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Richard H. McElroy

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ABSTRACT

Effects of the Early Start Preschool Curriculum on the Achievement of Third Grade Students Who Follow Standard Assessment Measures for English and Mathematics

By

Richard H. McElroy

M.S.Ed., State University of New York College at Oswego, New York 1994
B.S., State University College of New York at Cortland, New York 1982

Doctoral Study Submitted in Partial Fulfillment
Of the Requirements for the Degree of
Doctor of Education
Teacher Leadership

Walden University
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# ABSTRACT

This descriptive, quantitative study examined the effects of participation in a 1-year Early Start Preschool Program for 4-year-olds in a state that requires annual testing at the end of select grades. This study focused primarily on achievement through grade 3. As no study has evaluated the effectiveness of the program, this research examined whether it has positively affected the results of the end-of-year tests. The predictor variable for this study was participation in the Early Start preschool program. For this study, the only 2 groups assessed were children who participated in Early Start and children who did not participate in the program. The criterion variables or dependent variables in this study included the state end-of-year tests for the 3rd grade in English and math from 2003 to 2005. Each group of student scores was compared using a 2 tailed *t*-test, and the measure of effect determined using Cohen's *d* statistic. The results of this study determined that this program does not positively affect achievement in English and mathematics through 3rd grade. These findings could be used to modify the program to better meet the needs of children and justifies advocacy for children through social justice by providing conclusive evidence that an academically-focused preschool program does not meet the academic needs of young children and their families.

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DEDICATION

This doctoral study is dedicated to
The Church of Jesus Christ of Latter Day Saints,
my Father in Heaven,
my older brother Jesus Christ,
and
my eternal companion,
Sandra (Sandy) Wilson McElroy

It is also dedicated to my mother and father,
Margaret (Peggy) Cecelia O'Neill McElroy
Richard Clifford McElroy
and
to my children
Rick, Ashley, John, Casey, Kevin and Michayla
for their patience, love and support,

and to my brother,
John Christian Woerner,
who nurtured and loved me.

My plea--and I wish I was more eloquent in voicing it--is a plea to save the children. Too many of them walk with pain and fear, in loneliness and despair. Children need sunlight. They need happiness. They need love and nurture. They need kindness and refreshment and affection. (Hinkley, 1994, p. 54)

ACKNOWLEDGEMENTS

I appreciate the cooperation of the school division that allowed me to use its data for the purposes of this project. I am particularly grateful for the support of MCMAR and my esteemed colleagues for their limitless love, patience and confidence in me. I propose special and sincere thanks to Mrs. Lucy Ann Hancock, my esteemed Principal. I must also thank my committee: Dr. Maryanne Hunter-Longo (Chair), and Dr. Frank Powers for their support, diligence, advice, and patience. They were awesome.

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# CHAPTER 1:

# INTRODUCTION TO THE STUDY

## Introduction to the Study

Whether children are successful students depended greatly on the quality of their experiences in early childhood (U.S. Department of Health and Human Services, 2003). The Early Start program is a program for four–year-olds in the Mid-Sized City of the Mid-Atlantic Region (MCMAR) Schools in Virginia. The prospectus and instructional program of Early Start was designed to improve academic achievement, to work with the Harcourt-Brace standardized early childhood curriculum, and to align with standards established by the National Association of Education of Young Children (NAEYC).

The Early Start (ESPP) is an early childhood program for four year old children. ESPP is an acronym for a preschool program consisting of four and five year olds in a school district in Virginia (MCMAR). Both of the aforementioned terms are used to protect the anonymity of the program and the school district.

The goals of the program reflect the principles of Vygotsky (1978), Montessori (1989), Sternberg (1990), Bruner (1996), Gardner (2000), Marzano (2003), NAEYC, and the National Association of Early Childhood Specialists for State Departments of Education (NAECS/SDE). The NAYEC/SDE (2004) has established principles of instruction that enhance social, academic and emotional growth in children. Instruction must be configured in a spiral fashion so the learner can grasp information easily. Spiral learning begins with the simplest of concepts and then builds upon that in an upward

direction having connections to previous knowledge. Instruction must help the scientific technique of questioning and departing beyond the basic information (Bruner, 1996).

The principles established by Bruner (1996) of questioning techniques and investigating the purposes behind or surrounding principles; along with the cultural aspects of the learner's life and his/her desire for knowledge are similar to those of Marzano (2003), as Marzano lists family life, knowledge, and a longing to learn as basic stimuli for achievement for children

ESPP reflects each of these theorists' philosophies as it is a program designed to meet the needs of students, families and community. There is one full-time parent outreach coordinator to assist families with issues surrounding parenting for each of the four centers. There is a full-time certified school guidance counselor to provide support to students and teachers on a myriad of emotional, psychological problems or concerns.

Vygotsky (1978) asserted that children's understanding should be relatable to their lives. The teacher can then become a reflective facilitator who emphasizes socialization as part of instruction and content (Vygotsky). Reflection and facilitation by the teachers of ESPP is limited to the adopted curriculum model in use. Vygotsky suggested that the learned material be relevant or relatable to the lives of the children. The broad expanse of the curriculum of ESPP tries to bring a sense of reality to the lives of the children with many lessons constructed around thematic units involving animals, the weather, plants, and communities. There is a discussion and investigation of the works of J Piaget (1969), Montessori (1989), Sternberg (1990), Gardner (2004), Bruner (1996), and Vygotsky (1978) in chapter 2. Using these theorists of early childhood

education a detailed analysis of the Early Start Program is found in Chapter 2. Additionally, evidence was provided through contemporary researchers including Barnard (2007); Groark (2006); the National Association for the Education of Young Children (NAEYC) (2007), and the National Institute for Early Education Research (NIEER) (2004). All of these theorists and researchers were presented to either support or contrast the Early Start Program.

## Problem Statement

According to the National Institute of Early Education Research (2004) the United States has too few affordable, reliable, and effective preschool programs. As a result, not all young children can enjoy optimum emotional, physical, and academic growth before they enter kindergarten or first grade (National Institute of Early Education Research, [NIEER] 2004). NIEER further asserts that even existing preschool programs must expand curriculum to meet the requirements to decrease dependence on community services, reduce teenage pregnancy and criminal behavior, and improve standardized test scores for children. NIEER purports that sober consideration should be given to the emotional, societal, ethical, cerebral, cultural, and nutritional locales of maturity. Curriculum and instruction must be child centered, research based, teacher built, and culture supported.

According to MCMAR (2006) ESPP provides a comprehensive, child-centered program for four and five year olds through a teacher-built and research-based program that aligns with the school district's choice of a standardized comprehensive packaged

curriculum. Research is needed to substantiate the curriculum and provide an opportunity to examine the long-term effects of its participants.

This descriptive, quantitative analysis investigated whether the Early Start preschool program of the MCMAR school district has been effective in increasing academic achievement of third grade students in English and math on the end-of-year state tests during the 2003 to 2005. The participants included 7,198 students in the MCMAR school district who took the end-of-the-year standardized assessments in English (Reading) and math. A *t*-test was used to compare the scores of the sample population. An Alpha level of 0.05 was chosen. According to Gravetter and Wallnau (2005) since the variability of certain scores is not known the purpose for conducting this hypothesis test is to determine that variability. The mean for the population, all students who took the end-of-the-year tests, was determined. A portion of the population has received a treatment, that is, participation in the Early Start Program. This treated sample was the basis for determining whether or not the treatment had an effect. The research questions being addressed in this study were:

1) Is there a significant difference in English and math scores on the state third grade end-of-the-year tests in the years 2003, 2004 and2005 between children who participated in the Early Start preschool program and those who did not?

2) Is there a correlation to gender, ethnicity, socioeconomic status and/or repeating a grade between first and third grades?

3) What are the similarities and differences displayed by the data between each year studied?

## Nature of the Study

This quantitative study evaluated two groups of students: those who participated in the Early Start program and those who did not. It compared achievement scores as measured by the state end-of-term tests in English and math for third grade in 2003-2005. For the purposes of this study, the control population was comprised of all students who took the end-of-term tests in third grade in 2003-2005 in the school division. The experimental group was comprised of students who did not participate in the Early Start program. The null hypothesis stated that there is no effect or that the population mean is not changed by the treatment. The variance and estimated standard error were computed from the sample data. Gravetter and Wallnau (2005) further explain that if the obtained difference between the obtained difference and the hypothesis is large the study will reject the hypothesis. If the difference is small and a *t* statistic is found near zero then the decision to fail to reject the null hypothesis is made. The following research question was addressed in the proposed study.

The following hypotheses guiding this proposed study was: Null Hypothesis $H_{01}$: There was no statistically significant difference (0.05 levels) on the state third grade end-of-term tests in 2003-2005 in English and math between children who participated in the Early Start program of the MCMAR Schools and those who did not. The alternative hypothesis or H? : There was a statistically significant difference (0.05 levels) on the state third grade end-of-term tests in 2003-2005 in English and math between children

who participated in the Early Start program of the MCMAR Schools and those who did not. Addition of alternative hypothesis

There were 1,436 children attending the Early Start program currently located in four centers throughout the Mid-Sized City in the Mid-Atlantic Region (MCMAR) boundaries. There were 676 (47%) children in the program identified as being economically disadvantaged and eligible for the free breakfast and lunch program sponsored by the federal government as per MCMAR records. President George W. Bush stated in January 2001, “These reforms express my deep belief in our public schools and their mission to build the mind and character of every child, from every background, in every part of America” (U.S. Department of Education [DOE], 2001, Executive Summary, para. 1). The No Child Left Behind (NCLB) Act of 2001 is a framework for educational reform proposed because too many of the neediest children were being "left behind” ( para. 2). All school districts are now held accountable for achievement measured and demonstrated through assessment results.

The State Foundation Building Blocks (FBB) provides a minimum set of standards for literacy, mathematics, science, history and social science in 2005. The FBB provide attention to detail as they direct curriculum and expectations for children in preschools funded by state monies. MCMAR receives federal funding by adhering to NCLB (2001) and Adequate Yearly Progress (AYP) regulations. AYP is a measure of qualification for schools to continue to receive funding from the federal government based on specific academic achievement standards. If a school does not meet those

standards they are subject to sanctions by the federal government. NCLB stated President George W. Bush's commitment to ensuring that every child can read by the end of third grade. To accomplish this goal, the State Reading First (2006) initiative increased the federal investment in scientifically based reading instruction programs in the early grades. One benefit of this approach would be reducing the number of children identified for special education services because they had no reading instruction before entering first grade (U.S. DOE, Executive Summary, 2001, para. 2)

MCMAR Schools are committed to the success of all children and conforms to the standards of the NCLB and the State Board of Education through grade level assessments in kindergarten, third, fifth, seventh, ninth and eleventh grades. This study focused on the assessment results in third grade, for students who did or did not participate in preschool, on the state end-of year assessments in reading and mathematics.

The standards are outlined in Appendixes A and B. The expectations are aligned with the objectives and goals of Early Start. Early Start adheres to the State Foundation Blocks for Early Learning Standards are in (Appendix E) Virginia Preschool Initiative which began in 1995 appears in Appendix F and. This study focused on the achievement of participants of the Early Start program as compared to children who did not participate in the program. There was a discussion of how the participants were grouped. The independent and dependent variables were defined. A further discussion in chapter 3 revealed the validity and reliability of the state tests being examined in this study and how those measures were determined. A thorough explanation of a *t* test measure was given including the Cohen *d* statistic for measure of effect. An explanation of the chosen

Alpha level of 0.05 was outlined. The population size and sample was discussed and justified through an explanation of the G*Power program regarding effect size. A further discussion of probability of error provides a complete and thorough look into the rationale for this study.

## Purpose of the Study

The purpose of this study was to determine if participation in the Early Start program significantly increases achievement on the third grade state end-of-term assessments in English and math and provides a measurable foundation for learning for the participants in the program. Studies of contemporary preschool programs have determined that continual accumulation and comparisons of data is necessary to determine program effectiveness. An additional purpose of this investigation was to add to the existing data of preschool achievement on standardized assessments.

Longitudinal studies of preschool programs and their participants including, the High-Scope Perry Preschool program, the Chicago Child-Parent Centers, and the Abecedarian Project along with state-funded programs in Georgia and Oklahoma have shown that quality preschools produce economic benefits to society by decreasing crime rates and effecting a reduction in delinquency among participants Additional benefits for the participants of these quality preschool programs included higher scores on standardized achievement tests, and improved high-school graduation rates (Barnett, 1996; Masse & Barne, 2002; Reynolds, Temple, Robertson, & Mann, 2002). Currently, there are 39 states with a state-funded preschool program in effect. One main goal of all of these programs, including Early Start, is to provide kindergarten readiness skills.

Effective preschools must provide more then kindergarten readiness skills. Children in quality preschools must be exposed to a rich vocabulary, both written and spoken. They must be able to play and learn in cooperative settings. Children must be challenged to think abstractly and be encouraged to regulate their own choices and behaviors (Husted, Barnett, Jung, & Thomas, 2007).

There is no current scientific study being conducted to determine if preschool in Virginia is effective. The Virginia Preschool Initiative outlines criteria for obtaining state/federal funding. Local agencies must have a written plan to include services that specifically describe a featured and valued preschool education ,as defined in Appendix E, how parents was involved in the process, health services provided, criteria adhered to for admission to the preschool program, inclusive social service responsibility, and transportation to and from the preschool site. Additional guidelines are provided by the state for acceptable classroom size and configuration, pupil-teacher ratio (9-1) and diet regulations and allowed foods for the children. The state initiative explains that:

> The legislative intent of the initiative is to establish a quality preschool education program for "at-risk" four-year-olds. Research, culminating in a legislative study, has defined the criteria for a quality program. Programs should be designed to meet these criteria. Localities will align the curriculum with *Virginia's Foundation Blocks for Early Learning*. They establish a measurable range of skills and knowledge essential for four-year-olds to be successful in kindergarten. Localities are also required to use PALS Pre-K for literacy screening. (p. 4)

Risk factors as defined by the state are defined (Appendix E) as: a child who lives in poverty, or homeless: the child's parents or guardians are dropouts, have limited education or are chronically ill: the child's family is under stress as evidenced by poverty,

violence, crime, underemployment, unemployment or incarceration; the child has health or developmental problems, low birth weight, developmental delays or there is substance abuse in the family, or if the child has limited English proficiency. If the child meets any of these established criterions the child is defined as at-risk (Virginia Department of Education, 2007).

A quality preschool program is designed to provide skills necessary for success in kindergarten and throughout formal education (NAEYC, 2007). The Early Start Preschool Program has a defined and written plan that includes services to children and specific expectations for parental involvement. It further defines the role of health expectations and dietary considerations by providing guidelines to parents for their children and a breakfast and lunch program with meals conforming to Federal guidelines for nutrition and dietary needs of young children. Transportation is provided to and from the preschool Centers by MCMAR. Classroom size is limited to 18 children with a teacher and paraprofessional assigned to every room bringing the teacher-student ratio to an acceptable 9:1 ratio. Goals and standards of the Early Start Program are set forth in the established curriculum. Initial screening for admittance to the program is done and a literacy readiness inventory is taken in the first month of school using the Phonological Awareness Literacy Screening, a research based criterion referenced reading inventory (Curry School of Education, 2006).

## Operational Terms

Operational terms associated with this study include:

1. *MCMAR:* An acronym meaning a medium-sized city in the mid-Atlantic region.

2. *Early Start or ESPP:* a term for a preschool program consisting of 4- and 5-year-olds in a school district in Virginia. Both of the aforementioned terms are used to protect the anonymity of the program and the school district.
3. *Reading First* is a term used to define legislation related to the federal No Child Left Behind Act of 2002. Reading First is designed to help all children succeed and become competent readers as defined by the guidelines of the program. Reading First provides additional federal monies to assist at-risk children in becoming competent readers. Another operational term used in this study is on-the-run-assessment or OTR.
4. *OTR* (on-the-run) is a style of assessing involving the teacher in the Early Start Program. The teacher has guidelines of items or areas to assess on each child. The assessment sheet covers intellectual, social, and physical areas of development. It further allows for the examination of history, geography, mathematics, literacy/reading and science objectives covered in the curriculum. The purposes of an OTR is to observe the child or children in a social setting, at Centers, or interacting during a group lesson and mark the child competent when the certain area is observed. For example, if the child is playing with colored blocks and names the colors, the teacher would mark the OTR assessment sheet noting that the child knows the colors.
5. *Phonological Awareness*: Phonological awareness is the understanding of different ways that oral language can be divided into smaller components and manipulated.

6. *Spiral Learning*: the theoretical framework of Bruner is that learning is an active process in which learners construct new ideas or concepts based upon their existing or precedent knowledge. The learner selects and transforms information, constructs hypotheses, and makes decisions, relying on a cognitive structure to do so.

## Assumptions, Limitations

An assumption was that teachers are following the scripted curriculum as designed by the school district. The study assumes that the readiness skills outlined in the curriculum are designed to provide longitudinal competency and increase the reading skills and comprehension of the learner.

This study was limited. The study examined a local program for one specific school district. It is limited to conclusions and assumptions based on the parameters of that school district in geographical location, socioeconomic status of the area, educational background of the parents of children in the study, and the physical characteristics or differences in settings for the participants of the Early Start Preschool Program.

A limitation is that this study was the first of its kind to be conducted on preschool longitudinal achievement performance in Virginia (Virginia Department of Education, 2007). The researcher could find no other studies to date attempting to identify preschool performance or curriculum effectiveness. This study is an effort to assist legislatures, and local leaders in guiding the direction of universal preschool for children in Virginia.

## Potential for Social Change and Theoretical Base of the Study

Crosser (2005) indicated that participation in a preschool program tends to significantly increase achievement in reading and mathematics and that social and emotional gains are also associated with not only preschool participation, but with the quality of the program. The research in Michigan of Bully-Cumming, Gorcycya, Wriggelsworth, Schweinhart, and Pelleren, (2005) indicated that high quality preschool programs do prepare children for kindergarten and that those who attend preschool score better in reading and math throughout their school years. Additional benefits are that remedial education is almost eliminated and there are higher high school graduation rates and lower crime rates among the participants. A report by Rosman and Kirsch (2006) on Nebraska crime concluded that quality preschool program participants consistently score higher on achievement tests in reading and mathematics and have higher quality peer relationships than those who had no preschool. "Not only do high quality early childhood programs cut crime and produce academic and societal benefits, but denying these services to children results in significantly higher costs to Nebraska's taxpayers" (p. 15)

Bully-Cumming et al., (2005) concluded that the High/Scope Perry Preschool program, a longitudinal study of preschool participants through age 27, indicated that achievement scores were higher. Chicago's Child-Parent Centers program studied children drop out rates of children who participated in its curriculum since 1967 and found that children who had not participated had a 70% higher arrest rate. The achievement scores and high-school graduation rates for participants was higher. Head

Start participants had significantly higher academic skills, better language development and acquisition, and lower levels of aggression. (Bully-Cumming et al.)

These and other studies suggested that preschool participation decreases crime and aggressive behavior, increases achievement test scores in reading, language, and mathematics; develops higher levels of cognition, and assists children in forming positive peer relationships. Substantial research indicates that participation in high quality preschool programs positively affects children, communities, and society at large. If the Early Start program has a similar effect, it could lead to positive change by producing citizens who have experienced increased academic achievement and cognition, have more positive peer relations, and who are generally more law-abiding. In accordance with the work done by Bully-Cummings,et al (2005) and Crosser (2005) these studies guided the direction of the Early Start examination and act as verification for the results to determine if academic achievement is enhanced through their quality preschool program.

## Significance of the Study

Barnett and Lamy (2006) found that high-quality preschool programs are urgently needed to assist children in poverty with vocabulary development and reading skills. Barnard (2007) listed the distinct advantages of participation in publicly funded preschool. These programs must include knowledge cooperative engagement of colors, shapes, numbers, and vocabulary and readiness skills to increase cognitive skills. There is also an increase in social and emotional development along with better health care.

Barnard (2007) studied a sample of 738,000 children that attended publicly funded preschool along with the Head Start programs in Georgia, Oklahoma, New Jersey, Michigan, and Chicago from 2002-2003. He determined that there was "consistent evidence that early childhood education increases children's ability to do well in kindergarten and beyond" (p. 82). Barnard further noted the need for more evidence to support his assumption and findings but stated, "Existing data indicate that early education programs are beneficial, and the long-term effects include less school failure, higher rates of employment, and less crime" (p. 84). Clearly this study of the effects of the Early Start program added to the body of evidence on the benefits of a quality preschool experience by determining if the participants have significantly higher scores on the third grade State standardized tests in English and Mathematics as compared to non-participants.

This study provides the MCMAR Schools with data which will indicate whether there is a need to modify, continue or expand Early Start. Barnard (2007) asks, "What components of early education work best and for whom?" (p. 85). The data identified whether the Early Start curriculum supports English and mathematics expectations through the third grade and if participation in the program will increase achievement of those specific standardized assessments.

