wholesome experiences for pre-school children.

Recommendations for Counseling and Readiness Interventions

The following recommendations are offered for consideration for federal, state, and locally funded school districts, superintendents, school boards, principals, assistant principals, school counselors, and teachers in identifying the student's deficiencies through readiness screening.

1. Federal, state, and locally funded school districts, superintendents, school boards, principals, assistant principals, school counselors, and teachers should be aware of the students' basic skills and deficiencies through administration of readiness, ability and achievement tests.
2. Federal, state, and locally funded school districts, superintendents, school boards, principals, assistant principals, school counselors, and teachers should be aware of the students' basic living environments,

such as family structures, family dwellings, and family economic status through home visits, school and parents communication by way of notes, telephone calls and/or home visits.

3. Federal, state, and locally funded school districts, superintendents, school boards, principals, assistant principals, school counselors, teachers, and parents should be aware of the students' continuous learning experiences through parent-teachers communication by way of notes, telephone calls, and/or home visits.

4. Federal, state, and locally funded school districts, superintendents, school boards, principals, assistant principals, school counselors, teachers, and parents should be aware of the students' cognitive and affective needs through observation, ability, achievement, and group and individual counseling and should devise behavioral management plans to increase self-esteem and promote a successful learning experience.

5. Federal, state, and locally funded school districts, superintendents, school boards, principals, assistant principals, school counselors, teachers, and parents should be aware of the differences in students' cultural backgrounds and the manner in which they affect learning ability and achievement; they should incorporate methods and programs to promote a successful learning experience for all.

Recommendations for Further Study

In order to extend the findings of this investigation, the researcher recommends the following:

1. That a follow-up study be conducted with a more diverse population.
2. That a study be conducted to examine the learning styles of kindergarten students as they relate to readiness.
3. That a study be conducted to examine the power of the Phelps Kindergarten Readiness Scale scores to predict students' achievement and ability.
4. That a longitudinal study be conducted to examine the relationship between the attrition and return rates of students and their performance on the Phelps Kindergarten Readiness Scale, as well as the impact of scores on the Phelps Kindergarten Readiness Scale on the students' dropout rate.
5. That a study be conducted to examine the effect of kindergarten curriculum and teaching styles of teachers on students' achievement.

APPENDICES

APPENDIX A

LETTER REQUESTING PERMISSION TO CONDUCT RESEARCH

December 5, 1995

Mr. David Walker
Crenshaw Primary School
16204 Wood Drive
Channelview, Texas 77530

Dear Mr. Walker:

As a requirement for the Doctor of Education degree in Counselor Education from Texas Southern University, I am researching the subject: "An Analysis of the Effects of Selected Demographic Variables On the Readiness of Kindergarten Students". The purpose of this study is to investigate whether or not variables such as type of dwelling, gender, number of siblings, parental economic status, family structure, type of transportation to and from school, and ethnicity influences school readiness of kindergarten students. School readiness will be measured by the Phelps Kindergarten Readiness Scale.

Your permission is requested to use the demographic martial collected in the school computer data bank. This data will be handled with complete confidentiality. In a world of rapidly advancing technology and highly competitive job markets, education can be changed to meet individual requirements. These needs can be addressed earlier and more efficiently once factors determining variables effecting readiness are determined.

Thank you very much for your consideration. I look forward to your response.

Sincerely,

Carol Harris

Carol Harris
Doctoral Candidate

cc: Dr. Irma T. Malloy, Dissertation Advisor

APPENDIX B

LETTER OF PERMISSION

Mrs. Carolyn H. Harris, Doctoral Candidate
Department of Counseling Education
Texas Southern University
Houston, Texas 77004

Dear Mrs. Harris:

I am writing in response to your request to use demographic material gathered in the data bank located in the specific school where I am the current principal for use in your dissertation study. Your proposal provides a well organized and interesting plan for determining various influences upon kindergarten readiness. Please inform me if you need any further assistance.

Sincerely yours,

David Walker

David Walker, Principal
Primary School

APPENDIX C

TABLE 9
DEMOGRAPHIC CHARACTERISTICS AND PERCENTAGES OF THE POPULATION

Table 9

Demographic Characteristics and Percentages of the Population

Varible	No. of Cases	Percentage
Lunch status		
Free lunch	51	49.0
Regular lunch	53	51.0
Sex		
Male	49	47.1
Female	55	52.9
Type of Dwelling		
House	64	61.5
Apt./Trailer	40	38.5
Siblings		
1 or 2 Siblings	40	38.5
More than 2 siblings	64	61.5
Method of Transportation		
Car	28	26.9
Bus	76	73.1

(table continued)

Varible	No. of Cases	Percentage
Family Structure		
Traditional	93	89.4
Non-traditional	11	10.6
Ethnicity		
Caucasian	76	73.1
Hispanic	28	26.9
Parents' Employment Status		
Father works	44	42.3
Mother works	13	12.5
Both work	41	39.4
Neither works	6	5.8

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