Husted, Barnett, Jung, and Thomas (2007) showed that the Arkansas Better Chance (ABC) program increased vocabulary by 31% over the year- long study, and provided statistically significant results that predicted increases in general cognitive development. The math scores of the ABC program improved by 37% in such areas as

basic number concepts, simple addition and subtraction, telling time, and counting money. The program was also effective in increasing children's concepts about print and increased print awareness by 23%, which doubled the growth over the previous year. Participants knew more letters and letter-sound associations and were more familiar with words and book concepts then the non-participants.

Early Start is a literacy focused curriculum with number conceptualization being introduced. These concepts are all assessed on the state third grade end-of-the-year third grade tests in mathematics.

Previous research established that early childhood programs with adequate funding made positive changes in literacy and mathematics conceptual skills for young children (Barnett, 2002). Funding for the Early Start program is adequate and has allowed the program to expand to four centers with one center being a former elementary school. Prekindergarten participants in programs such as the Abecedarian Early Childhood Intervention program, the High/Scope Perry Preschool program, and the Chicago Child-Parent Centers program made substantial gains. These programs have demonstrated that the benefits to children far outweigh the expenditures (Barnett, 1996; Masse & Barnett, 2002; Reynolds, Temple, Robertson, & Mann, 2002). These benefits were quantitatively measured using achievement test scores, special education placements, and grade repetition data. Additional measurements included high school graduation rates and the rates of crime and delinquency. Achievement test scores also increased dramatically, special education placements dropped significantly, high school graduation rates was

statistically and significantly higher, and there was a dramatic reduction in crime and delinquency rates among the participants in these programs.

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Kauerx (2006) provides another pre-school perspective.

> It's a good news/ bad news situation. The good news is an increasing body of evidence shows that children's participation in high quality pre-kindergarten (PK) programs helps them begin kindergarten ready to succeed. Similarly, there is growing evidence that children who start kindergarten behind but participate in a full-day kindergarten (FDK) catch up to their peers by the end of one academic year. The bad news is these effects often appear to 'fade out' over time. As children move through the primary grades (grades 1, 2, and 3), the progress they made in PK and FDK dissipates and they are, once again, lagging behind other children. This fadeout effect suggests that while participation in PK and FDK produces positive short-term outcomes, it may not be sufficient to inoculate children against future academic failure. High quality PK and FDK give children a boost to successfully climb the first few rungs on the ladder of learning. (p. 1)

Barnett, 1996; Masse & Barnett, 2002; Reynolds, Temple, Robertson, & Mann, 2002, Kauerx (2006); and Barnett, 2002 all concluded that achievement test scores increased and that adequate funding for quality preschools makes a distinct difference in

literacy and mathematics conceptualization skills in young children. These researchers have essentially opened the door for evaluation of Early Start.

This study examined a significant relationship between participation in the MCMAR Early Start Preschool Program and achievement on state third grade end-of-the-year standardized tests in English and mathematics. A thorough explanation of the rationale for the type of scientific methods for this study was given. The literature review provides a comparison to the existing Early Start curriculum. The literature reviews offer contrasting evidence based on current research and numerous theorists in child development and early childhood education. The data were posted. A discussion of the results of the data was given. A determination was made regarding the effectiveness of the Early Start curriculum based on the results of the data. Conclusions, based on the data and the literature review allowed the researcher to offer suggestions to the MCMAR school district for modification to the existing Early Start curriculum if needed. The proposed study examined whether or not a publicly funded preschool program helps children succeed academically through the third grade. It addressed the "fade out" issue and determined if Early Start is producing long-term or short-term results from their preschool curriculum.

# CHAPTER 2:
# LITERATURE REVIEW

## Introduction

The literature review discussed historical and existing curriculum or instructional models used in quality research-based preschool models. The literature review outlined current and past research-based conclusions to support this study.

The purpose of the literature review was to guide the premise of the study that longitudinal achievement on standardized assessments through the third grade is significantly affected by participation in quality preschool settings and to support the choice of research variables for this study; those variables being participation and nonparticipation in the selected preschool program. The literature review showed substantial support and evidence of research conducted using preschool participants as variables along with other factors such as socioeconomic status, gender, ethnicity, and repeating a grade as compared to achievement on standardized test scores, longitudinally.

The models presented are designed to enhance the social, emotional, physical, and moral aspects of child development. The examination of literature was guided by the premise of this study. The strategy used in searching the literature was based on the designed curriculum of the Early Start Preschool Program by using terms such as early childhood curriculum, preschool, child development, characteristics of quality early childhood programs, , brain-based research, affective learning, effective learning, publicly funded preschool programs and privately funded preschool programs and

searching the developmental needs of the children. The literature review was aimed at reviewing the existing curriculum models and design elements associated with quality preschool programs.

The literature review is a thorough examination of the history of early childhood educational curriculum and theory. Throughout this section there was an intertwining of major theorists and a comparison to the Early Start curriculum along with contrasting ideologies and theories of learning. The purpose of this review was to illuminate particular curricular strategies that effectively and affectively give children the opportunity to grow intellectually, socially, emotionally, and physically. The literature review was structured to flow evenly between each point of interest of the Early Start curriculum. The historical examination provides a beginning to the purpose and structure of contemporary preschool education, theories of child development and guiding forces in designing curriculum for modern day schools.

There was an examination of the Early Start Preschool program of the MCMAR school district and the differences in the effects of participation in this one-year program for four-year-olds beginning with an extensive literature review Early Start is in a state that requires annual testing at the end of 3$^{rd}$, 5$^{th}$, 8$^{th}$ and 11$^{th}$ grades. The specific curriculum guidelines for adhering to the statewide preschool initiative emphasize a primary academic focus on literacy and math with a general focus on science and social studies. Early Start measures progress of participants by using an on-the-run (OTR) assessment that measures 126 academic, social, physical, and emotional items. The concept of an on-the-run assessment is derived from the NAEYC position statement of

November 2003 which states that assessment of young children should be done with concern for the developmental stage of the young child and be tied to the children's daily center activities. The Early Start Preschool Program follows that guideline and encourages teachers to assess skills by watching the children interact and perform structured activities at their Centers and during social activity times. Individualized assessment is not encouraged nor is it effective. As no study has evaluated the efficacy of the Early Start program, this research examined whether it has positively affected the results of the end-of-year tests. The effects were examined by comparing the end-of-year test scores in English and math for school years 2003-2005 for third grade students.

## Preschool, A Universal Decision?

A change in family life has occurred over the past 30 years that includes a dramatic increase in the number of mothers who are employed and a constant and continual increase in single parent homes. As a result of this change, there is a need for preschool education in the United States that makes a difference for young children. Contemporary families have far fewer avenues for affordable child care. Without advantages enjoyed by children with a parent who can afford to stay home with them or who can provide an enriching pre-school experience for them, these children enter school academically and socially behind their contemporaries and risk failure, dropping out or needing public support for a large portion of their lives (Groark, MeHaffie, McCall, & Greenberg, 2007).

Groark, et al (2007) concluded that dramatic new brain growth and development evidence demonstrates that the "quality of the child's relationships and the degree of

cognitive stimulation in the early years have a profound impact on the child's later cognitive, emotional, and social growth" (p. xix).

The National Institute of Child Health and Human Development (NICHD) through extensive, comprehensive research on child care and child care settings in a 2005 study examined certain, "structural" (p. 101) characteristics--child-adult ratio, group size, and characteristics of the physical learning environment--and caregiver characteristics--education, specialized training, experience, and beliefs" (pp. 101-102). Their results revealed that the amount of quality attention a child receives is determined by the ratio of children to caregiver and what the caregiver's characteristics are positive indicators of quality childcare, and that the safety of the physical environment is a direct indicator of quality care for young children. The results of this comprehensive study indicated that most children in the United States were receiving relatively adequate care, and that it is seldom either outstanding or substandard. The ratio of child to teacher in the Early Start program is 9:1. Each classroom has a trained and highly qualified paraprofessional with a teacher who is licensed and certified in early childhood education by the state of Virginia.

According to *New Recommendations for Programs for Children from Birth through Age 8* NAEYC and the National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE) (2005):

1. All assessment must lead to benefits for children, families and programs;
2. Assessment instruments must meet accepted professional standards of validity and reliability;

3. Assessment must respond to culturally and linguistically diverse communities and to the special needs of children with disabilities;
4. Content and implementation of early childhood curriculum should be based on sound research and organizing principles about young children's learning and development;
5. Curriculum goals should address both developmental and academic content; and
6. Curriculum should be regularly reassessed regarding its effects on classroom practices and desired results for children. (Recommendations for Programs for Children Birth through Age 8. 1106)

Early Start has incorporated the Phonological Awareness Literacy Screening (PALS) assessment as developed and designed by the University of Virginia, Curry School of Education. Phonological awareness is the understanding of different ways that oral language can be divided into smaller components and manipulated. The preschool screening process begins in the fall of the school year and is followed through with a final assessment in the spring. PALS is a tool designed to assess name writing, alphabet knowledge, beginning sound awareness, print and word awareness, rhyme awareness, and nursery rhyme awareness (University of Virginia, 2006).

The validity of PALS was established through teacher and administrator review and acceptance of the questions given to the children. The instrument permits generalizations and predictable outcomes on other assessment measures as determined by the University of Virginia and the Virginia State Department of Education. The reliability of PALS is questionable since any instrument assessing young children is subject to developmental readiness and stages of the children. Scoring consistency was established through staff development instructing teachers on scoring methodology. The on-the-run

assessment is generally accepted by teachers and administrators as being a valid instrument of assessment. It is given through direct observations of children performing center or play-based activities designed to reinforce or practice skills. The instrument has scripted questions and specific scenarios framing the asking of questions (University of Virginia, 2006).

## Historical Significance

Johann Heinrich Pestalozzi, in Krusi (1875) taught that teachers should begin with the tangible object before introducing abstract concepts. He believed that learning and instruction should begin with the immediate environment before dealing with what is distant and remote. The teacher should begin with easy exercises before introducing intricate ones and always proceed gradually, cumulatively, and little by little. (Krusi, 1875).

Freidrich Froebel, known as the Father of the Kindergarten, in Liebschner (1992) emphasized that children should begin instruction at age five, and teachers should lead the instruction through various constructive improvement activities. Liebschner cited Froebel's conclusion that children wish to distinguish themselves from external objects, want to learn the names of things in their surroundings, and take pleasure in discovery.

The first law of instruction of children is to keep their brains actively engaged (Liebschner, 1992) Children learn best slowly by moving from the simple to the complex, but as they search, they also learn. The child’s requirements prompt where the learning

begins. As children learn and grow their individual needs change. The curriculum must focus on those needs and relate the material to the children's world. It must be adaptable and evolving to satisfy the growth and development of all the children. There must be ample opportunities for the children to explore and search through play and social activities constructively directed and facilitated by the teacher. Early Start children are actively engaged throughout the day in diverse learning experiences. See Appendices I and J.

Froebel concluded that fresh air and hard work produced superior learning in young children and that the harder children and adults worked and used their brains, the healthier they were (Liebschner, 1992). Early Start children have physical activity twice each day for the full-day program of thirty minutes each. The half-day program allows for one 30 minute physical fitness activity. It is highly recommended by program and building supervisors that the physical fitness activity take place outside. Lillard (2007) emphasizes that preschool children learn by absorbing information through play and gentle guidance. Children develop mental muscles by practicing within their surroundings. As children practice, they desire and respond to choices about what they want to learn or their interests. Children enjoy and grow through socialization. Lillard (2007) describes children as being; "seen as a motivated doer in a research university, rather then an empty vessel in a factory" (p. 29).Lillard is referring to the Maria Montessori method of education young children.

According to Lillard (2007), the Montessori Method can be defined by guiding principles. These principles include using movement to enhance thinking and learning achievement. Comfort or self-esteem is improved when people have a sense of control over their lives, things must be interesting for people to learn, extrinsic rewards can negatively impact impetus when withdrawn, collaboration is conducive to learning, learning occurs best when put in meaningful contexts, teachers must maintain high expectations for their learners and children learn best in an orderly environment.

The child can only extend fully by experiencing what the environment offers within a social context (Montessori, 1989). Montessori believed education must conform to real life and based her curriculum on linking family and school with multiple preschool age groupings of children learning their best by doing. She asserted that,

> Education, therefore, of little ones is important, especially from three to six years of age, because this is the embryonic period for the formation of character and of society, (just as the period from birth to three is that for forming the mind, and the prenatal period that for forming the body). What the child achieves between three and six does not depend on doctrine but on a divine directive which guides his spirit to construction. These are the germinal origins of human behavior and they can only be evolved in the right surroundings of freedom and order. (pp. 242-243)

Montessori (1989) suggested that teachers should demonstrate the use of materials followed by children choosing the activity and working independently. She believed teachers should be scrupulously trained to include sensory learning along with aesthetically pleasing materials. Play should also be prearranged affirmatively with obvious objectives and must be active. All center or play area activities in Early Start have a purpose with specific outlined methodology and materials within the curriculum.

These activities are explained daily to the children prior to the commencement of Center time.

## Constructivist Curriculum

Sternberg (1990) and Vygotsky (1978) supported stories and play centers that promoted interaction with peers and expanded cognition through functions that help children to learn. Vygotsky (1978) introduced the *zone of proximal development*, a point at which children begin learning through dependence on adults or caregivers for help with tasks. The ability of a child to say and describe requirements and wants in a coherent fashion or vocalization comes next. Language and understanding language are major elements in scaffolding or creating information. Giving advice to direct children in a task alerts them to the sequence of activities and actions. Children may memorize directions given to them and eventually use them to complete tasks independently. As children hear directions, instructions, or comments associated with a task or problem, they become familiar with the wording and can associate it with the task. Then can they apply the information and the words to other, similar tasks.

The guidelines established for a constructivist curriculum allow for the intellectual, emotional, moral, and social requirements of children (DeVries & Zan, 1994). This considers teacher creativity and the emotional and social needs of the children. Modern brain research shows that children have the power to handle complex thinking and that learning involves a whole-person phenomenon based on meaning (Diamond & Hopson, 1998). Included in this process is how children feel, act, and think.

Early Start is a public preschool program that does not fall within the framework of Constructivism. The emphasis of the Early Start program is academic achievement. There is daily rote memorization and repetitive phonological activities. Teachers are deliberately focused on academic achievement and advancement of their children to kindergarten. The days are filled with performance objectives and academic achievement leaving little time for teachers to examine how children feel. Their behavior becomes the problem and not their circumstances. These phenomena work together with paying attention, emotional responses, learning, and memory to reinforce the concept of emotional intelligence in learning. It then follows that health and emotional intelligence are linked (Elias, Zins et al., 1997; Lazarus, 2000).

The Vygotskian approach emphasizes social interaction with less emphasis on developmental stages (1978). Vygotsky concluded that behaviors are increased as the social dealings increase narratives, conversation, and communication. Social familiarity leads to the formation of new concepts and schemas, constructing new knowledge in small steps as people learn. The social interaction permits building new schemas and developing appropriate or inappropriate actions. Positive achievement can be enhanced by a pleasant, nurturing, and comfortable social atmosphere (Vygotsky, 1978).

## Description of the Early Start Program

Frede and Ackerman (2007) assert that a major advantage of this type of program is that all teachers are teaching the same thing and that the same requirements are established for all the children. According to the authors this approach allows for continuity and consistency across the curriculum which lends itself to ease of program

evaluation by administrators. The Early Start day is filled with distinct opportunities for the teacher to reinforce concepts and skills taught at circle time or within small groups. A focused literacy lesson based on a particular theme is given to the whole group daily.

Frede and Ackerman (2007) also concluded that a curriculum is not necessarily effective when focused on a theme or specific domain. The morning activities in an Early Start Center take approximately twenty to forty minutes of whole group instruction and are focused on a particular theme. The curriculum is divided into units and themes which are further divided into days. All classes in the Early Start Program follow the same format and curriculum for these non-negotiable activities. Each classroom is expected to be completing these activities. All classrooms in any Early Start Center were on the same day of the curriculum.

Center activities in the program are designed to allow the children to play and socialize while using materials prepared by the teacher to reinforce the introduced skills of the particular theme or unit that are needed by children to fulfill assessment requirements designed by Early Start and conforming to the Reading First Initiative and the Virginia Building Blocks criterion.

In the Early Start program, literacy focus groups designed by the teacher using reading “levels” provide the opportunity for the teacher to interact and explain sequences of events and activities, directions and individualized pre-reading skill development. During these focus group sessions teachers explore problem solving and comprehension

skills with the children. Children are grouped according to the following MACMAR reading level standards:

1. Pre-phonetic level or IP: Children know some letter names. They have no phonemic awareness or concept of words. They write random marks and use pictures to communicate.
2. Early Phonetic level or IE: Children are able to define beginning word sounds and rhyming words. They know most of the alphabet and write with random letters. They begin to retell stories and discuss the pictures with detail. They hear likenesses and differences of sounds in words along with dominant consonant sounds.
3. Stage II Level: Children can track words along with the appropriate other skills. Children track print from left to right and demonstrate voice to print match. They develop a sight word vocabulary and read simple text independently. Children begin to self-correct, predict what may happen.

Early Start is a predominantly literacy-based program with direct emphasis placed upon mathematics, social studies and science. The program adheres to the state requirements and Building Blocks which adhere to Reading First. Little emphasis is placed on socialization or emotional development of children and there is little time for teachers to assess social skill development throughout the year. The curriculum is structured and scripted so teachers will say exactly what is written in the curriculum. A Daily Plan or thoughts for the day is done every day, without fail. The child is asked to

write a statement on the easel and then the teacher writes it, “the adult way.” It is a daily requirement for all classrooms. The Literacy Lesson is completed in a whole group setting and requires direct adherence to the curriculum. A thematic book is read, following the prescribed guidelines, and the children are required to answer specific questions from the curriculum. This methodology is contrary to Constructivist principles because of the length of time children are sitting according to their age and not allowing them to form conclusions or guide their thoughts to group discussion and discovery.
A major portion of the day is Center Activity time. Centers are thematic and designed to facilitate on-the-run assessment by the teachers (MCMAR, 2006). Vygotsky emphasized a positive and pleasant environment. Montessori designed an orderly setting with high expectations for children. Early Start does provide that criterion. There is also action and movement to and from centers which aligns with the theories of Piaget.

Jean Piaget (1969) asserted that young children learn through action and through all stages of maturation. People are born with the ability to organize information in the psyche. The process includes precisely organized ways children and adults perceive material and respond to their views. As children extend their knowledge, responses increase. Through various defined stages, children react with their surroundings. Actions and schema bring children in contact with reality in ways that produce understanding. Supplementary action can, in turn, produce further awareness. As children acquire information and persist in acting and changing, their previous understanding is altered.

Early Start aligns somewhat with Piaget’s constructivists’ theory of development, Sternberg’s theory of self-expression and Vygotsky’s theory of proximal development.

Children are encouraged to play act or dramatize stories or life. It is in accordance with the Reading First initiative. According to the State Reading First definition:

> Title I, Part B, Subpart 1 of the Elementary and Secondary Education Act, as amended by the No Child Left Behind Act of 2001 authorizes Reading First. Reading First is the academic cornerstone of No Child Left Behind, which recognizes the importance of both improving student reading achievement and implementing programs and strategies scientifically proven to be effective. Reading First, along with the programs authorized under Title I, focuses on improving student achievement for all students, especially children in the nation's most disadvantaged schools and communities. p.2

The National Research Council (NRC) (2005) listed key traits of a superior pre-kindergarten (PK) program. Early Start follows and adheres to these guidelines, which include cognitive, social-emotional, and physical growth areas which are complementary and require active attention (NAEYC, 2007). Teachers who nurture children's dispositions by an encouraging teacher-child relationship influence a superior preschool program. There must be a low adult-to-child ratio around 1:9. The program benefits children from poverty whose maternal parent has had limited formal schooling, depression, or other elements associated with limited accomplishment.

## The Reading First Initiative

Reading First is a federally mandated reading directive designed to assist all children to become better readers through scientifically researched and tested programs of learning (Virginia Department of Education, 2007). The Early Start curriculum has never been studied on any level to modify or adjust the curriculum. MCMAR is teaching a program that has existed since 1977 without evaluating its longitudinal effectiveness as prescribed through Reading First and the NCLB (2005). However, Reading First

describes the components of a scientifically based reading program to include a phonemic awareness piece, phonics, vocabulary development, which is listening, speaking, reading and writing, reading fluency and reading comprehension. Early Start has a variety of phonemic awareness and phonic strategies employed to help young children within the curriculum structure. It also helps children develop vocabulary and with comprehension (Virginia Department of Education, 2007)). So, Early Start does follow the guidelines set forth by Reading First even though the program itself has not been researched or studied. Early Start curriculum has not been accepted by a peer reviewed journal or panel of independent experts through a rigorous review as described in the Reading First program descriptor of scientifically based reading programs. Data analysis of the program is limited to a comparison of yearly accumulated data within the program.

The Early Start program is a state-approved program that receives funding based on its existing curriculum from Reading First. The Reading First Program outlines specific criterion for quality reading instruction. The Early Start curriculum is aligned with the requirements of the Reading First Initiative. For example the design includes a 90 minute block of time for reading using specific strategies and identifiers for assessment. Early Start has a structured day focused on Reading and mathematics with an on-the-run assessment done throughout the day and year. All Center activities match the curriculum objectives. Reading First also requires designed reading groups at all levels and Early Start follows that requirement to the letter.

## Curriculum

The curriculums required for a successful PK program should be centered on play, should contribute to a child's happiness, and be relevant to a child's life (Montessori, 1989). Barnard (2007) indicate that a 2003 U.S. Department of Health and Human Services study of 33 State funded preschool programs conclusively showed that scores for participants on cognitive and language ability assessments was substantially higher then nonparticipant. Scores in reading and mathematics was higher, there was a higher attendance rate of participants in state funded preschool programs, and lower retention rates through the early elementary grades. Barnard (2007) determined that the curriculums of successful programs have developmentally appropriate materials and that learning take place through play. The author further asserts that the learning environment must be comfortable and provide security for children with plenty of parental involvement and home visits by the teachers to the home of the children under their care. Finally, Barnard states that there must be an emphasis on math and basic language skills, problem solving and a sure continuity between kindergarten and the preschool setting.

## Contemporary Research

The research of Gopnik, Meltzoff, and Kuhl (1999) indicated that children act or predict based on interpretations and ignore or reinterpret details which do not fit their lives or theories. Children will also change the understandings they have to make new information or create new theories (Bruner 1967). Bruner determined that education is social and the curriculum must be also, reflecting Vygotsky (1989) and Gardner (2000). Early Start is not child-centered as Bruner believes is best for children. A major portion

of the day is spent in small and whole group settings with the children modeling adult responses, memorizing curriculum requirements and practicing phonics and phonemic awareness along with basic mathematics. Gardner (1993) is particularly significant with his theory of multiple intelligences. Gardner feels that education should allow for different types of intelligences through offering a variety of modalities of learning to the student as Center activities do with young children. Gardner believes that playing music composed by Mozart will positively affect the intellectual development of children because of the particular sequencing of notes and tones as they act to stimulate the synapses required for intellectual thought. His recommendation is to play Mozart as background music and to develop lessons that study his works (Gardner, 1993).

The intelligence of the child is best assessed socially through observations and interactions (Bruner, 1967). Bruner felt that it is best to leave the children at play and observe their interactions and assess them through that observation. Sternberg (1990) and Vygotsky reflect this philosophy by recognizing socio-cultural and conditional elements which influence children. Programs and assessments in early childhood should be designed to include socio-cultural and environmental elements (Sternberg,1990). Early Start has an on-the-run assessment model which conforms to Bruner (1996), Sternberg (1990), and Vygotsky (1978) by using social assessment measures that adapt to cultural and environmental elements by allowing the teacher latitude to observe and record when appropriate. The Vygotskian approach emphasizes social interaction with less emphasis on the stage development Piaget (1969) asserted. Vygotsky concluded that behaviors are increased as the social dealings increase narratives, conversation, and communication.

Social familiarity leads to the formation of new concepts and schemas, constructing new knowledge in small steps as people learn. The social interaction permits building new schemas and developing appropriate or inappropriate actions. Positive achievement can be enhanced by a pleasant, nurturing, and comfortable social atmosphere (Vygotsky, 1978). Early Start is a place to learn for young children. Children are referred to as "friends". Teachers are expected to be polite, encouraging, and cheerful. They give the children a sense of family for learning. Social interaction is constant and reflects the needs that Vygotsky outlined to help children create new schema in a safe, nurturing and happy place.

Continuous assessment of academic, social, physical and emotional progress is made throughout the school year by the teacher on a daily basis. This is called on-the-run (OTR) assessment. OTR assessment is comprised of 126 different items for evaluation. These are recorded when completed by the child (Appendix G). A quarterly report card is sent to the parents of the child corresponding to the school division's calendar year for reporting grades. The report includes some of the OTR items, but as of date is not aligned with it. The report (Appendix H) allows for satisfactory progress (S), progressing (P) and not progressing (N). Attendance, conferences and teacher comments are also recorded.

Socio-cultural theorists, like Jerome Bruner (1996), supports the idea that children must be given choices and permitted to make mistakes. There is pressure to provide substantial progress of children through different reading levels, Early Start focus on the objectives of the curriculum and not the child. Teachers and parents can help children

learn to think by showing them their assumptions and identifying how false assumptions are made (Gardner 2000). What matters is the ability of the child to use specifics. Gardner also asserted that children should be encouraged to discover their longings and skills and allowed plenty of time to think. Young children in Early Start find opportunities to think and are provided time to reflect. During group literacy time and the Daily Plan children are given time to reflect and think about the story. Questions are posed to help children discover and to develop necessary language skills. At Center activities the children are constantly interacting, thinking and developing assumptions based on their experiences (MCMAR Schools, Early Start curriculum guide, 2006). Sternberg (1990) and Montessori (1989) assert that children should be permitted to explore and expand their creativity in numerous areas. Gardner (1993) concluded that there must be a focus for young children with an emphasis on language growth and skills.

Preschools that emphasize play and language expansion through narratives and modeling of the teacher increase cognition. The curriculum in Early Start provides a focus for children by allowing the teacher to model letter sounds, words, and expressive language and to act out the story during the Literacy and phonological awareness portions of Circle Time. The story of the day or theme of the unit is carried over into the Dramatic Play Center or is acted out through puppets thereby giving the children the opportunity to expand their vocabulary and develop needed language skills.

Zigler, Stevenson-Finn, and Hall (2002) reported that brain research findings support early intervention programs for young children's language development. Montessori (1989) contended the child inherits the power of constructing language by

absorbing it and by watching the speaker and having the speaker model wanted language. Questioning is a key factor in developing language skills. According to MCMAR Schools, Early Start curriculum guide, 2006, during the daily Literacy Lesson, in Early Start, the teacher uses expressive language filled with colorful and dramatic pauses raising and lowering the voice while creating different voices for the characters in the stories. There are six or seven books read throughout the day in this manner. At the end of the reading the children are required to answer who, what, when, where, why and how questions while adding their own descriptions of the story characters (Early Start curriculum guide, 2006).

Sternberg (1990) emphasized the concept that parents and teachers should use questioning techniques to help the child increase language skills and become more independent thinkers. Children must be allowed to take risks, learn patience, and have the time to process ideas. Learning takes place optimally in a child-centered and intellectually stimulating environment in which preschoolers are allowed to make choices. Sternberg concluded that even young children should be allowed to make choices and that teachers should give them opportunities to do that. Within Early Start, children are encouraged to take risks and try new games or experiences. The focus is on the positive growth of children.

## Social and Emotional Learning

Changing societal expectations and the composition of families force PK teachers into increasing pro-social behaviors in children to bring them to constructive logical conclusions (DiPerna & Elliot, 1999; Feshbach & Feshbach, 1997; Haynes, Ben-Avie, &

Ensign, 2003; Pasi, 2001). Results are predictable on achievement tests of basic skills, conceptualization, and language arts according to Cobb (1972), Malecki and Elliot (2002), Welsh, Park, Widaman, and O'Neill (2001) and Wentzel (1993). The results of the longitudinal, 35 year study conclusively suggest that when children's scores on standardized assessment increased that it was attributable to the pro-social affective behaviors taught by the school and the teachers. Teachers who demonstrated appropriate behaviors reinforced upbeat affective emotions, atmospheres and nurture children verify assessment products can be constructively affected.

A curriculum in any educational setting must purposefully address moral questions surrounding family organization, American lifestyle, and ethical reasoning according to DeVries and Zan (1994). Their research confirms a decline in the makeup of American society. According to the authors there are recent declines in children of poverty and single-parent families having the capability to select or choose proper emotional responses. DeVries & Zan (1994) maintained "Affective classrooms are classrooms in which the socio-moral atmosphere supports and promotes children's development" (p. 4). DeVries and Zan (1994) add that the socio-moral atmosphere must include relationships within the building or setting. Caring classroom surroundings promote collaboration and a supportive learning atmosphere. Social and emotional learning play a decisive role in improving children's academic performance and their capability to become lifelong learners. Zins, J. E., Weissberg, R. P., Wang, M. C., & Walberg, H. J. (Eds.) (2004) stated "There is a growing body of scientifically based

research supporting the strong impact that enhanced social and emotional behaviors can have on success in school and ultimately in life" (p. 19).

Empirical evidence shows that children who come to school with positive social and emotional learning (SEL) profiles adjust successfully to the new practices and make better grades (Ladd, Birch, & Bush, 1999; Ladd, Kochenderfer, & Coleman, 1996).

According to the NAEYC (2004) a preschool curriculum should develop activities to teach appropriate social behaviors and emotional responses encouraging children to rise above their circumstances. Considering that .4707% of the children within the Early Start program are considered disadvantaged the curriculum is designed to assist teachers in presenting activities and Literacy lessons that teach appropriate emotional responses that are intertwined within the lessons (MCMAR, 2006). These emotional responses are also learned through social interaction during Center and physical fitness activities. Children are directed to modify their response to something as needed. Teachers and administrators model appropriate behavior daily. Adherence to standards is recommended by both NAEYC and NAECS/SDE to enhance the development and maturity of young children. NAEYC and NAECS/SDE (2004) have also stated that teachers must be empowered to take control of their teaching and given freedom to teach desirable skills and behaviors as required by giving learners the opportunity to explore and make choices for themselves within the context of the curriculum.

Teachers in the Early Start program have little time for creativity with the implementation of standards and do not control their teaching. Numerous observations by administrators act to control the teachers' sense of freedom and their ability to interpret

the designed curriculum. Teachers must adhere to the prescribed didactic curriculum or face scrutiny and negative evaluations by administrators who strongly suggest that they follow the format and design of the program to ensure continuity.

## Brain-Based Research

Bruner (1996) stated that the educator must situate details within a living context and make learning real to the student. Sternberg (1990) observed that intelligent people are problem solvers with superior reasoning skills, logical thinking, and superior vocabulary who can draw on large sources of information. Problem solving and learning within a living context are not the focus of Early Start. The lessons in the curriculum for the children are scripted and artificial allowing for rote memorization and designed to meet Early Start assessment needs and requirements for funding. How do schools foster a society of wisdom seekers using the different intelligences, socio-culturality, living context and include a stimulating usable curriculum? A complex state of affairs exists because schools seek to attract new teachers, meet standards, appease the population, raise children, and produce citizens.

Modern brain research data supports constructivist theories and social and emotional theories of learning as espoused by Zins, (2004), Weissberg, (2004) Kessler, (1997), Vygotsky, (1978), and Piaget, (1969). The curriculum emphases should be derived from organizational research. NAEYC and NAECS/SDE (2004) show that children create their own awareness and actively interpret their settings socially, logically, and morally actively through caring settings. Early Start requires constant monitoring of children through continuous assessment and focused literacy groups.

The most efficient ways to promote the construction of understanding by children according to DeVries and Zan (1994) are to engage the interest of the children, encourage experimentation with error, and foster mutual aid and collaboration. Constructivist education can be summarized in three words: "interest, experimentation, and cooperation" (DeVries, Edmiaston, Zan, & Hildebrandt, 2002, p. 35). Experimentation with error includes error without harmful consequences. Children should have the opportunity to make mistakes and learn from them. Given that premise, teachers in Early Start are encouraged by the program administrators to create learning environments that foster conceptualization and prepare students for their futures through the designed curriculum. The learning atmosphere created in Early Start is controlled by the curriculum and the academic expectations. Children have the opportunities to make mistakes and learn from them. However, there is little room for creativity on the part of the teacher. Early Start is a performance based academically focused curriculum model that presents a rigid and scripted format for teachers to follow.

"There is great concern for children's school readiness and searches for the curriculum that were to prepare children for school success" (Goffin, 1994, p. 13). The Early Start curriculum does not address psychological or anti-social behaviors through the curriculum. Early Start does address these issues through a child referral for special services committee. This takes place after the child is identified and has exhibited negative behavior. Further evaluation/testing, home visits and social interviews are used to assess the needs of the child.

When parents search for suitable instruction for their children, they often face a lack of appropriate and affordable services which follow any prescribed curriculum. How can parents be assured their children are being cared for appropriately? How can parents be assured their children are learning what they need to be successful in school? Parents want the best services for their children.

> Access to and availability of class instructional preschool programs is limited and, in numerous parts of the United States, non-existent. The limitations are focused on middle socio-economic level parents. Head Start is an available option to families within certain low-income levels. (NYAEC Early Learning Standards, 2004, p. 4)

Head Start is not universally available, however, and "Too many children in the United States lack access to any preschool program at all, and too many others do not have access to a high quality educational program" (NIEER, 2004 p. 19). Early Start was created to assist parents in the local community choose a free and quality program for their children.

According to the NAEYC and NAECS/SDE, early childhood programs and curriculum must contain firm key performance elements. Collaborative relationships with schools encourage interactions between the general population who have contact with the child, that are sensitive to family composition, and which promote family participation in the program (NAEYC, 2004). Other aspects listed by NAEYC include health and nutrition, beautiful surroundings for the children, and qualified and licensed staff. Additional aspects include the quality and consistency of formal and informal assessment models, district partnerships, and multiple teaching approaches that benefit children. A

preschool program must be hands-on, engage the learner, and be concept- based with substantial and relevant understanding based on interactive teaching and cooperative learning (NAEYC, 2004). Early Start is a hands-on program that engages the learner through interactive play, teaching and cooperative learning. NAEYC further asserts the content of the curriculum be integrated across customary subject matter divisions (NAEYC, 2004).

Children must form their own hypotheses and keep trying them out (Sternberg, 1996). The Early Start curriculum is integrated across subject matter with diverse content. It allows for child exploration and investigation through facilitated learning Centers for small groups of children. Each Center has activities for every child at that Center and the activities are wide ranging in ability giving all children the opportunity to participate. Long-established teaching and assessment must be reevaluated and aligned with best practices. Assessment should be performance-based and conform to best practices that reflect student learning. As discussed earlier, the assessment piece is on-the-run and does conform to the best practices for assessment of young children.

According to Elliot (2002), Froebel (1889) Gardner (2000) and Montessori (1989), Pasi (2001), Piaget (1969), Vygotsky (1978), and Sternberg (1996) children learn best when their physical, emotional, social, and psychological needs are met through active listening by the teacher and active play by the learners. The setting must be protected and secure, where no participant is excluded and everybody is acknowledged. Children must be permitted to build their comprehension through errors and successes and should discover their state of affairs through active engagement (Bruner, 1996). The

Early Start program is implemented in 4 centers which currently employ 76 full-time licensed and certified early childhood teachers and 76 highly qualified paraprofessionals. Each building houses a School Nurse, Reading Specialist, and Technology Specialist, Security Officer, Speech Pathologist (shared) and English Speakers of Other Languages (ESOL) teacher (MCMAR, 2007).

## Administration and Leadership

Caruso and Fawcett (1999) consider that a supervisor or principal of an early childhood program is a caregiver striving to increase an atmosphere of nurturing, one in which staff and children grow in the ability to care. Caruso and Fawcett further stated, "Caring as relation and reciprocity means that supervisors and staff members as care-givers and care receivers are participants in and contributors to acts of caring" ( p. 46). The leaders of early childhood programs should be sensitive to teachers and have gentle voices. Leaders must be warm, kind, and nurturing (Caruso & Fawcett, 1999). Principals and school leaders must be able to guide others through the process of learning with kindness and caring. Early childhood leaders must be a step above other leadership and should display and require caring staff (Mayeroff, 1971).

The administrative leadership team of the Early Start program administers to four Centers. These leaders are experienced (15 to 30 years). They are perceived as kind and nurturing with welcoming demeanors. These administrators are very sensitive to the needs and emotions of the teachers and the children in their care. They are very visible, always interacting with the children and helping teachers. Staff development is given to uplift and make the faculty feel wanted and appreciated amidst the pressure to perform.

Currently, the reading and Literacy assessment items for the children are posted in the Reading Resources room's listing the classrooms with their corresponding children. Recommendations to the building supervisor are made from central office based on that data. Teachers and other's can view the progress of all the children as a comparison.

Keeping in line with Caruso & Fawcett (1999) the building leaders within the Early Start program are caring and nurturing with warm mannerisms and kind demeanors. This leads to the creation and facilitation of nurturing teaching environments which enhances the learning environment for Early Start participants. The school community enhances communal, ethical, academic, and emotional growth and achievement in children through that nurturing and positive atmosphere. Groark, MeHaffie, McCall and Greenberg (2007) stated that high quality relationships in early learning settings have extreme positive effects for achievement. Bruner (1967), Vygotsky (1989) and Gardner (2000) all agreed that education is social. The Early Start program has a positive social atmosphere conducive to high academic achievement. The data determined that achievement is not positively affected by participation in Early Start through the third grade.

A descriptive, quantitative study was needed to guide the development of the Early Start Preschool Program. No scientific examination of the program has been conducted since its inception in 1977. Christie (2007) in the June issue of the Phi Delta Kappa magazine notes that Virginia is beginning to see the importance of research into preschool by stating,

> Virginia joint resolution H.J. 729 requests a study of the 12- year old Virginia Preschool initiative. The study is to examine funding issues, assess implementation and effectiveness, evaluate the continuing success of students who participated in the current program, identify and assess accountability measures, study the concept of universal preschool, evaluate additional costs of aligning components with 'quality standards' checklist recommended by the National Institute for Early Educational Research, and determine whether research has been conducted concerning the efficacy of preschool programs for children of middle-and upper-income parents.. (p. 725)

The research determined if children who participate in this preschool program achieve significantly higher then children who do not participate in the program.

## Literature Base for Variables and Research Methods

Quantitative studies similar to this proposed study have been conducted on larger scales. The Georgia Prekindergarten Program which was launched in 1993 as evaluated by Henry et al. (2003) found that there was a distinct advantage of attending the Prekindergarten program as evidenced by reading/English and mathematics scores. Oklahoma's Prekindergarten Program also showed significant increases in achievement in language arts scores as evidenced by (Gormley & Gayer, 2003). The New Jersey Prekindergarten Program, as reported by the Early Learning Improvement Consortium (2004) showed dramatic increases in language skills, linguistic awareness as measured by the state kindergarten screening tool. The Chicago Child-Parent Center program, established in 1967 has established higher scores for participants of the program in reading and mathematics through the eighth grade (Reynolds, Miedel, & Mann, 2000; Reynolds, Temple, Robertson, & Mann, 2001). These quality programs show an increase in academic achievement in language arts and mathematics as evidenced on standardized

assessment measures. This study adds to that body of evidence by determining if achievement is positively affected and contributed to by preschool participation.

## Research Variables

This study determined if the end-of-the-year assessment scores correlated with participation in Early Start Preschool. The literature base for the research variables includes The NAEYC and NAECS/SDE studies along with Barnard (2007); Henry et al. (2003); Early Learning Improvement Consortium (2004); Gormley & Gayer, 2003; Reynolds, Temple, Robertson, & Mann, (2001); and Reynolds, Miedel, & Mann, (2000) investigations of longitudinal effectiveness of preschool participation combined with the Chicago-Parent project, Georgia Preschool, the New Jersey Prekindergarten Program and the Oklahoma preschool initiative further developed the idea that quality preschool participation positively affects achievement on standardized assessments. The dependent variables used in those and other studies included participation in quality preschool programs. The independent variables included comprehensive, longitudinal end-of-the-year assessments. These studies form the research basis for this study's research methodology.

# CHAPTER 3:
# METHODOLOGY

## Introduction

This study investigated whether the Early Start preschool program of the Medium-Size City in the Mid-Atlantic Region (MCMAR) school district has contributed to and increase in academic achievement of third grade students in English and math on the end-of-year state tests during the school years; 2003 to 2005. The scores of Early Start participants were compared with those who did not attend the preschool program. Chapter 3 includes a description of the methodology used in the study and the rationale for the research design. The sample selection and setting are discussed along with the methods of data collection and analysis.

Early Start is a voluntary state and federally funded preschool program for four year olds in the MCMAR school district. The program consists of 1,436 children with children attending their zoned school as either full or half day. The majority of the Early Start Programs are full day programs with 54 classroom offering full day and 30 offering half day programs. There are 74 teachers certified in early childhood education and licensed to teach by the state. Each classroom has a paraprofessional who fulfills the state requirement of having at least two years of college. The ratio of children to teacher is 9:1. (MCMAR, 2006).

## Research Questions

The following research questions were addressed in this study:

1) Is there a significant difference in English and math scores on the state third grade end-of-the-year tests in the years 2003, 2004 and2005 between children who participated in the Early Start preschool program and those who did not?

2) Is there a correlation to gender, ethnicity, socioeconomic status and/or repeating a grade between first and third grades?

3) What are the similarities and differences displayed by the data between each year studied?

The data was examined as individual years 2003, 2004 and 2005 and no statistical correlation was attempted between the years because the students only take the third grade tests once.

## Purpose of the Study

A quantitative, descriptive study is designed to compare and contrast two groups of students using existing data. Group A is comprised of third grade students who attended the Early Start preschool program. Group B is comprised of third grade students who did not attend Early Start preschool. The study examined if participation in the Early Start Program increases achievement in English and mathematics in the third grade from 2003-2005. The entire population was examined from those years. Early Start is a one-year preschool program for four year old children of the MCMAR, schools. The

participants in this study were or were not in the Early Start program from 1998, 1999 and 2000.

## Research Design

The principal focus of this quantitative research study was to determine if participation in the Early Start preschool program significantly contributed to increased achievement in English and mathematics on the state end-of-year tests for the third grade. The independent variable is participation in Early Start preschool. The dependent variables are the scores for all students taking the third grade end-of-year from 2003-2005.

The design of this study is evidenced and discussed by studies comparing third grade students who attended Head Start and those who did not (Hernstein & Murray 1994 and Kafer 2004). The researchers strongly implied that the intellectual effect of Head Start, an early childhood program, fade by third grade and achievement is not affected by participation in the program. They further determined that the effects of Head Start are totally gone by the sixth grade. More recent research, however, suggests that preschool participation increases cognition. Barnett (2004); Luster and McAdoo (1996); Schweinhart (2004); and Singh (2003) all determined, by comparing groups of children who participated in Head Start, that there was significant positive differences in achievement scores for the participants of Head Start. Additionally, in Groark, MeHaffie, McCall and Greenberg (2007) Barnard (2007) indicates that existing data has determined that preschool is beneficial in the long and short term but that more research is needed

within the early childhood field. Barnard further elucidates that these benefits include less failure in school, lower crime rates and higher employment rates. These studies necessitate the researcher to ask; Does participation in preschool positively affects achievement scores? According to Lee et al. (1990), there are positive cognitive effects of participation in a rich preschool program but that the return of measurable and statistically significant differences in cognition generally fades by third grade.

## Variables

The predictor variable for this study was participation in the Early Start preschool program. For this study, the only two groups assessed were children who participated in Early Start and children who did not participate in the program. The criterion variables or dependent variables in this study included the state end-of-year tests for the third grade in English and math from 2003-2005. A dependent or criterion variable depends on the function of the independent variable.

This information was determined by MCMAR records.

Following are the dependent variable(s) in this study:

1. English end-of-the-year test 2003
2. English end-of-the-year test 2004
3. English end-of-the-year test 2005
4. Math end-of-the-year test 2003
5. Math end-of-the-year test 2004
6. Math end-of-the-year test 2005

The following other factors were examined to see what may develop:

1. Group
2. Socio-economic Status
3. Ethnicity
4. Gender
5. Repeat

Categorical independent variables are nominal in value. Either the subject is in or out of the category. For example someone is either male or female, is of one ethnicity or another, receives free lunch or does not and so forth. Group is a categorical independent variable consisting of groups that did not participate in the Early Start program and groups that did participate in Early Start. The socio-economic status is a categorical independent variable. The groups within the socio-economic status are those who receive free or reduced lunch and those who do not. Ethnicity is a categorical independent variable. The groups within ethnicity are; Caucasian, African-American, Latino, Asian, Native-American and Unspecified. Gender is a categorical independent variable with the groups being male and female. Repeat is a categorical independent variable with the groups having repeated a grade and those who did not repeat a grade.

## Sample Selection and Setting

The participants in the study were 7,198 third grade students in the school district who took the state end-of-year test from 2003-2005. A portion of those students participated in the Early Start Program. The information was available from school

district records. The records were configured from the electronic attendance reporting system in use by the school district by the technology department who manages the records with permission from the MCMAR office of Statistics and Accountability. Permission to examine the records has been granted. The entire population was examined. This added to the validity and the reliability of the study considering the size of the sample alone. The total number of third graders taking the state test in English (Reading) and math in 2003 were 2,202, in 2004 2,516, and in 2005 there were 2,478 students. All data will remain available from the researcher for seven years upon completion of the study.

## Data Collection

The researcher identified third grade students who did or did not participate in the Early Start preschool program and who took the third grade test in English and math. Each student was assigned a random number to provide total anonymity to the student and protect his/her rights. Once this information was gathered, the participants were grouped according to those who participated in or did not participate in Early Start in each of the school years, 2003-2005. Further groupings were by socio-economic status, ethnicity, gender and whether the person repeated a grade.

## Instrumentation and Materials

*Validity*

The most important factor and criterion for judging the validity of any test concerns whether or not the questions measure what they are designed to measure. The state standardized tests in English and Mathematics for the third grade are judged as valid. The State education department, through the Content Review Committee in cooperation with the Harcourt Brace Educational Measurement Company, suppliers of the current curriculum to the school district, ensures that every item that appears on the third grade standardized test matches the test qualifications (State Department of Education, 2007). . The test qualifications include whether the test measures the State Standards of Learning in English or math. The second validity measure employed uses a comparison between related measures tests. The state department of education correlates the scores between the *Stanford 9* and the *Literacy Passport Test (LPT).* The comparison indicated that schools (students) who performed well on the Stanford 9 and the LPT also performed well on the related state standardized end-of-the-year tests. The State Content Review Committee ensures that the standardized test measures the content and complies with test specifications. The committee works closely with the content area experts and the testing contractor. In addition, an outside review committee reviews all information and makes a final recommendation for all test questions. (Virginia Department of Education, 2007).

*Reliability*

The accepted technical requirements for reliability of scores on high-stakes testing for the English and Mathematics end-of-the-year tests used in this study have been satisfied by the Kuder-Richardson Formula #20 test for reliability. These reliability measures determined whether or not the tests are a true and accurate measure of the students' knowledge and skills. The Kuder-Richardson Formula #20 or the KR-20 was used to measure all end-of-the-year tests in this study. The Kuder-Richardson is a traditional measure designed to test the degree that the test questions measure the same content or test for internal consistency. The values used in the KR-20 range from 0 - .99. Test developers aim for a high KR-20 score. Values measure from a low of .80 to a high of .92 on all end-of-the-year tests. This shows a statistically high score of reliability for the tests (Virginia Department of Education, 2007).

## Data Analysis

This study is a comparison and analysis of existing data. Each group of student scores was compared using a two-tailed *t*-test, and the measure of effect determined using the Cohen's *d* statistic as Gravetter and Wallnau (2005) outline. A *t*-test is an inferential statistic used to determine if the means of two groups are significantly different from one another. Cohen (1977) suggested the following rule of thumb for an ordinary t-test (a univariate method of analysis): small = .2, medium = .5, large = .8. A longitudinal study can be characterized by having several successive measurements (univariate) on the same

individuals, or experimental units, as opposed to investigations where only one measurement is made per individual. Rules of thumb are somewhat arbitrary and change from author to author. Cohen also noted that small and medium effect sizes are common in social and behavioral research; this is well known among experienced researchers.

These effect sizes were utilized within this study. Alpha is the probability of type one error. A type one error can be thought of as a false positive. A practical example of a type one error is when a researcher mistakenly concludes that a treatment had an effect when in fact it did not. As alpha increases, power increases. As alpha decreases, power decreases. A type one error occurs when the researcher falsely rejects a null hypothesis. The researcher chooses the Alpha value of .05 or a 5% chance of error. The study chooses a .05 or 5% Alpha.

This study examined 7,198 third grade test-takers from 2003-2005. The most common reason for doing a power analysis is to get an idea of the number of subjects that would be required to attain a certain power level. The standard error of a given statistic estimates the amount of error when inferring a population value from the sample value. Being aware of this the researcher struck a balance between the probability of type one error, effect size and sample size that lead to acceptable levels of power by using the, "G*Power" program as designed by (Erdfelder, E., Faul, F., & Buchner, A. 1996). They emphasize that the "rule of thumb" regarding effect size was used because there was no empirical effect size estimate to use. Assuming a choice of alpha of .05, an effect size of .15 a sample size of 70 gives a power estimate of .81, which is acceptable for most social science research. This implies that a sample size of 70 will give an 81% chance of

rejecting the null hypothesis when it should be rejected. The recommended minimum sample size is 70, more is better. This sample size of 7,198 is definitely, better, because it is far larger then the 70 recommended by the authors. There is no missing data from the scores received from the MCMAR district.

The sample size of 7,198 allowed for normality. This population is the total number of children who took the end-of-the-year assessments in Reading and math for the years 2003, 2004, and 2005. This total sample size equals the population being tested which insures that the population is being represented. The assumption is that the dependent variables follow an approximately normal distribution. It is also well known that this assumption can be ignored when the sample size is large within each group. The reason for this is that the data tends to behave as if it is normal when sample size gets large. By getting more than 30 in each group the statistical tests should be robust to violation of the assumption of normality (Gravetter & Wallnau, 2005). There was an examination and comparison of other factors to include gender, ethnicity, and socioeconomic status and if the child repeated a grade to see if there is a correlation between these factors and achievement on the end of the year assessments. Socioeconomic status is determined by whether or not the child is receiving free lunch according to Virginia guidelines as shown in Appendix M. Those guidelines state:

> At the beginning of each school year, letters and meal applications are distributed to households of children attending school. This letter informs households that school nutrition programs are available and that free and reduced price meals are available based on income criteria. Students are required to have a meal application on file. Children from families with incomes at or below 130 percent of the poverty level are eligible for free meals.

> Those between 130 percent and 185 percent of the poverty level are eligible for reduced-price meals, for which students can be charged no more than 40 cents. (State of Virginia Web page: http://www.doe.virginia.gov/VDOE/Finance/Nutrition/faq.html)

This demonstrated other factors that might be involved in achievement and added to the validity of the study by exposing these factors.

## Protection of Participants' Rights

All participants of the study were identified through random numbers assigned by the MCMAR to ensure confidentiality and to protect the legality of the study. There was no visible way to identify the participant. In developing the project design the researcher considered all risks to confidentiality that could occur and the appropriate means of assuring confidentiality was taken by following prescribed measures to protect the rights of all participants through MCMAR. An agreement between the investigator and MCMAR was signed and described how the confidentiality of records identifying the subject was maintained (Appendix K). The amount of personal information is limited to the absolute minimum. The information was acquired without names and has unique identifiers attached to the data. Other identifiers such as socioeconomic status, gender, repeating a grade and ethnicity, was aggregated. This included cultural differences that may require different assurance issues.

# CHAPTER 4:

# DATA COLLECTION AND ANALYSIS

This chapter discusses the findings of the study according to the accumulated data and determined if participation in the Early Start program of a MCMAR school had an effect on the state standardized achievement scores in English and math in the third grade. NIEER purported that deliberation should be given to the emotional, societal, ethical, cerebral, cultural, and nutritional needs of young children. Curriculum and instruction must be child-centered, research based, teacher built and culture supported (NIEER, 2004).

Early Start (ESPP) provides a comprehensive, direct-instruction program for four and five year olds through a teacher-built curriculum that aligns with the school district's choice of a standardized comprehensive packaged literacy program. The program was designed to meet the needs of students, families and community. The curriculum at Early Start was constructed by a team of early childhood teachers within the program. This study is the first of its kind to scientifically examine any portion of the program.

Research was needed to substantiate the curriculum and provide an opportunity to examine the longitudinal effects of its participants. This descriptive, quantitative analysis investigated whether the Early Start preschool program of the MCMAR school district has been effective in increasing academic achievement of third grade students in English and math on the end-of-year state tests during the 2003 to 2005 school year. The participants included 7,198 students in the MCMAR school district who took the end-of-

the-year standardized assessments in English (Reading) and math. Additional variables were used to describe the sample including gender, ethnicity, receiving free or reduced lunch or if the student repeated a grade prior to taking the end-of-the-year tests. 7,198 students took the third grade end-of-the-year achievement assessments in English and math. All students were assigned random identification numbers to ensure anonymity.

Vygotsky (1978) taught that children's' understandings should be relatable to their lives. The teacher is an insightful facilitator who emphasizes socialization and play as part of instruction and content (Vygotsky, 1978). Creativity and reflection by the teachers of ESPP is limited to the adopted curriculum model in use and to the on-the-run assessment procedures. The curriculum is formatted and scripted to insure continuity in all ESPP classrooms. Vygotsky suggested that cognition and learning be relevant or relatable to the lives of the children. The broad expanse of the ESPP curriculum tries to bring a sense of reality to the lives of the children with many lessons constructed around thematic units involving animals, the weather, plants and communities. Bruner (1996); Gardner (2004); Montessori (1989); Piaget (1969); Sternberg (1990); and Vygotsky (1978) all promoted and emphasized learning as a culture for young children with nurturing and play as key elements.

The Virginia State Foundation Building Blocks (FBB) provided a minimum set of standards for literacy, mathematics, science, history and social science in 2005 for the guidance of preschools in Virginia. MCMAR is conforming to those standards and following the guidelines. The FBB provide extensive and comprehensive attention to detail as they direct curriculum and expectations for children in preschools funded by

state monies. MCMAR receives federal funding by adhering to NCLB and Adequate Yearly Progress (AYP) regulations.

MCMAR Schools are committed to the success of all children and conforms to the standards of the NCLB and the State Board of Education through grade level assessments in kindergarten, third, fifth, seventh, ninth and eleventh grades (Virginia Department of Education, 2007). ESPP is a literacy-based program conforming to state and federal guidelines for receipt of federal monies. The study was concerned with the assessment results in third grade, for students who did or did not participate in preschool, on the state end-of year assessments in reading and mathematics. The following research question was addressed in the study. Does participation in the Early Start Preschool Program significantly affect achievement on the state end-of-the-year standardized assessments in English and Mathematics?

The following hypotheses guiding this study was: Null Hypothesis $H_{01}$: There was no statistically significant difference (0.05 levels) on the state third grade end-of-term tests in 2003-2005 in English and math between children who participated in the Early Start program of the MCMAR Schools and those who did not. The alternative hypothesis or H? : There was a statistically significant difference (0.05 levels) on the state third grade end-of-term tests in 2003-2005 in English and math between children who participated in the Early Start program of the MCMAR Schools and those who did not.

There are 1436 children attending the Early Start program currently, located in four centers throughout the MCMAR boundaries. There are 676 (47%) children in the program identified as being economically disadvantaged and eligible for the free

breakfast and lunch program sponsored by the federal government as per MCMAR records. The study identified 167 participants of the Early Start program who took the third grade end-of-the-year assessments in Reading and Mathematics.

Contemporary longitudinal studies of preschool programs and their participants including, the High-Scope Perry Preschool program, the Chicago Child-Parent Centers, and the Abecedarian Project along with state-funded programs in Georgia and Oklahoma have shown that quality preschools produced higher scores on standardized achievement tests (Barnett, 1996; Masse & Barne, 2002; Reynolds, Temple, Robertson, & Mann, 2002). In 2007, there are 39 states with a state-funded preschool program in effect. One main goal of all of these programs, including Early Start, is to provide kindergarten readiness skills. Effective preschools must provide more than kindergarten readiness skills. Children in quality preschools must be exposed to a rich vocabulary, both written and spoken. They must be able to play and learn in cooperative settings. Children must be challenged to think abstractly and be encouraged to regulate their own choices and behaviors (Husted, Barnett, Jung, & Thomas, 2007).

This study provides the MCMAR Schools with statistically reliable data indicating a need to modify Early Start. The resulting data identified that the Early Start curriculum supported English and mathematics expectations but participation in the program did not increase achievement of those specific standardized assessments.

The data was posted. A discussion of the results of the data was given. A determination was made regarding the effectiveness of the Early Start curriculum based on the results of the data. Conclusions, based on the data and the literature review

allowed the researcher to offer suggestions to the MCMAR school district for modification to the existing Early Start curriculum. The study examined whether or not a publicly funded preschool program helps children succeed academically through the third grade and determined that it did not help increase achievement. It addressed the "fade out" issue and determined that Early Start is not producing long-term achievement results from their preschool curriculum. The Early Start program emphasizes a central focus on academic achievement as a direct instruction or didactic approach to preschool education. Frede and Ackerman (2007) asserted that a major advantage of direct instruction is that all teachers are teaching the same thing and that the same requirements are established for all the children. According to these authors this approach allows for continuity and consistency across the curriculum which lends itself to ease of program evaluation by administrators.

The Georgia Prekindergarten Program, which was launched in 1993, found that there was a distinctive advantage of attending the program as evidenced by reading/English and mathematics scores (Henry et al., 2003). Oklahoma's Prekindergarten Program showed significant increases in achievement in language arts scores (Gormley & Gayer, 2003). The New Jersey Prekindergarten Program, as reported by the Early learning Improvement Consortium (2004) showed dramatic increases in language skills, and linguistic awareness as measured by the state kindergarten screening tool. The Chicago Child-Parent Center program, established in 1967 has established higher scores for participants of the program in reading and mathematics through the eighth grade (Reynolds, Miedel, & Mann, 2000; Reynolds, Temple, Robertson, & Mann,

2001). These quality programs show academic achievement in language arts and mathematics as evidenced on standardized assessment measures. These programs deemphasize direct instruction and adhere to quality program standards.

This study adds to that body of evidence by determining that achievement is not positively affected by a direct instruction approach to teaching and learning. ESPP does not increase achievement in reading and mathematics by participation in the program as evidenced by the following data.

## Data Analysis

### Demographic tables: 1 - 5

The following tables describe the characteristics of this sample. A majority of the participants were never in ESPP as seen in Table 1.

*Table 1*

*Participants*

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Not in Early Start | 7084 | 98.4 | 98.4 |
| In Early Start | 114 | 1.6 | 100.0 |
| Total | 7198 | 100.0 | |

The small number of participants in the ESPP is attributed to program size and to the transient nature of the area.

In 2003 there were 24 participants who took the third grade end-of-the-year assessments. In 2004 there were 32 and in 2005 there were 58.

Lunch status is a general indicator of socio economic status. There was a fairly even split among the participants.

*Table 2*

*Lunch Status*

*Lunch Status*

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Paid Lunch | 3064 | 42.6 | 42.6 |
| Free Lunch | 4134 | 57.4 | 100.0 |
| Total | 7198 | 100.0 | |

There was a difference between participants who received free lunch and those who paid for their lunches. There were 42.6% of the participants who paid for their lunches and 57.4% who received free lunch.

Table 3 shows that the most common race was African-American with Caucasian, Asian, Native American, Hispanic and Unspecified as much less frequent.

*Table 3*

*Ethnicity*

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Caucasian | 2364 | 32.8 | 32.8 |
| African-American | 4225 | 58.7 | 91.5 |
| Hispanic | 364 | 5.1 | 96.6 |
| Asian | 169 | 2.3 | 98.9 |
| Native American | 54 | .8 | 99.7 |
| Unspecified | 22 | .3 | 100.0 |
| Total | 7198 | 100.0 | |

The largest ethnic group would be African-American. Caucasians followed next with Hispanic, Asian and Native American. The total percentage of minorities would be 66.9%.

Table 4 shows that there was a very close split with respect to gender.

*Table 4*

*Gender*

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| Male | 3698 | 51.4 | 51.4 |
| Female | 3500 | 48.6 | 100.0 |
| Total | 7198 | 100.0 | |

Gender was almost evenly split.

A large percentage of the study group did not repeat a grade as shown in Table 5.

*Table 5*

*Repeat a Grade*

| | Frequency | Percent | Cumulative Percent |
|---|---|---|---|
| No | 5694 | 79.1 | 79.1 |
| Yes | 1504 | 20.9 | 100.0 |
| Total | 7198 | 100.0 | |

A large percentage, 79.1, of the participants did not repeat kindergarten through third grade.

## Descriptive Statistics

An independent samples *t*-test was used to analyze the data. Table 6 depicts the descriptive statistics (mean, standard deviations and sample size) for participation in Early Start and not in Early Start on each independent variable. The mean for not in Early Start was slightly higher then the mean for participation in Early Start on all variables. This difference is not large when the standard deviation is considered.

*Table 6*

*Descriptive Statistics for Standardized Test Scores by Group*

| | Group | Mean | Standard Deviation | N |
|---|---|---|---|---|
| Math 03 | Not in Early Start | 471.16 | 75.769 | 2183 |
| | In Early Start | 452.15 | 95.510 | 20 |
| Math 04 | Not in Early Start | 478.88 | 74.668 | 2481 |
| | In Early Start | 457.25 | 88.665 | 36 |
| Math 05 | Not in Early Start | 469.15 | 78.915 | 2420 |
| | In Early Start | 451.93 | 71.551 | 58 |
| English 03 | Not in Early Start | 429.52 | 55.393 | 2161 |
| | In Early Start | 426.42 | 68.426 | 19 |
| English O4 | Not in Early Start | 431.40 | 58.733 | 2475 |
| | In Early Start | 415.31 | 60.416 | 36 |
| English 05 | Not in Early Start | 436.12 | 68.224 | 2414 |
| | In Early Start | 424.14 | 54.617 | 58 |

Null Hypothesis $H_{01}$: There was no statistically significant difference (0.05 levels) on the state third grade end-of-term tests in 2003-2005 in English and math between children who participated in the Early Start program of the MCMAR Schools and those who did not. A significance test of differences of the means for In Early Start and Not in Early Start was done for each standardized score. A Levene's test was used to test the

assumption of equal variances on each variable.

*Table 7*

*Individual Comparisons for Standardized Test Scores by Group*

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | |
|---|---|---|---|---|---|
| | F | Sig. | t | df | Sig. |
| Math 03 | 1.723 | .189 | 1.114 | 2201 | .265 |
| Math 04 | 3.683 | .055 | 1.721 | 2515 | .085 |
| Math 05 | 1.568 | .211 | 1.646 | 2476 | .100 |
| English 03 | 2.398 | .122 | .242 | 2178 | .809 |
| English O4 | .123 | .725 | 1.631 | 2509 | .103 |
| English 05 | 3.588 | .058 | 1.327 | 2470 | .185 |

The Levene's test was non-significant on each variable which is evidence that the assumption of equal variances was not violated.

## Conclusion

There was no statistical difference between those who took the end-of-the-year math test in 2003, 2004, or 2005 between those students who participated in the Early Start Program and those who did not. Additionally, there was no statistically significant difference between children who participated in the Early Start Preschool Program and those who did not on the English end-of-the-year tests in 2003, 2004, or 2005. This study accepts the Null Hypothesis. The following additional descriptive statistics are for ethnicity and standardized test score performance in Table 8.

*Table 8*

*Descriptive Statistics for Ethnicity and Test Scores*

| | Ethnicity | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Math 03 | Caucasian | 498.6 | 74.47 | 75 |
| | African-American | 451.9 | 72.33 | 126 |
| | Hispanic | 475.1 | 67.69 | 11 |
| | Asian | 516.7 | 55.89 | 5 |
| | Native American | 472.9 | 70.13 | 2 |
| | Unspecified | 588.0 | 16.97 | 2 |
| | Total | 470.9 | 75.96 | 220 |
| Math 04 | Caucasian | 508.2 | 68.90 | 84 |
| | African-American | 458.6 | 72.19 | 146 |
| | Hispanic | 485.4 | 69.66 | 12 |
| | Asian | 531.6 | 67.57 | 6 |
| | Native American | 477.7 | 71.75 | 1 |
| | Unspecified | 483.2 | 71.78 | 8 |
| | Total | 478.5 | 74.91 | 251 |
| Math 05 | Caucasian | 502.4 | 74.29 | 77 |
| | African-American | 448.6 | 75.12 | 150 |
| | Hispanic | 473.3 | 68.69 | 12 |
| | Asian | 529.3 | 64.73 | 5 |
| | Native American | 470.7 | 97.08 | 1 |
| | Unspecified | 494.0 | 58.31 | 1 |
| | Total | 468.7 | 78.78 | 247 |
| English 03 | Caucasian | 448.8 | 55.43 | 75 |
| | African-American | 416.8 | 52.50 | 124 |
| | Hispanic | 428.2 | 48.57 | 11 |
| | Asian | 451.9 | 48.27 | 5 |
| | Native American | 431.1 | 66.65 | 2 |
| | Unspecified | 505.0 | 29.69 | 2 |
| | Total | 429.4 | 55.50 | 218 |
| English O4 | Caucasian | 452.3 | 57.37 | 83 |
| | African-American | 417.8 | 55.29 | 146 |
| | Hispanic | 429.2 | 55.59 | 12 |
| | Asian | 468.6 | 69.19 | 6 |
| | Native American | 446.13 | 54.726 | 19 |
| | Unspecified | 407.7 | 37.83 | 8 |
| | Total | 431.17 | 58.776 | 2511 |
| English 05 | Caucasian | 461.53 | 67.811 | 769 |
| | African-American | 421.34 | 64.138 | 1498 |
| | Hispanic | 431.60 | 63.434 | 126 |
| | Asian | 480.74 | 55.099 | 53 |
| | Native American | 434.00 | 85.071 | 14 |
| | Unspecified | 447.08 | 53.714 | 12 |
| | Total | 435.84 | 67.951 | 2472 |

Table 8 shows that Asians scored highest in every area examined. Caucasians scored highest next in all years except Math 03 where the unspecified ethnicity scored higher. The African-American children scored consistently lower then the Asian, Caucasian and Hispanics in all areas and years.

Students who paid for their lunch's scored higher in all areas then students who received free or reduced lunch (Table 9).

*Table 9*

*Descriptive Statistics for Standardized Test Scores by Lunch Status*

| | Lunch Status | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Math 03 | Paid Lunch | 489.02 | 74.064 | 1035 |
| | Free Lunch | 455.00 | 74.058 | 1168 |
| | Total | 470.99 | 75.966 | 2203 |
| Math 04 | Paid Lunch | 504.30 | 70.408 | 1035 |
| | Free Lunch | 460.60 | 72.706 | 1482 |
| | Total | 478.57 | 74.910 | 2517 |
| Math 05 | Paid Lunch | 495.70 | 73.754 | 994 |
| | Free Lunch | 450.70 | 76.885 | 1484 |
| | Total | 468.75 | 78.780 | 2478 |
| English 03 | Paid Lunch | 442.60 | 55.889 | 1028 |
| | Free Lunch | 417.80 | 52.479 | 1152 |
| | Total | 429.49 | 55.501 | 2180 |
| English O4 | Paid Lunch | 450.94 | 57.300 | 1034 |
| | Free Lunch | 417.32 | 55.779 | 1477 |
| | Total | 431.17 | 58.776 | 2511 |
| English 05 | Paid Lunch | 459.06 | 65.172 | 993 |
| | Free Lunch | 420.24 | 65.291 | 1479 |
| | Total | 435.84 | 67.951 | 2472 |

Table 9 indicates that children in lower socio-economic status scored lower then students with parental incomes above the poverty level.

There was little difference in test scores by gender as illustrated by (Table 10).

*Table 10*

*Descriptive Statistics for Test Scores by Gender*

| | Gender | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Math 03 | Male | 471.02 | 78.064 | 1139 |
| | Female | 470.95 | 73.690 | 1064 |
| | Total | 470.99 | 75.966 | 2203 |
| Math 04 | Male | 478.64 | 76.395 | 1285 |
| | Female | 478.50 | 73.360 | 1232 |
| | Total | 478.57 | 74.910 | 2517 |
| Math 05 | Male | 468.14 | 79.669 | 1274 |
| | Female | 469.40 | 77.857 | 1204 |
| | Total | 468.75 | 78.780 | 2478 |
| English 03 | Male | 423.32 | 56.028 | 1127 |
| | Female | 436.10 | 54.183 | 1053 |
| | Total | 429.49 | 55.501 | 2180 |
| English O4 | Male | 425.79 | 59.431 | 1280 |
| | Female | 436.76 | 57.581 | 1231 |
| | Total | 431.17 | 58.776 | 2511 |
| English 05 | Male | 427.03 | 67.267 | 1270 |
| | Female | 445.14 | 67.455 | 1202 |
| | | 435.84 | 67.951 | 2472 |

As indicated by the above table there was little difference in test score by gender.

The students who did not repeat a grade scored higher than students who repeated a grade as shown in (Table 11).

*Table 11*

*Descriptive Statistics for Repeating a Grade*

| | Repeat a Grade | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Math 03 | No | 479.26 | 72.849 | 1741 |
| | Yes | 439.82 | 79.385 | 462 |
| | Total | 470.99 | 75.966 | 2203 |
| Math 04 | No | 486.83 | 73.379 | 1940 |
| | Yes | 450.81 | 73.376 | 577 |
| | Total | 478.57 | 74.910 | 2517 |
| Math 05 | No | 476.73 | 77.453 | 2013 |
| | Yes | 434.21 | 75.145 | 465 |
| | Total | 468.75 | 78.780 | 2478 |
| English 03 | No | 436.30 | 53.522 | 1720 |
| | Yes | 404.03 | 55.425 | 460 |
| | Total | 429.49 | 55.501 | 2180 |
| English O4 | No | 438.62 | 57.466 | 1935 |
| | Yes | 406.12 | 56.189 | 576 |
| | Total | 431.17 | 58.776 | 2511 |
| English 05 | No | 442.65 | 67.529 | 2009 |
| | Yes | 406.25 | 61.613 | 463 |
| | Total | 435.84 | 67.951 | 2472 |

It is interesting to note that students who did not repeat a grade scored higher then students who repeated a grade.

These conclusions seen in the above tables are additional to the tested Null Hypothesis. In summary Asian children who paid for their lunches, and didn't repeat scored the highest on all end-of-the-year tests, for all years examined. This data is appropriate to present and interesting to address as it relates to effective domain and directly supports the need for social change in American Schools as related to cultural, race and ethnicity. There were no significant differences noted by gender in test score for all years. Children who paid for their lunches scored higher then children who received free or reduced lunch. African-American children scored significantly lower on the end-of-the-year tests for all years then did Asian, Unspecified, and Hispanic children.

The conclusion drawn from this study is that there was no difference between children who participated in the Early Start Preschool Program and those who did not on math test scores at 03, 04, or 05. There was no difference between children who participated in the Early Start Preschool Program and those who did not on English test scores at 03, 04, or 05. The variances of the Not in Early Start and In Early Start groups were more or less equal. The Levene's test was non-significant on each variable with the value of Sig. under the Levene's test column greater then .05 in each and every case. This evidence verifies the assumption that equal variances were not violated. Considering the data and the size of the sample the conclusions of this study are valid. The comparison of children who participated in ESPP to the children who did not participate in ESPP showed statistically significant results based on the methodology of the study.

Interestingly enough, there were a total of 5, 970 children who participated in some form of preschool preparation prior to entering formal schooling. That was evenly

distributed over the three year period. The data aggregated those participants, other then Early Start, and compared them. The data shows that participation in Early Start does not influence higher achievement in Reading and Mathematics through third grade.

A further study may identify whether or not these participants in other preschool programs achieved higher then the Early Start participants. Clearly, as aggregated data suggests they did score higher as a group. A further study employing similar attributes and methodologies used by Barnett, 2002 ; Barnett, 1996; Masse & Barnett, 2002; Reynolds, Temple, Robertson & Mann, 2002 which studied differences in literacy and mathematics conceptualization skills in young children. The programs they studied included the Arkansas Better Chance (ABC), the Abecedarian Early Childhood Intervention program, the High/Scope Perry Preschool program, and the Chicago Child-Parent Centers program. These extensive and comprehensive longitudinal studies would shed light upon program effectiveness through high school. An additional model would be the Barnard (2007) study of a sample of 738,000 children that attended publicly funded preschool along with the Head Start programs in Georgia, Oklahoma, New Jersey, Michigan, and Chicago from 2002-2003. ESPP could then review the curriculum expectations and implementations of these programs to provide a quality program for young children in MCMAR.

# CHAPTER 5

# SUMMARY, CONCLUSIONS AND RECCOMENDATIONS

## Introduction

A quantitative study was conducted to determine if the existing curriculum was positively effective in enhancing academic achievement on the third grade end-of-the year tests in English and Mathematics for participants of the Early Start Preschool Program (ESPP) of the MCMAR School District. As a comparative analysis this study examined children who participated in the program and children who did not. The study was conducted to assist and guide the MCMAR School District in program evaluation and to provide evidence for the efficacy of the preschool program and curriculum now in place. The study answered the questions: Does participation in the ESPP positively affect achievement in English and Mathematics on third grade standardized tests? Is the curriculum presently being used in the ESPP increasing achievement through third grade in English and Mathematics? The results of this study determined, with statistical significance, that ESPP participation did not have a positive effect on achievement in English or Mathematics. The population sample used 7,196 third grade MCMAR students (all) from the 2003, 2004 and 2005 academic years.

This study compared two groups of children; children who participated in the ESPP of the MCMAR and children who did not participate in the ESPP of the MCMAR. The purpose of this study was to determine if participation in the ESPP significantly affected achievement on the third grade end-of-the-year standardized assessments in

English (Reading) and Mathematics. Additional factors such as free lunch, gender, ethnicity or repeating a grade was examined also.

## Discussion

Throughout the United States there is a growing fervor about instituting a free and public preschool program for all eligible children, at least for four year olds (United States Department of health and Human Services, 2003) The MCMAR has instituted such a program. This public, preschool program is open to all children in the MCMAR. According to Duncan (2005), there are positive cognitive effects of participation in a rich preschool program but that the return of measurable and statistically significant differences in cognition generally fades by third grade. More recent research; however, suggests that preschool participation increases cognition. Duncan (2005) stated in his findings that time in quality center-based child care for three and four year olds increased cognitive skills and achievement significantly. He continues by saying that there were comparable findings regarding center care for cognitive outcomes reported with the National Institute of Child Health and Human Development (NICHD) data (NICHD SECC, 2000)

The Early Start program employs a regular school day of 6.5 hours long for a large percentage of the children participating. That means that four year old children are spending a very long day in a public preschool setting away from their parents or the home.

The major focus and emphasis of Early Start is literacy with additional focus on mathematics, social studies, science and social skills. A large portion of the day is spent on, focused literacy groups, reinforcement of skills and specific curriculum-based Center activities to supplement the daily lesson. Little time is spent allowing the children to explore, expound and expand their knowledge.

The need for affordable, quality and public preschool continues to grow. In a policy brief for the National Institute of Early Education Research (NIEER) Espinoza, L. (2002) stated:

> Research has shown that 3- and 4-year-olds, especially those who are at risk for school failure, when placed in high-quality preschool programs are more successful in their future academic and social development. However, studies measuring both process and structure – two essential indicators of the quality of early education programs – in multiple preschool programs around the country have found that the average quality of early education and care is less than good, with most in the "minimally adequate" range. A further look at the research shows that those children who are considered most vulnerable for school failure and social problems, and therefore in greatest need of high- quality care, are attending those programs found to be of the lowest quality. (p.1)

The ESPP falls significantly short, according to the data in this study, of providing a quality program that brings about long-term academic achievement in English (Reading) and Mathematics, at least through the third grade as assessed by standardized achievement measures. The data shows that 57.4% of the total population studied received free or reduced lunch which means those families fall below the poverty level as established by Virginia guidelines. These children, as participants of the ESPP, did not show that participation in the ESPP statistically increased achievement on end-of-the-year standardized test scores in English and Mathematics through the third grade.

Currently, Laosa (2005) of NIEER indicates that current policy at the state and federal level focuses on the, “achievement gap”, socioeconomic status (SES) race and ethnicity. Laosa further indicates that throughout the United States higher SES groups have better achievement scores. According to Laosa there exists an enormous amount of research that supports preschool education as significantly influencing children’s abilities upon entering school. These studies, according to Laosa have an immediate effect and that the effect lasts through the early grades.

This study determined that the ESPP does not have an effect on early grade achievement through the third grade in English (Reading) and math. It is interesting to note that the programs listed by the NIEER study are research based and time tested. These programs, covering a twenty-five year time span, include: Perry Preschool project (Schweinhart, Barnes, Weikart, Barnett, & Epstein, 1993; Schweinhart, 2004), The Abecedarian program (Campbell, Ramey, Pungello, Sparlin, & Miller-Johnson, 2002) and the Infant Health and Development Project (McCarton, Brooks-Gunn, Wallace, & Bauer, 1997. Additionally, a close examination of the Head Start Program, Barnett (1995, 1998) found that usually public programs had were weaker then higher quality, strategically implemented models. ESPP is not founded on a solid research base since this is the first study since 1977 to be conducted to evaluate the effectiveness of the program.

Frede & Ackerman (2007) indicated that the effectiveness of any preschool program is determined by the skills that the children bring to the preschool, overall program quality, curriculum and content. The author’s continue stating that if preschool

programs are to be effective then classrooms must be equipped with appropriate materials, highly trained teachers and a well-designed curriculum to meet the needs of the children attending the preschool. They list strategic and integral factors used in making curriculum design decisions for preschoolers. The role of the teacher and the role of the student must be clearly defined. Activities with integrated learning domains should be child initiated (Frede & Ackerman, 2007).

Fredde & Ackerman further state that there must be an eclectic approach to teaching and learning. The classrooms should be Constructivist in design with teacher designed scaffolded activities with play being the opportunity to blueprint and construct concepts with minimal teacher assistance. The curriculum must address all domains of learning. There must be connections between standards and curriculum. The age, home language, culture, socio-economic status, and developmental abilities of the children must be considered and incorporated into the program. Assessment of the children should be authentic, realistic and meaningful to the children. The curriculum must be carefully researched, validated, seen in multiple settings and implemented as intended. There must be a sure balance between the need for structure and the individual needs of the children. There must be a clear understanding of how the family enhances the learning of the child with the family playing a major role through parental-involvement (Frede & Ackerman, 2007).

The National Association of Early Childhood Education (2007) notes, in part, for preschool curriculum that children should have access to printed material, become familiar with its use and recognize print, and recognize letters. Children should have

access to and be read numerous books each day. It is important that children have opportunities to write every day. Children must be given the opportunity to discover and use scientific terms in conversation. They can use tools and materials associated with science and document their findings through graphs or charts. They can learn to question and infer about phenomena. Various technologies should be utilized by the children through collaboration and by themselves and that it is used as an extension of the curriculum.

Children should have the opportunity to gain an appreciation for responding to and actively participating in art, drama, music and dramatic play. They must be given the opportunity to develop skills in the arts and express themselves freely. Children must be engaged in fine and large motor activities through various materials and equipment. Children will identify themselves and their differences with other children, social roles, family structure, culture, where they live, neighborhoods, and the world in which they live.

## Interpretation of the Findings

According to the data collected there was no statistical difference between those who took the end-of-the-year math test in 2003, 2004, or 2005. Additionally, there was no statistically significant difference between children who participated in the ESPP and those who did not on the English end-of-the-year tests in 2003, 2004, or 2005. This study accepted the Null Hypothesis. Asians scored highest in every area examined. Caucasians scored highest next in all years except Math 03 where the unspecified ethnicity scored higher. The African-American children scored consistently lower then the Asian,

Caucasian and Hispanics in all areas and years. Students who paid for their lunch scored higher in all areas then students who received free or reduced lunch. There was little difference in test scores by gender. The students who did not repeat a grade scored higher on the third grade assessments then students who repeated a grade. NAEYC and NAECS/SDE (2004) clearly indicate that children create their own awareness and actively interpret their settings socially, logically, and morally actively through caring settings.

There was no difference in scores between children who participated in ESPP and those who did not on math test scores at 03, 04, or 05. There was no difference between children who participated in ESPP and those who did not on English test scores at 03, 04, or 05. The variances of the Not in Early Start and In Early Start groups were more or less equal. The Levene's test was non-significant on each variable with the value of Sig. under the Levene's test column greater then .05 in each and every case. This evidence verifies the assumption that equal variances were not violated.

## Implications for Social Change

Henry Pestalozzi an educator and pioneer of curriculum for young children in Krusi (1875) stated that a quality education must be enabling to the student so the pupil will secure, by his/her principles, feelings and direction, a path to happiness that brings into play the total faculties of man. According to the data evidenced, ESPP is not enabling, students, identified, according to the data evidenced by the fact that there is no appreciable difference in achievement for participation in the program.

For social change to occur there must be compelling circumstances. Clearly, by the thorough examination of the data the ESPP needs an adjustment to fulfill current and past MCMAR achievement requirements. The difficulty lies in where and how to make changes to a program that has been in existence since 1977. The curriculum has been modified to meet standards. The focus of ESPP has been on obtaining available materials for the MCMAR to supply to teachers and children for accomplishment of goals of the curriculum. There must be a focus on maintaining a substantial research base for the continuity of the modifications by establishing a tracking mechanism of achievement for the participants through the early years of their education. The tracking mechanism is in place through the Technology Department of the MCMAR and is readily and easily accessible.

This study provides the MCMAR School District with data indicating that there is a need to modify Early Start. Barnard (2007) asks; "What components of early education work best and for whom?" (p. 85). The data identified that the Early Start curriculum does not support English and mathematics expectations through the third grade.

Participation in the program did not increase achievement of those specific standardized assessments. The main components of ESPP are the Literacy Lesson and the Daily Plan. Both, according to the data, are not serving the developmental needs of the children as evidenced by the fact that achievement scores are not higher because of the direct instruction provided to young children.

Barnett, 2002 ; Barnett, 1996; Masse & Barnett, 2002; Reynolds, Temple, Robertson & Mann, 2002 all concluded that achievement test scores increased and that

adequate funding for quality preschools makes a distinct difference in literacy and mathematics conceptualization skills in young children. The programs they studied included the Arkansas Better Chance (ABC), the Abecedarian Early Childhood Intervention program, the High/Scope Perry Preschool program, and the Chicago Child-Parent Centers program. These are all extensive and comprehensive longitudinal studies. One suggestion from the research is that ESPP needs to review the curriculum expectations and implementations of these programs to provide a quality program for young children in MCMAR.

ESPP is a literacy focused curriculum with number conceptualization being introduced. These concepts were all assessed on the state third grade end-of-the-year third grade tests in Mathematics and English. The results are significant and show a need for change in program implementation from a didactic approach to a discovery, child-centered approach. Change needs to come from program administration. Further, large group time includes story time and transition time which extends the circle sitting time to forty minutes every day or more. This is contrary to developmental expectation established by Piget (1969); Bruner (1996); Gardner (1993); Vygotsky (1978) and other child development specialists.

Great teachers, as outlined by Krusi (1875) above, are inexhaustible, kind, loving, firm, fair and consistent. Teachers in the ESPP need time to develop a nurturing relationship by spending time getting to know their children on a personal level. According to the United Nations Scientific and Cultural Organization (2006) early

childhood curriculum should allow children to develop holistically through an orderly sequence of activities. The curriculum needs to be revised to allow for the nurture of young children. The curriculum should allow for varying rates of progress in children. The authors continue saying that children a re active learners and learn best in social and play situations. They remind us that children must learn through a combination of physical, social and reflective experiences. Finally, children's learning is influenced by the environment and by their maturation level. These numerous factors are keys to a successful program.

Shore (1997) indicated that, elevated cortisol levels in the brain can cause cells to die and reduces the connections between the cells in areas of the brain. Cortisol is a chemical in the brain. He states that having affective, positive emotional bonds with teachers and caregivers consistently lowers levels of cortisol in children's brains. Positive experiences brighten a child's future, negative experiences darken it. High levels of cortisol in the brain make it hard for children to develop cognitively and emotionally appropriately. They have emotional and academic problems associated with high levels of cortisol and stress. ESPP can easily reduce that stress by adding a rest or quiet period and modifying the curriculum to relieve stress on the children by combining expectations and requirements and thereby decreasing the time teachers spend assessing children and increase the time they spend nurturing children. Shore concluded:

> Healthy relationships during the early years help children have healthy relationships throughout life. Deprived of a positive, stimulating environment, a

> child's brain suffers. Rich experiences, in other words, really do produce rich brains. (pp. 16-17)

There is no down time in the ESPP program for the four year olds to relax and rest. Crosser (2007) in the *Early Childhood News* stated:

> It has become an accepted proposition in education that we must provide for the development of the whole child-cognitive, social, emotional, and physical. Perhaps it would be helpful to think about nap time as a learning opportunity-part of developing the physical aspect of the whole child.
> If we view nap time as an opportunity to learn, we then need to consider how we can plan for that part of the program as carefully as we plan for social interactions and literacy experiences. We need to consider individual differences and engagement of children in purposeful, age-appropriate activities as we schedule transitions and implement a time for rest.

Ohanian (2007) states that certain administrators are under extreme pressure to make school more rigorous early on in preschool to increase achievement in Reading and mathematics. The belief is that children who are behind academically by age 6 or 7 have a difficult time catching up. The justification is that when children come into first grade or kindergarten for the first time, their capabilities to learn are not developed which leaves a burden on the schools. On the other hand, Montessori, Reggio, the Chicago-Parent Project, Head Start and the Abecedarian Project all seek to provide a positive and developmentally appropriate nurturing, social and emotional foundation for children. These programs all provide extensive parent workshops, training and parenting skill classes.

Academic achievement as described by Bloom in Andersen & Krathwohl (2001) included a structure for learning levels of abstraction beginning in order with knowledge,

comprehension, application, analysis, synthesis and evaluation. In order to begin with the first category Bloom describes children must be prepared to accept knowledge, know how to learn and be ready to learn. That is the essence of a quality preschool program. Quality preschool means preparing children to be independent learners in all aspects of life by teaching them how to learn through a nurturing, play-based program filled with excitement and wonder; not kill and drill techniques used to fulfill assessment requirements. The data clearly shows the current curriculum is not producing lasting effects on achievement as designed.

## Recommendations for Action

A closer examination of the process and structure of the ESPP is needed to adjust curriculum and programmatic issues that are affecting the lack of achievement. Further emphasis must be placed on designing or implementing a research-based preschool program that has been time tested and shows significant results longitudinally like the Creative Curriculum, Reggio Emilia or High-Scope Perry. Teachers need to allow themselves time to enjoy the children, have fun and get to know the children on a personal level. Administrators of the ESPP need to assist teachers in relieving stress on the children and themselves for meeting standardized requirements and expectations. The data clearly shows that the program is not working the way it is currently being implemented and structured. A warm and comfortable, collegial and cooperative work place allows a trickle-down effect for the children. Program administrators need to modify the curriculum to meet the developmental needs of young children. Flexibility

needs to be given to teachers for program implementation. Expectations and requirements need to be combined to allow for an easier on-the-run assessment. Children of poverty and diverse cultural backgrounds come to school with a myriad of issues these children need love, nurture and understanding (NIEER, 2004). They need a person who will go that extra mile that Pestalozzi, Montessori, Vygotsky, Maeser all refer to, and that favorite teacher we all had.

The researcher, in his practice, has made substantial modifications to improve the existing curriculum and add a solid research base to the current curriculum by incorporating proven strategies. Within his practice he has instituted a quiet reflection time for children to have the opportunity to consider and think about the day's activities. Emphasis is placed upon the needs of the children and not the needs of administrators to accumulate data by allowing the children the needed time to socialize, discover and grow. Activities are planned to invite and instill inquisitiveness, creativity and allow for choices by giving the children the opportunity to choose which activities they want to do. The researcher allows children to be children by encouraging dialogue, lessening or eliminating current curriculum expectations on performance, rote memorization and, timely reading progress. The researcher lessens the stress placed upon the children by the MCMAR School District by injecting humor into all aspects of the day. The researcher also uses Mozart as background music to suppress stress, stimulate cognition and creativity and to expose children to the wonders of classical music (Gardner, 2004).

The researcher acts as a mentor for teachers within the building and encourages his colleagues to lessen the stress placed upon the children and themselves by being a role model. In this capacity, the researcher acts as an advocate, not only for the children, but for his colleagues and offers sound and grounded research evidence to support changes to the ESPP program. The researcher is an advocate for children and teachers.

## Recommendations for Further Study

There is a definite need to further ground the ESPP in a solid research base. The program has the opportunity to really make a lasting difference in the lives of children and data should be accumulated on a yearly basis, even following children to adulthood. The research should include academic achievement on the Virginia end-of-the-year assessments through high school, college placement, drop-out rates, and incarceration of participants of the ESPP. It should be modeled against research conducted by NIEER and the federal government on Head Start. Other models would include; Arkansas Better Chance (ABC), the Abecedarian Early Childhood Intervention program, the High/Scope Perry Preschool program, Chicago Child-Parent Centers program, Oklahoma and New Jersey public preschool initiatives. This would give credibility to ESPP and allow for a comfortable alignment of standards to developmentally appropriate expectations for young children.

An examination of the absentee rates, drop out rates, pregnancy, and suspension or expulsion rates of participants as compared to non-participants of the ESPP through

the high-school years would enlighten the MCMAR on program effectiveness. Conducting a qualitative study of the participants compared to the non-participants of ESPP to see if they are content, happy, if the program worked for them, their feelings, stress levels and other areas would add to the body of knowledge on Affective Domain research.

Overall, the MCMAR needs to establish a quality data base focusing on program effectiveness longitudinally. Yearly data on participants, as is currently undertaken by the program administrators of ESPP is not enough to establish program effectiveness. A further qualitative study of teacher job satisfaction and their feelings about the program would illuminate program administrators to affect a change if needed. Further surveys of parents should be conducted and evaluated to add to the credibility of the program.

Anderson, L.W., & Krathwohl (Eds.). (2001) outlined affective domains of learning. His taxonomy began, in order, with the receiving of information or ideas, responding to those ideas, valuing the information, organizing it and characterizing and acting consistently with it. Both taxonomies are excellent ways to organize a structured learning environment with clear-cut expectations and direction for application. These taxonomies provide an important direction for assessment and curriculum development. However, they do not provide for the nurture and care required when helping pre-schoolers succeed. That requires additional areas to examine prior to affecting a change with Bloom or Krathwohl.

The state of Virginia needs to take a close look at the Virginia Building Blocks and more closely align the standards with appropriate developmental criteria for young children. The emphasis of those standards as outlined in the appendix of this document clearly focuses on academic achievement. ESPP follows the state standards as outlined and integrated those expectations within the extensive curriculum used by the program. The Building Blocks need to be streamlined to focus on children and not assessment requirements. Further, NCLB (2001) and the Reading First initiative are the driving forces behind the strong emphasis on achievement of children (2007). Clearly, the data accumulated in this study shows that an emphasis on direct instruction and adherence to itemized standards of achievement are not producing the desired outcomes. Children entering school without a preschool education or with a for-profit preschool education did much better academically then those children who participated in the ESPP. ESPP follows state and federal guidelines. Private providers are not compelled to follow stringent achievement standards and the children, according to this study, are out-performing ESPP participants.

## Commentary

This researcher would recommend adding the affective domain and providing a quality nurturing piece to the existing program that focuses on the individual needs of children, especially in at-risk situations but not limited to. Even with more-then-adequate funding, excellent teachers, an overabundance of appropriate materials and an orderly and clean environment, the ESPP did not meet quality academic achievement standards

as described in the overwhelming amount of research provided in this study. The researcher believes that the answer lies in curriculum design and implementation. The curriculum must be modified to meet the individual needs of the children. It must be simplified to allow teachers to spend more time nurturing children and attending to their emotional and social needs. The curriculum must allow for personal differences in children. Finally, large group instruction needs to be deemphasized along with the elimination of rote memorization of skill sets. Young children learn by playing not by having information lectured to them or presented to them in a developmentally inappropriate way. With these adjustments, the ESPP will become a great, quality program designed to meet the social, emotional, physical, intellectual and moral needs of young children.

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# APPENDIX A

## *Grade Three Virginia Standards of Learning in English*

Reading continues to be a priority in third grade. Emphasis is on learning about words, reading age-appropriate text with fluency and expression, and learning comprehension strategies. The student will read a variety of fiction and nonfiction literature, which relates to all areas of the curriculum. The student will use effective communication skills in group activities and will present brief oral reports. Reading comprehension strategies was applied in all subjects, with emphasis on materials that reflect the Standards of Learning in mathematics, science, and history and social science. The student will plan, draft, revise, and edit stories, simple explanations, and short reports. In addition, the student will gather and use information from print and non-print sources. The student also will write legibly in cursive.

### *Oral Language*

3.1 The student will use effective communication skills in group activities.

a) Listen attentively by making eye contact, facing the speaker, asking questions, and summarizing what is said.
b) Ask and respond to questions from teachers and other group members.
c) Explain what has been learned.

3.2 The student will present brief oral reports.

a) Speak clearly.
b) Use appropriate volume and pitch.
c) Speak at an understandable rate.
d) Organize ideas sequentially or around major points of information.
e) Use grammatically correct language and specific vocabulary to communicate ideas.

### *Reading*

3.3 The student will apply word-analysis skills when reading.

a) Use knowledge of all vowel patterns.
b) Use knowledge of homophones.
c) Decode regular multisyllabic words.

3.4 The student will use strategies to read a variety of fiction and nonfiction materials.

a) Preview and use text formats.
b) Set a purpose for reading.
c) Apply meaning clues, language structure, and phonetic strategies.
d) Use context to clarify meaning of unfamiliar words.
e) Read fiction and nonfiction fluently and accurately.

f) Reread and self-correct when necessary.

3.5 The student will read and demonstrate comprehension of fiction.
- a) Set a purpose for reading.
- b) Make connections between previous experiences and reading selections.
- c) Make, confirm, or revise predictions.
- d) Compare and contrast settings, characters, and events.
- e) Identify the author's purpose.
- f) Ask and answer questions.
- g) Draw conclusions about character and plot.
- h) Organize information and events logically.
- i) Summarize major points found in fiction materials.
- j) Understand basic plots of fairy tales, myths, folktales, legends, and fables.

3.6 The student will continue to read and demonstrate comprehension of nonfiction.
- a) Identify the author's purpose.
- b) Make connections between previous experiences and reading selections.
- c) Ask and answer questions about what is read.
- d) Draw conclusions.
- e) Organize information and events logically.
- f) Summarize major points found in nonfiction materials.
- g) Identify the characteristics of biographies and autobiographies.
- h) Compare and contrast the lives of two persons as described in biographies and/or autobiographies.

3.7 The student will demonstrate comprehension of information from a variety of print resources.
- a) Use dictionary, glossary, thesaurus, encyclopedia, and other reference books, including online reference materials.
- b) Use available technology.

*Writing*

3.8 The student will write legibly in cursive.

3.9 The student will write descriptive paragraphs.
- a) Develop a plan for writing.
- b) Focus on a central idea.
- c) Group related ideas.
- d) Include descriptive details that elaborate the central idea.
- e) Revise writing for clarity.

3.10 The student will write stories, letters, simple explanations, and short reports across all content areas.

a) Use a variety of planning strategies.
b) Organize information according to the type of writing.
c) Identify the intended audience.
d) Revise writing for specific vocabulary and information.
e) Use available technology.

3.11 The student will edit writing for correct grammar, capitalization, punctuation, and spelling.

a) Use complete and varied sentences.
b) Use the word *I* in compound subjects.
c) Use past and present verb tense.
d) Use singular possessives.
e) Use commas in a simple series.
f) Use simple abbreviations.
g) Use apostrophes in contractions with pronouns.

Use correct spelling for high-frequency sight words, including irregular plurals.

Retrieved from:

http://www.pen.k12.va.us/VDOE/Superintendent/Sols/2002/English3.doc

APPENDIX B

# Grade Three

*Virginia Standards of Learning in Mathematics*

The third-grade standards place emphasis on learning multiplication and division facts through the nines table. Concrete materials and two-dimensional representations was used to introduce addition and subtraction with fractions and decimals and the concept of probability as chance. Students will use standard units (U.S. Customary and metric) for temperature, length, liquid volume, and weight and identify relevant properties of shapes, line segments, and angles.

While learning mathematics, students was actively engaged, using concrete materials and appropriate technologies such as calculators and computers. However, facility in the use of technology shall not be regarded as a substitute for a student's understanding of quantitative concepts and relationships or for proficiency in basic computations.

Mathematics has its own language, and the acquisition of specialized vocabulary and language patterns is crucial to a student's understanding and appreciation of the subject. Students should be encouraged to use correctly the concepts, skills, symbols, and vocabulary identified in the following set of standards.

Problem solving has been integrated throughout the six content strands. The development of problem-solving skills should be a major goal of the mathematics program at every grade level. Instruction in the process of problem solving will need to be integrated early and continuously into each student's mathematics education. Students must be helped to develop a wide range of skills and strategies for solving a variety of problem types.

## Number and Number Sense

3.1 The student will read and write six-digit numerals and identify the place value for each digit.

3.2 The student will round a whole number, 9,999 or less, to the nearest ten, hundred, and thousand.

3.3 The student will compare two whole numbers between 0 and 9,999, using symbols (>, <, or = ) and words (*greater than*, *less than*, or *equal to*).

3.4 The student will recognize and use the inverse relationships between addition/subtraction and multiplication/division to complete basic fact

sentences. Students will use these relationships to solve problems such as 5 + 3 = 8 and 8 – 3 = ____.

3.5 The student will
a) divide regions and sets to represent a fraction; and
b) name and write the fractions represented by a given model (area/region, length/measurement, and set). Fractions (including mixed numbers) will include halves, thirds, fourths, eighths, and tenths.

3.6 The student will compare the numerical value of two fractions having like and unlike denominators, using concrete or pictorial models involving areas/regions, lengths/measurements, and sets.

3.7 The student will read and write decimals expressed as tenths and hundredths, using concrete materials and models.

## Computation and Estimation

3.8 The student will solve problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping, using various computational methods, including calculators, paper and pencil, mental computation, and estimation.

3.9 The student will recall the multiplication and division facts through the nines table.

3.10 The student will represent multiplication and division, using area and set models, and create and solve problems that involve multiplication of two whole numbers, one factor 99 or less and the second factor 5 or less.

3.11 The student will add and subtract with proper fractions having like denominators of 10 or less, using concrete materials and pictorial models representing areas/regions, lengths/measurements, and sets.

3.12 The student will add and subtract with decimals expressed as tenths, using concrete materials, pictorial representations, and paper and pencil.

## Measurement

3.13 The student will determine by counting the value of a collection of bills and coins whose total value is $5.00 or less, compare the value of the coins or bills, and make change.

3.14 The student will estimate and then use actual measuring devices with metric and U.S. Customary units to measure
a) length — inches, feet, yards, centimeters, and meters;
b) liquid volume — cups, pints, quarts, gallons, and liters; and
c) weight/mass — ounces, pounds, grams, and kilograms.

3.15 The student will tell time to the nearest five-minute interval and to the nearest minute, using analog and digital clocks.

3.16 The student will identify equivalent periods of time, including relationships among days, months, and years, as well as minutes and hours.

3.17 The student will read temperature to the nearest degree from a Celsius thermometer and a Fahrenheit thermometer. Real thermometers and physical models of thermometers was used.

## Geometry

3.18 The student will analyze two-dimensional (plane) and three-dimensional (solid) geometric figures (circle, square, rectangle, triangle, cube, rectangular solid [prism], square pyramid, sphere, cone, and cylinder) and identify relevant properties, including the number of corners, square corners, edges, and the number and shape of faces, using concrete models.

3.19 The student will identify and draw representations of line segments and angles, using a ruler or straightedge.

3.20 The student, given appropriate drawings or models, will identify and describe congruent and symmetrical, two-dimensional (plane) figures, using tracing procedures.

## Probability and Statistics

3.21 The student, given grid paper, will
a) collect and organize data on a given topic of his/her choice, using observations, measurements, surveys, or experiments; and

b) construct a line plot, a picture graph, or a bar graph to represent the results. Each graph will include an appropriate title and key.

3.22 The student will read and interpret data represented in line plots, bar graphs, and picture graphs and write a sentence analyzing the data.

3.23 The student will investigate and describe the concept of probability as chance and list possible results of a given situation.

## Patterns, Functions, and Algebra

3.24 The student will recognize and describe a variety of patterns formed using concrete objects, numbers, tables, and pictures, and extend the pattern, using the same or different forms (concrete objects, numbers, tables, and pictures).

3.25 The student will

a) investigate and create patterns involving numbers, operations (addition and multiplication), and relations that model the identity and commutative properties for addition and multiplication; and
b) demonstrate an understanding of equality by recognizing that the equal sign (=) links equivalent quantities, such as $4 \cdot 3 = 2 \cdot 6$.

APPENDIX C

COMMONWEALTH of VIRGINIA

DEPARTMENT OF EDUCATION

Division of Assessment and Reporting

P. O. BOX 2120

Richmond, Virginia 23218-2120

Phone: (804) 225-2102

Fax: (804) 371-8978

January 31, 2007

Via e-mail to Richard.McElroy@nn.k12.va.us

TO: Richard McElroy, Teacher

MCMAR

FROM: Shelley Loving-Ryder, Assistant Superintendent

Division of Assessment and Reporting

SUBJECT: Request to Use Released Tests

Thank you for your interest in Virginia's Standards of Learning (SOL) released tests. You requested permission to use the 2003 through 2006 released tests for grade 3 reading
and mathematics. However, the 2006 tests for grade 3 will not be released at this time as these tests was new in 2005-2006. Therefore, permission is granted to use the released

tests for 2003 through 2005. Please be aware that the Department of Education does not
hold the copyright to all the reading passages.

You state in your e-mail that you would like to include a copy of the released tests in the
appendix of your research (dissertation) on the effect of preschool education participation and achievement on standardized assessment measures (SOLs) in MCMAR.

The permission being granted is specific to this request. Should you wish to use the released tests in a different way or to use additional released tests, you must request permission again. The link to the Standards of Learning released tests is http://www.pen.k12.va.us/VDOE/Assessment/releasedtests.html .

All copies should bear the copyright of the Department of Education and cite that permission has been granted for reproduction. In the event the document is partially reproduced, such should be noted. No commercial, for-profit use of these materials is permitted. Should you have questions, please call me at (804) 225-2102 or e-mail darfax@doe.virginia.gov.

SLR/jc

APPENDIX D

Table I

| | Center A | Center B | Center C | Center D | Total |
|---|---|---|---|---|---|
| Total Children | 474 | 160 | 315 | 487 | 1436 |
| Male | 253 | 90 | 165 | 255 | 763 |
| Female | 221 | 70 | 150 | 232 | 673 |
| Black | 220 | 61 | 299 | 237 | 817 |
| Asian | 18 | 3 | 1 | 16 | 38 |
| Hispanic | 45 | 29 | 5 | 34 | 113 |
| Native American | 1 | 4 | 0 | 3 | 8 |
| White | 152 | 60 | 8 | 180 | 400 |
| Unspecified | 38 | 3 | 2 | 17 | 60 |
| Economically Disadvantaged | 78 | 89 | 273 | 236 | 676 |
| Special Education | 22 | 5 | 8 | 48 | 83 |

APPENDIX E

**Virginia Preschool Initiative**

**Guidelines for the Virginia Preschool Initiative Application**
**2006-2007**

**Title of Program:**
Virginia Preschool Initiative for At-Risk Four-Year-Old Children

**Issued to:**

Commonwealth of Virginia City Managers, County Administrators and Division

Superintendents

**Issuing Agency:**
Virginia Department of Education
Office of Elementary Instruction
101 North 14th Street, 24th floor
Richmond, Virginia 23219

**Type of Funding:**
General Fund Appropriation by Virginia General Assembly

**Period of Funding:**
July 1, 2006 to June 30, 2007

**Issue Date:**
April 7, 2006

**Submission Deadline:**
**May 15, 2006**

**Mail the signed certification page by May 15, 2006, to:**
Cheryl P. Strobel
Virginia Department of Education
Office of Elementary Instruction
101 N. 14th Street, 24th floor
Richmond, Virginia 23219

**E-mail the completed Excel application by May 15, 2006, to:**
Cheryl.Strobel@doe.virginia.gov

**Application/Guidelines/Budget:**
Application, guidelines, and budget information may be downloaded at:

http://www.doe.virginia.gov/VDOE/Instruction/Elem M/early/preschoolinitiative.htlm.

**Direct program inquiries and completed applications to:**
Cheryl Strobel, Early Childhood Specialist
Telephone: (804)371-7578
Cheryl.Strobel@doe.virginia.gov

**Direct budget inquiries and Excel spreadsheet questions to:**
Kirsten Olson, Education Finance Analyst
Telephone: (804) 225-2025
Kirsten.Olson@doe.virginia.gov

*Program Overview*

In January 1994, the Commission on Equity in Public Education adopted and endorsed four major programs as the core elements in their recommendations to the 1994 General Assembly. The recommendations, subsequently adopted by the General Assembly, focused on programs that had been shown to improve educational achievement. A preschool program for at-risk four-year-olds was one of those recommendations.

The 1995 General Assembly, through passage of the Omnibus Education Act (HB2542) and the Appropriation Act, reinforced all components of the 1994 package and provided for expansion of the initiative for at-risk four-year-olds. As of 2005-2006 state funds are available to provide comprehensive preschool programs to 100 percent of Virginia's at-risk four-year-olds who are not being served by Head Start.

Funding is calculated at an estimated $5,400 per eligible child, with program costs shared by the state and local governments based on the composite index of local ability-to-pay. This funding calculation is based on the Governor's introduced 2006-2008 biennial budget, which is subject to change by the 2006 General Assembly.

Completed applications are due to the Department of Education by May 15, 2006, with grants to be awarded in July 2006. Programs must operate on a full-day or half-day basis for the entire 2006-2007 school year to receive the full state allocation. For a new program in the first year of implementation only, a program operating less than a full school year will receive state funds on a fractional basis determined by the pro-rata portion of a school year program provided.

The program will comply with the staffing standards required by Section 22.1-199.1C, *Code of Virginia*. The maximum class size was 18 students. One teacher was employed for any class of nine students or less. If the average daily membership in any class exceeds nine students but does not exceed 18, a full-time teacher's aide was assigned to the class.

*Scope of Services*

The purpose of the grants is to reduce disparities among young children upon formal school entry and to reduce or eliminate those risk factors that lead to early academic failure (see Appendix A).

To obtain state funding, localities must develop a written local plan for programs that includes five services:

1. Quality preschool education;
2. Parental involvement;
3. Comprehensive child health services;
4. Comprehensive social services; and
5. Transportation.

The legislative intent of the initiative is to establish a quality preschool education program for "at-risk" four-year-olds. Research, culminating in a legislative study, has defined the criteria for a quality program as those noted in Appendices A-C. Programs should be designed to meet these criteria.

Localities will align the curriculum with *Virginia's Foundation Blocks for Early Learning*. They establish a measurable range of skills and knowledge essential for four-year-olds to be successful in kindergarten. Localities are also required to use PALS Pre-K for literacy screening.

The purpose of the *Foundation Blocks* is to provide early childhood educators a set of standards with indicators of success for entering kindergarten based on scientifically-based research. They reflect a consensus of children's conceptual learning, acquisition of basic knowledge, and participation in meaningful and relevant learning experiences (see Appendix B).

Localities are expected to coordinate resources and funding streams to serve the greatest number of four-year-old children.

Funds was disbursed by the Department of Education to localities to:

1. establish or expand quality, comprehensive preschool programs in public schools or community sites;
2. purchase quality preschool education programs and services for at-risk four-year-old children from existing providers;
3. expand existing quality programs to serve more children; and
4. upgrade existing programs to meet criteria for comprehensive, quality preschool programs to include new, unserved children.

Programs must provide full-day or half-day and at least school year services. First year programs operating less than a full school year shall receive state funds on a fractional basis determined by the pro-rata portion of a school year program provided. Children enrolled in the program must be four years of age on or before September 30 of the school year.

The Department of Education reviews preschool programs or centers operated by school divisions as a part of the pre-accreditation process. Instructional programs offered by public schools that satisfy compulsory attendance laws or the Individuals with Disabilities Education Act (IDEA), vocational child-care programs, and extracurricular activities that are focused on single interests such as, but not limited to, music, drama, art, or foreign languages are exempt from the requirements of the Standards for Licensed Child Day Centers.

*Application Requirements*

Authorizing legislation requires the chief administrator (city manager or county administrator), in conjunction with the school division superintendent, to identify a lead agency within the locality prior to submitting a proposal application on or before May 15, 2006.

Applicants must:

1. demonstrate willingness to provide a quality preschool education program that conforms to the guidelines and criteria outlined in Appendices A-C;
2. demonstrate collaboration and coordination with community agencies and groups identified by the lead agency as necessary for the successful delivery of comprehensive services to the children and their families;
3. develop and utilize selection criteria based on the community's definition of "at-risk." Appendix A provides information on risk factors that may be used; and
4. complete a grant application and submit it to the Department of Education by May 15, 2006.

## Local Match Requirements

The Appropriation Act states that a local match of funds, based on the composite index of local ability-to-pay, is required to receive state funds for this program.

*Defining a Qualifying Program*

For the purpose of this initiative, a qualifying program is one that is supported through local dollars and meets, or can meet, the criteria for a quality preschool program for at-risk four-year-old children in school year 2006-2007.

State dollars may be used to:

1. Upgrade, complement, or expand an existing locally funded program to meet quality criteria;
2. Complement or expand a Title I or Head Start program to serve additional children; and
3. Establish a new program to serve additional children.

*Local Funds*

**Cash Contributions**

Cash contributions are defined as local dollars that are:

1. In a program that meets, or can meet the criteria for a quality preschool program for at-risk four-year-old children in school year 2006-2007; and/or
2. New dollars, which are used to implement a program in school year 2006-2007 that meets the criteria for a quality preschool program for at-risk four-year-old children.

**In-Kind Contributions**

In-kind contributions are defined as cash outlays that are made by the locality that benefit the program, but not directly charged to the program. The value of fixed assets cannot be considered as an in-kind contribution. In-kind contributions are:

1. Limited to no more than 25 percent of the total local match requirement;
2. Justified in the program plan as necessary and reasonable for proper and efficient implementation of the program;
3. Verifiable from the recipient's records;
4. Not included as contributions for any other federally-assisted or state-assisted project or program; and
5. Not paid by the federal government or state government under another award.

*Coordination of Funds*

State funds are to be used to create new programs, supplement, enhance, or broaden current services.

Localities should coordinate other funding sources in planning programs for four-year-old children. Some sources of funds include federal funds for Title 1, Head Start programs, and child-care subsidy programs such as Title IV-A.

Local plans must provide clear methods of service coordination for the purpose of reducing the per child cost for the service, increasing the number of at-risk children served and/or extending services for the entire year. Examples of these include, but are not limited to:

1. **Wraparound services** combine funds such as child-care subsidy dollars, administered by local social service agencies, with dollars for quality preschool education programs.
2. **Wrapout services** use grant funds to provide health, social services, and transportation within a setting that currently provides quality preschool education (e.g., child-care settings or schools).
3. **Expansion of services** use grant funds to purchase placements within existing programs, such as Head Start, which provide comprehensive services to at-risk four-year-old children.

*Important Information About the Grant Application*

The signed certification form must be mailed by May 15, 2006, to the following address:

Cheryl P. Strobel
Virginia Department of Education
Office of Elementary Instruction
101 N. 14th Street, 24th floor
Richmond, Virginia 23219

The completed Excel application file must be e-mailed by May 15, 2006, to the following address:

Cheryl.Strobel@doe.virginia.gov.

*Submission Deadline*

***All copies of the application must be received at the Department of Education by May 15, 2006.***

*General Instructions for Using the Microsoft Excel File*

Please go to: http://www.doe.virginia.gov/VDOE/Instruction/ElemM/early/preschoolinitiative.htlm for complete directions on using the Excel worksheet.

*Using Appendices A-C to Complete the Application*

Appendices A-C refer to information regarding the requirements of a quality preschool program and the Virginia Preschool Initiative.

**Appendix A:**

Risk Factors, Page 9

**Appendix B:**

*Virginia's Foundation Blocks for Early Learning*, Page 10

**Appendix C:**

Site Visit Instrument, Page 11

## Risk Factors

Localities will develop selection criteria based on their definition of at-risk. Listed below are sample factors that have been identified as possible risk factors.

1. The child lives in poverty.
2. The child is homeless.
3. The child's parents or guardians are school dropouts, have limited education, or are chronically ill.

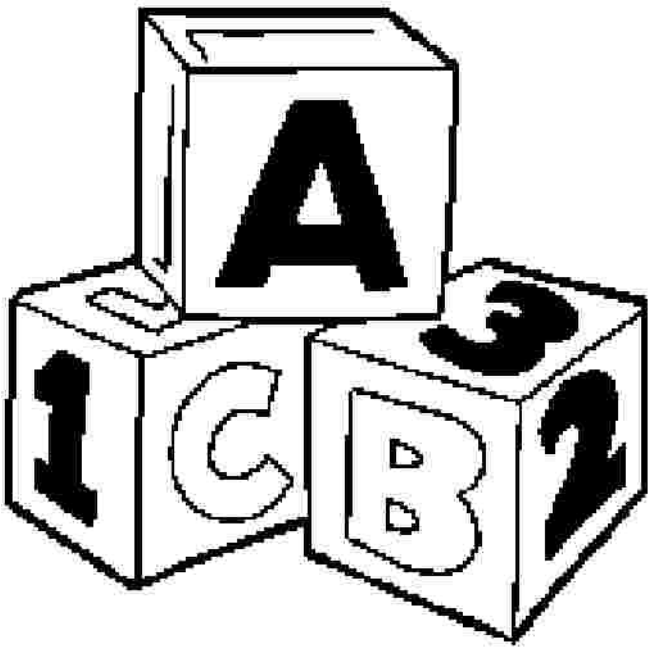
4. The child's family is under stress as evidenced by poverty, episodes of violence, crime, underemployment, unemployment, homelessness, or incarceration.

5. The child has health or developmental problems including, but not limited to, developmental delay, low birth weight, substance abuse.

6. The child has limited English proficiency.

APPENDIX F

# Virginia's Foundation Blocks for Early Learning




Prepared by
Office of Elementary Instructional Services
Virginia Department of Education

2005

# VIRGINIA PRESCHOOL INITIATIVE SITE VISIT INSTRUMENT

## LOCALITY_____

| Requirement | Is there sufficient documentation that this requirement is being met? | Documentation | Action taken *(*or to be taken*)* to fulfill requirements and/or improve in areas of concern. (Include timeline for completion.) |
|---|---|---|---|
| 1. The locality will provide a high quality comprehensive preschool program for at-risk four-year-olds not served by Head Start. | Yes<br>No | -Research-based, comprehensive preschool curriculum<br>-Professional development plan for current year<br>-Lesson plans<br>-Classroom observation by consultant | |
| 2. The program will align preschool curriculum with *Virginia's Foundation Blocks for Early Learning* and use PALS Pre-K. | Yes<br>No | -Scope and sequence of curriculum<br>-Documentation of alignment from locality or publisher | |
| 3. The program will maintain a maximum group size of 18 children with a child/staff ratio of 9:1. | Yes<br>No | -Class roster | |
| 4. Programs not located in public schools will comply with the *Standards for Licensed Child Day Centers*. | Yes<br>No | -License from social services | |
| 5. Children served will reach their fourth birthday on or before September 30th. | Yes<br>No | -Student records or class roster with birth dates | |

| Requirement | Is there sufficient documentation that this requirement is being met? | Documentation | Action taken (or to be taken) to fulfill requirements and/or improve in areas of concern. (Include timeline for completion.) |
|---|---|---|---|
| 6. The program was half-day (3 hrs.) or full-day (6 hrs.) and at least school-year (180 days). | Yes<br>No | -School year calendar<br>-Class schedule | |
| 7. The locality will develop and use criteria for eligibility. | Yes<br>No | -Eligibility criteria form<br>-Rank listing of students | |
| 8. Program personnel will have the appropriate professional credential for the program site. | Yes<br>No | -Copy of licensure for teachers | |
| 9. The chief administrator (city manager or county administrator) in conjunction with the school superintendent will identify a lead agency. | Yes<br>No | -Application | |

| | | | |
|---|---|---|---|
| 10. The locality will develop a written local plan. The plan will include a description of these services: educational program, parent involvement, health services, social services, and transportation. Please attach a copy of the budget to the plan. | Yes<br>No | -Detailed local plan to include each required component (See page 4 of the Guidelines) | |
| 11. No participation fees was charged to families. | Yes<br>No | -Budget | |
| 12. The required local match was met.<br>At least 75 percent of the local match was cash and no more than 25 percent was in-kind. | Yes<br>No | -Budget summary<br>-Budget narrative | |
| 13. State funds was used only for educational personnel and program requirements. | Yes<br>No | -Budget narrative | |
| 14. The locality will submit interim and final reports. | Yes<br>No | -Interim report was due in October<br>-Final report was due in July | |
| 15. The locality will maintain a steering committee to coordinate with schools, child care providers, local social services agency, Head Start, local health department and other groups identified by the lead agency. | Yes<br>No | -List of committee members and agency they represent<br>-Dates of meetings or agendas or minutes/ notes from meetings | |

v —

Virginia's Foundation Blocks for Early Learning:
Standards for Literacy, Mathematics, Science and History and Social Science
2005

Literacy Foundation Blocks:

- The child will develop listening and speaking skills by communicating experiences and ideas through the use of appropriate oral expression
- The child will develop an understanding of words and word meanings through the use of appropriate vocabulary.
- The child will manipulate various units of sounds in words.
- The child will demonstrate basic knowledge of the alphabetic principle.
- The child will demonstrate knowledge of print concepts.
- The child will write using a variety of media.

Mathematics Foundation Blocks:

- The child will count with understanding, and use numbers to tell how many, describe order, and compare.
- The child will recognize change in groups (sets/collections).
- The child will identify and compare the attributes of length, capacity, weight, time and temperature.
- The child will describe simple geometric shapes (circle, triangle, rectangle, and square) and indicate their position in relation to him/herself, and to other objects.
- The child will participate in the data gathering process in order to answer questions of interest.
- The child will identify simple patterns of concrete objects and use them to recognize relationships.

Science Foundation Blocks:

- The child will make observations, separate objects into groups based on similar attributes, compare lengths and mass, and develop questions based upon observations using the five senses.
- The child will describe and categorize properties of materials using magnets.
- The child will develop language to describe an object's position, movement and physical properties. The child will also describe properties of water and its movement.
- The child will compare the growth of a person to the growth of a plant and an animal to be able to describe basic life processes and basic needs of each.
- The child was able to create a shadow.
- The child will identify simple patterns in his/her daily life. The child will identify things that change over time.
- The child will practice reusing, recycling and conserving energy on a daily basis.

History and Social Science Foundation Blocks:

- The child will identify ways in which people are alike and different.
- The child will develop an awareness of change over time.
- The child will develop an increased awareness of the physical relationship between and among people and places.
- The child will use words to indicate relative location of objects and people including direction words, comparison words and attribute words.
- The child will develop an increased awareness of the kinds of work people do and the variety of tools people use in their jobs.
- The child will identify that people have wants and make choices.
- The child will participate as a member/citizen of a classroom community.

Student Name _____

# Literacy Assessment PK-2

Grade _____ Year _____ Teacher _____ School _____

Grade _____ Year _____ Teacher _____ School _____

Grade _____ Year _____ Teacher _____ School _____

Grade _____ Year _____ Teacher _____ School _____

Grade _____ Year _____ Teacher _____ School _____

## STAGE 1 Assessment: Prephonetic and Early Phonetic

**Sense of Story:** Identifies the child's understanding of book language. (SOL K.2, K.8, 1.1, 1.2, 1.11 First Step Objs: E.1, E.2, E.4)

Key: Check (✓) story elements included in retelling

| | Session 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 10 | | | | | | | | | |
| Date | | | | | | | | | |

1. Beginning (once upon a time, one day)
2. Setting (in the house, etc.)
3. Characters (names)
4. Sequence (at least 3 events)
5. Feelings (at least one feeling)
6. Description (descriptive words used at least twice)
7. Conversation (one example)
8. Ending (ran away, never came back)

**Oral Language:** The foundation for all literacy development (SOL K.1, K.2, K.3, K.13, 1.1, 1.2, 1.3 First Step Objs: D.5, E.3)

Key: Check (✓) appropriate letter(s)

A = Uses 1 or 2 word statements
B = Uses phrases
C = Uses complete sentences
D = Uses complete sentences with descriptive words
E = Asks how and why questions
F = Adapts/changes oral language to given situation

| | Session 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| F | | | | | | | | | | |
| E | | | | | | | | | | |
| D | | | | | | | | | | |
| C | | | | | | | | | | |
| B | | | | | | | | | | |
| A | | | | | | | | | | |
| Date | | | | | | | | | | |

**Phonemic Awareness:** The student will hear, say, and orally manipulate phonemes. (SOL K.4, K.7, 1.4 First Step Objs: E.10, E.11) **Date when mastered:**

_____ Orally identifies words that rhyme
_____ **Orally identifies words with shared beginning sounds (Gateway to IE)**
_____ Divides words orally into syllables
_____ Blends sounds orally to make words
_____ Applies phonemic awareness in writings

APPENDIX G

**Concepts about Print** (CAP): Behaviors related to how print works.
(SOL K.5, K.6, 1.5, 1.12, First Step Objs. F.5, E.6)
Key: Check (✓) when observed

| Book Concepts (can identify) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| A. How to handle a book | | | | | | | | | | |
| B. Front cover/back cover/ title page | | | | | | | | | | |
| C. What an author and illustrator does | | | | | | | | | | |
| D. Print contains message | | | | | | | | | | |
| **Directionality (demonstrates)** | | | | | | | | | | |
| E. Left page before right page | | | | | | | | | | |
| F. Left-to right in sentence | | | | | | | | | | |
| G. Return sweep | | | | | | | | | | |
| H. Top to bottom of page | | | | | | | | | | |
| **Letter/Word (points to)** | | | | | | | | | | |
| I. One letter two letters | | | | | | | | | | |
| J. One word two words | | | | | | | | | | |
| K. First letter of a word last letter | | | | | | | | | | |
| L. Capital letter | | | | | | | | | | |
| M. Each word (Sense of Word- one to one voice to print match) | | | | | | | | | | |
| *Gateway to Stage 2 Early | | | | | | | | | | |
| Date | | | | | | | | | | |
| Session | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Sense of Spelling**
**Spelling Development:**

A= Random marks 

B= Waves 

C= Letter like L 2 T

D= Random Letters t S R

E= Initial consonants C

F= Initial & final consonants C n

**Alphabet Knowledge:** (SOL K.9; First Step Obj. F.7)

Cross over the letters the student can identify in random order.

| | |
|---|---|
| E H F C S Q | m g i z r |
| J P W A I N | v h b w c |
| B Z G K R V | x l s d n |
| T L X D M O | e j u t q |
| U Y | f a k p o y |

**Sense of Spelling** Hearing and recording sounds in words

The student will write the following words

1. van 2. jab 3. rug 4. lip 4. sad

Key: Check (✓) appropriate letter

| G | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| F | | | | | | | | | | |
| E | | | | | | | | | | |
| D | | | | | | | | | | |
| C | | | | | | | | | | |
| B | | | | | | | | | | |
| A | | | | | | | | | | |
| Date | | | | | | | | | | |
| Session | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

## Stage 2 Assessment (Early and Transitional)

Student Name: _____

### Sense of Spelling

The student will write the following sentence:

*Father is going to the lake. He will ride in his boat.*

Key: Check (✓) appropriate letter(s).

E= Initial consonant
F= Initial and final consonant
G= A vowel as a place holder
H= Long vowels w/out marker (not for kids)
I= Correct short vowels
J= Correct long vowel patterns

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| J | | | | | | | | | |
| I | | | | | | | | | |
| H | | | | | | | | | |
| G | | | | | | | | | |
| F | | | | | | | | | |
| E | | | | | | | | | |
| Date | | | | | | | | | |
| Session | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

### Concepts about Print (CAP): Behaviors related to how print works

Key: Check (✓) when observed (SOL: K.5 K.8 1.5 1.7 1.8, 1.9, 2.4, 2.5, 2.6)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| A. Period (.) | | | | | | | | | |
| B. Exclamation Point (!) | | | | | | | | | |
| C. Question Mark (?) | | | | | | | | | |
| D. Quotation Marks (" ") | | | | | | | | | |
| E. Reads for meaning | | | | | | | | | |
| F. Self corrects | | | | | | | | | |
| G. Uses pictures to help read | | | | | | | | | |
| H. Uses repetitive patterns | | | | | | | | | |
| I. Uses sentence structure | | | | | | | | | |
| J. Uses beginning letter sounds | | | | | | | | | |
| K. Uses ending letter sounds | | | | | | | | | |
| L. Uses background experience | | | | | | | | | |
| Date | | | | | | | | | |
| Session | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

**Phonemic Awareness:** The student will hear, say, and orally manipulate phonemes. Check (✓) when accomplished.
Sort words orally according to shared ending sounds: ____
medial sounds: ____

### DRA Running Record: Accuracy, fluency, comprehension

(SOL: 1.5, 1.6, 1.7 1.8, 1.9 1.10 1.11 2.4 2.5, 2.6)

Fluency Key: 4-16

Comprehension Key: 6-28

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Text Level | | | | | | | | | |
| % | | | | | | | | | |
| Fluency | | | | | | | | | |
| Comp | | | | | | | | | |
| Date | | | | | | | | | |
| Session | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

### Alphabet Recognition/ Letter Sounds

Please ✓ in the space when a letter or sound has been mastered.

| | m | g | i | z | r | v | h | b | w | c | x | l | s | d | n |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | | | | | | | | | | | | | | | |
| Sound | | | | | | | | | | | | | | | |

| | e | j | u | t | q | f | a | k | p | o | y | sh | th | ch |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name | | | | | | | | | | | | | | |
| Sound | | | | | | | | | | | | | | |

Gateways: Stage 2 Transitional- Text level 4
Stage 3 Text level 10

# APPENDIX H

**Core Content Key for Pre-K**

S: Satisfactory, does consistently, meets standards
P: Progressing, making progress; needs further experience
U: Unsatisfactory, not making progress; needs time, help, and practice to improve

Mark ✓ = assessed this marking period. If blank, not assessed at this time

| A. Literacy Skills | 1 | 2 | 3 | 4 | Final |
|---|---|---|---|---|---|
| 1. Oral Expression | | | | | |
| 2. Vocabulary | | | | | |
| 3. Phonological Awareness | | | | | |
| 4. Letter Knowledge and Early Word Recognition | | | | | |
| 5. Print and Book Awareness | | | | | |
| 6. Written Expression | | | | | |

*Reading Stages*

- ☐ Stage I (Prephonetic)
- ☐ Stage I (Early Phonetic)
- ☐ Stage II (Early Beginning Reader)
- ☐ Stage II (Transitional Beginning Reader)
- ☐ Stage III (Independent Reader)

| B. Mathematics | 1 | 2 | 3 | 4 | Final |
|---|---|---|---|---|---|
| 1. Number and Number Sense | | | | | |
| 2. Computation | | | | | |
| 3. Measurement | | | | | |
| 4. Geometry | | | | | |
| 5. Data Collection and Statistics | | | | | |
| 6. Patterns and Relationships | | | | | |

| C. Science | 1 | 2 | 3 | 4 | Final |
|---|---|---|---|---|---|
| 1. Scientific Investigation | | | | | |
| 2. Force, Motion, Energy | | | | | |
| 3. Matter | | | | | |
| 4. Life Processes | | | | | |
| 5. Interrelationships in Earth & Space | | | | | |
| 6. Earth Patterns, Cycles and Changes | | | | | |
| 7. Resources | | | | | |

| D. History and Social Science | 1 | 2 | 3 | 4 | Final |
|---|---|---|---|---|---|
| 1. History/Similarities & Differences | | | | | |
| 2. History/Change Over Time | | | | | |
| 3. Geography/Location | | | | | |
| 4. Geography/Descriptive Words | | | | | |
| 5. Economics/World of Work | | | | | |
| 6. Economics/Making Choices | | | | | |
| 7. Civics/Citizenship | | | | | |

| E. Physical Growth | 1 | 2 | 3 | 4 | Final |
|---|---|---|---|---|---|
| 1. Puts on and zips coat. | | | | | |
| 2. Hops twice in a row on one foot. | | | | | |
| 3. Catches a small bouncing ball. | | | | | |
| 4. Cuts out shapes with scissors. | | | | | |
| 5. Holds pencil or crayon correctly. | | | | | |

| F. Citizenship Education/Work/Study Skills<br>Developing Citizenship Traits of Responsibility, Respect, Compassion, Honesty, Tolerance, Perseverance, Cooperation and Self-Discipline | 1 | 2 | 3 | 4 | Final |
|---|---|---|---|---|---|
| 1. Cooperates with others in a joint activity. | | | | | |
| 2. Recognizes the need for & follows school rules. | | | | | |
| 3. Participates in creating classroom rules. | | | | | |
| 4. States personal plans for learning center activities. | | | | | |
| 5. Participates in discussion of problems/solutions. | | | | | |
| 6. Shares thoughts & opinions in a group setting. | | | | | |
| 7. Identifies others' needs by helping them. | | | | | |
| 8. Handles classroom materials appropriately. | | | | | |
| 9. Participates constructively in group situations. | | | | | |
| 10. Stays in an activity for an appropriate amount of time. | | | | | |
| 11. Copes with minor disappointments. | | | | | |
| 12. Manages transitions. | | | | | |
| 13. Takes care of personal property. | | | | | |
| 14. Listens to and follows one-step directions. | | | | | |
| 15. Uses words and/or adults to resolve conflicts. | | | | | |
| 16. Follows classroom routines. | | | | | |
| 17. Manages personal hygiene. | | | | | |

| ATTENDANCE | 1 | 2 | 3 | 4 | Final |
|---|---|---|---|---|---|
| Entry Date | | | | | |
| Days on Roll | | | | | |
| Days Absent | | | | | |
| Days Present | | | | | |
| Days Tardy | | | | | |

APPENDIX I
Daily Schedule

Name: Position: Teacher School:

Program: Early Start Room Number/Location: / Revised Schedule

## DAILY SCHEDULE

Please list your daily schedule for your assigned workday, including all activities during your contract hours. If there is a change, send an update (marked "REVISED").
Print out this completed document and get your principal to sign it.

This schedule is for: x Monday, Tuesday, Thursday, Friday

| Time | Activity/Group | Grade | # |
|---|---|---|---|
| 8:00 - 9:15 | Teacher preparation/planning | PK | 17 |
| 9:15 – 9:30 | Teacher/Paraprofessional (PP) Planning | | |
| 9:30 – 10:00 | Bus Coordination/Children Arrive get a book and sit on the carpet. PP takes attendance. | | |
| 9:45 – 9:50 | Announcements/Pledge | | |
| 9:50 – 10:10 | Daily Plan/Phonological Awareness | | |
| 10:00 – 10:25 | Read Aloud/Music Movement | | |
| 10:25 – 10:27 | Wash Hands/Prepare for Breakfast/Walk to Breakfast | | |
| 10:27 – 10:42 | PP takes children to breakfast and monitors them. Teacher remains in room for planning and activity set – up. | | |
| 10:45 – 11:00 | Music Movement | | |
| 11:00 – 11:20 | Literacy Lesson | | |
| 11:30 – 11:35 | Walk Outside | | |
| 11:35 – 12:05 | Playground Time/Physical Fitness | | |
| 12:05 – 12:50 | (12:05 – 12:35) Paraprofessional Lunch Centers (12:30 – 1:00) Guidance the first Monday of every month. | | |

| | |
|---|---|
| 12:50 – 12:55 | Clean-up for lunch. |
| 12:55- 1:25 | Lunch for children/Teacher Lunch |
| 1:25 – 1:35 | Music Movement |
| 1:35 – 1:50 | Read Aloud |
| 1:50 2:15 | Physical Fitness – Activity (15 minute) Playground if appropriate or gym if inclement weather. |
| 2:15– 3:40 | Centers/Journals |
| 3:40 – 3:45 | Clean – up/Prepare for dismissal |
| 3:45 – 4:00 | Bus Tags/Parent Pick – up's/Bus Coordinator Duty |
| 4:00 – 4:15 | Dismissal/Clean Room/Prepare for the next day. |

_____

Name: Position: Teacher School:

Program: Early Start Room Number/Location:

## DAILY SCHEDULE

Please list your daily schedule for your assigned workday, including all activities during your contract hours. If there is a change, send an update (marked "REVISED").
Print out this completed document and get your principal to sign it.

This schedule is for: Wednesday

| Time | Activity/Group | Grade | # |
|---|---|---|---|
| 8:00 - 9:15 | Teacher preparation/planning | PK | 17 |
| 9:15 – 9:30 | Teacher/Paraprofessional (PP) Planning | | |
| 9:30 – 9:45 | Bus Coordination/Children Arrive get a book and sit on the carpet. PP takes attendance. | | |
| 9:45 – 9:50 | Announcements/Pledge | | |

| | | | |
|---|---|---|---|
| 9:50 – 10:10 | Daily Plan/Phonological Awareness | | |
| 10:10 – 10:25 | Music Movement | | |
| 10:25 – 10:27 | Wash Hands/Prepare for Breakfast/Walk to Breakfast | | |
| 10:27 – 10:42 | Children to breakfast. | | |
| 10:42 – 11:00 | Literacy Lesson | | |
| 11:00 – 11:35 | Centers/Journals | | |
| 11:35 – 12:05 | Playground Time/Physical Fitness | | |
| 12:05 – 12:50 | Centers/Group Activity (12:00 – 12:30 Paraprofessional Lunch) | | |
| 12:50 – 12:55 | Clean-up | | |
| 12:55- 1:25 | Lunch for children | | |
| 1:25 – 1:45 | Read Alouds | | |
| 1:45 - 150 | Dismissal | | |

APPENDIX J

½ Day Program Schedule

Early Start

AM Schedule

| | |
|---|---|
| 9:40 – 9:55 | Arrival, Sign in |
| 9:55 – 10:10 | Opening, Daily Plan |
| 10:10- 10:30 | Literacy Lesson |
| 10:30 – 10:45 | Read aloud/ Phonemic Awareness activities |
| 10:45 – 11:00 | PE |
| 11:00 – 11:25 | Journals/snack |
| 11:25 – 12:25 | Centers – small group activities |
| 12:25 – 12:40 | Movement activity |
| 12:40 – 12:45 | Read Aloud |
| 12:45 – 12:50 | Prepare for dismissal |

*PM Schedule*

| | |
|---|---|
| 1:00 – 1:10 | Arrival, Sign in |
| 1:10 – 1:25 | Opening, Daily Plan |
| 1:25 – 1:45 | Literacy Lesson |
| 1:45 – 2:00 | Read Aloud/ Phonemic Awareness activities |
| 2:00 – 2:15 | PE |
| 2:15 – 2:40 | Journals/snack |
| 2:40 – 3:40 | Centers – small group activities |
| 3:40 – 3:55 | Movement activity |
| 3:55 – 4:10 | Read Aloud |
| 4:10 – 4:20 | Prepare for dismissal |

APPENDIX K

# Developmental Reading Stages

| Reading Stage | Characteristics | Instructional Reading Level | Instructional Focus Small Groups Model, Guide, Practice |
|---|---|---|---|
| Stage 1 Prephonetic (IT) | ~Knows some letter names (upper and lower)<br>~Has no concept of word<br>~Lacks phonemic awareness<br>~May recognize a word or two<br>~Can discuss pictures<br>~Can listen and respond to literature<br>~Writes random marks and letter like forms on page<br>~Uses pictures to communicate meaning | A variety of printed material | ~Phonemic awareness<br>~Automatic letter recognition<br>~Letter/sound relationships<br>~Few basic sight words (name, I, a, the, to,..)<br>~Concepts about print, book handling skills<br>~Retelling stories<br>~Teacher is the scribe for student writing<br>~See Literacy Assessment Card for information on sense of story, oral language and concepts about print<br>Gateway to Stage 1 Early: Phonemic Awareness- hearing likenesses and differences in sounds |
| Stage 1 Early Phonetic (IE)<br><br>Level 1 | ~Hears likenesses and differences of sounds in words<br>~Sorts words orally according to shared beginning sounds<br>~Knows most of the alphabet<br>~Is beginning to track print (L-R, top to bottom)<br>~Demonstrating more book handling skills and concepts about print as assessed on Literacy Assessment Card<br>~Beginning to retell stories<br>~Is able to hear some dominant consonant sounds in words<br>~Recognizes some names and words<br>~Can discuss the pictures with more detail<br>~Writes with random letters and may include initial consonant | Reading Recovery 1<br>Rigby Level 1<br>PALS Readiness Level | ~Using language patterns and pictures to read<br>~Continued work with automatic letter recognition<br>~Reproduce letters of the alphabet using D'Nealian handwriting<br>~Model self monitoring as tracking print, one to one matching of voice to print, including multisyllabic words and more than one line of text<br>~Reading simple text with more than one line of print<br>~Distinguishing beginning consonant sounds<br>~Building sight words<br>~Writing to convey a message<br>~Arrangement of text on page and spacing<br>Gateway to Stage 2 Early: Consistently demonstrates voice to print match with text that has multi syllable words and more than one line of text. |
| Stage 2 Early<br><br>Levels 2-3 | ~Tracks print L-R, top to bottom, and return sweep<br>~Demonstrates voice to print match in a variety of situations<br>~Confirms beginning consonant sounds<br>~Continues to add to sight words<br>~Reads simple text<br>~Fluency is developing<br>~Beginning to monitor to cross-check on beginning sounds, beginning to self-correct<br>~Moving away from finger pointing ✗<br>~Predicting what will happen next<br>~Beginning sounds are used<br>~Writes sentences/ beginning to leave spaces between words | Reading Recovery 2-3<br>Rigby Levels 2-3<br>PALS Preprimer A | ~Completing alphabet recognition<br>~Continue to work on D'Nealian letter production<br>~Using beginning and ending consonant sounds<br>~Building sight words<br>~Continue reading text with several lines of print and increasing level of difficulty<br>~Using sentence context and pictures to read<br>Gateway to Stage 2 Transitional: Student is able to read text level 4 at an instructional level (90% accuracy). |

# Pre-K Report Card Scope and Sequence

2006-07

✓= Assessed during marking period.

## A. Literacy Skills

| ORAL EXPRESSION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Listens to stories | ✓ | ✓ | ✓ | ✓ |
| 2. Answers questions about stories (to include characters,objects, & actions) | ✓ | ✓ | ✓ | ✓ |
| 3. Makes predictions about stories | ✓ | ✓ | ✓ | ✓ |
| 4. Uses complete sentences to ask and answer questions | ✓ | ✓ | ✓ | ✓ |
| 5. Answers questions: who___ what___ when___ where___ why___ | ✓ | ✓ | ✓ | ✓ |
| 6. Engages in turn-taking exchanges & rules of polite conversation | ✓ | ✓ | ✓ | ✓ |

| VOCABULARY | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Uses single words to label objects | ✓ | ✓ | ✓ | ✓ |
| 2. Listens with increasing understanding to conversations & directions | ✓ | ✓ | ✓ | ✓ |
| 3. Follows simple, one-step oral directions | ✓ | ✓ | ✓ | ✓ |
| 4. Uses new vocabulary with increasing frequency to express & describe feelings and ideas | ✓ | ✓ | ✓ | ✓ |

| PHONOLOGICAL AWARENESS | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Discriminates likenesses and differences in sounds | ✓ | ✓ | ✓ | ✓ |
| 2. Identifies words that rhyme (Benchmark for IE) | ✓ | ✓ | ✓ | ✓ |
| 3. Generates simple rhymes | ✓ | ✓ | ✓ | ✓ |
| 4. Identifies beginning sounds in words (Benchmark for IE) | ✓ | ✓ | ✓ | ✓ |
| 5. Divides words into syllables | ✓ | ✓ | ✓ | ✓ |
| 6. Blends sounds orally to make words | ✓ | ✓ | ✓ | ✓ |

| LETTER KNOWLEDGE AND LETTER/WORD RECOGNITION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Correctly identifies uppercase letters by name in random order | ✓ | ✓ | ✓ | ✓ |
| 2. Correctly identifies lowercase letters by name in random order | ✓ | ✓ | ✓ | ✓ |
| 3. Select a letter to represent a sound | ✓ | ✓ | ✓ | ✓ |
| 4. Correctly provides the most common sound for letters | ✓ | ✓ | ✓ | ✓ |
| 5. Read simple, high-frequency words, including his/her name | ✓ | ✓ | ✓ | ✓ |
| 6. Notices letters in familiar, everyday life and asks how to spell words, names, or titles | ✓ | ✓ | ✓ | ✓ |

| CONCEPTS ABOUT PRINT | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Demonstrates how to handle a book__ & turn pages correctly__ | ✓ | ✓ | ✓ | ✓ |
| 2. Identifies: front of book___ back of book___ title page___ title___ | ✓ | ✓ | ✓ | ✓ |
| 4. Understands that print contains the message (Locates text words on the page) | ✓ | ✓ | ✓ | ✓ |
| 5. Identifies where reading begins on the page (first word or group of words) | ✓ | ✓ | ✓ | ✓ |
| 6. Demonstrates that pages are read from left to right | ✓ | ✓ | ✓ | ✓ |
| 7. Demonstrates that sentences are read from left to right | ✓ | ✓ | ✓ | ✓ |
| 9. Demonstrates that text is read from top to bottom | ✓ | ✓ | ✓ | ✓ |

| WRITTEN EXPRESSION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Distinguishes print from pictures | ✓ | ✓ | ✓ | ✓ |
| 2. Copies or writes letters using various materials | ✓ | ✓ | ✓ | ✓ |
| 3. Prints first name independently | ✓ | ✓ | ✓ | ✓ |
| 4. Prints 5 - 6 letters with a writing tool | ✓ | ✓ | ✓ | ✓ |
| 5. Copies 3 - 5 letter words | ✓ | ✓ | ✓ | ✓ |
| 6. Uses inventive spelling to convey message or tell a story (applies phonemic awareness in writing) | ✓ | ✓ | ✓ | ✓ |

| PHYSICAL DEVELOPMENT | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Puts on and zips coat | ✓ | ✓ | ✓ | ✓ |
| 2. Hops twice in a row on one foot | ✓ | ✓ | ✓ | ✓ |
| 3. Catches a small bouncing ball | ✓ | ✓ | ✓ | ✓ |
| 4. Cuts out shapes with scissors | ✓ | ✓ | ✓ | ✓ |
| 5. Holds pencil or crayon correctly | ✓ | ✓ | ✓ | ✓ |

APPENDIX L

## B. MATHEMATICS

| NUMBER AND NUMBER SENSE | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Count objects to 1_2_3_4_5_6_7_8_9_10_11_ | ✓ | ✓ | ✓ | ✓ |
| 12_13_14_15_16_17_18_19_20_ | | | | |
| 2. Count a group of at least 3 objects by touching each object | ✓ | ✓ | ✓ | ✓ |
| 3. Count the items in a collection of 1-5 (knows last # tells "how many") | ✓ | ✓ | ✓ | ✓ |
| 4. Compare two groups of objects using the terms: more/fewer/same | ✓ | ✓ | ✓ | ✓ |

| COMPUTATION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Describe changes in groups (sets/collections) by using more when groups of objects (sets) are combined (added together). | | ✓ | ✓ | ✓ |
| 2. Describe changes in groups (sets/collections) by using fewer when groups of objects(sets) are separated (taken away). | | ✓ | ✓ | ✓ |

| MEASUREMENT | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Compare two objects using the terms longer or shorter | ✓ | ✓ | ✓ | ✓ |
| 2. Identify the following tools of measurement: | ✓ | ✓ | ✓ | ✓ |
| clock___ calendar___ thermometer___ | | | | |
| ruler___ measuring cup___ scale___ | | | | |
| 3. Use the appropriate vocabulary when comparing temperatures (hot, cold) | ✓ | ✓ | ✓ | ✓ |
| 4. Use the appropriate vocabulary when describing duration of time | ✓ | ✓ | ✓ | ✓ |
| (hour, day, week, month, morning, afternoon, night, day) | | | | |

| GEOMETRY | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Match and sort shapes (circle, triangle, rectangle, and square) | ✓ | ✓ | ✓ | ✓ |
| 2. Describe how shapes are similar and different | ✓ | ✓ | ✓ | ✓ |
| 3. Identifies shapes: circle___ square___ triangle___ rectangle___ | ✓ | ✓ | ✓ | ✓ |
| 4. Positional concepts: | ✓ | ✓ | ✓ | ✓ |
| above__below_under_ over_ top_ bottom_ next to_ beside | | | | |

| DATA COLLECTION AND STATISTICS | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Collect information to answer questions of interest to children. | ✓ | ✓ | ✓ | ✓ |
| 2. Use descriptive language to compare data in objects and picture graphs by identifying which is more, fewer, or the same | ✓ | ✓ | ✓ | ✓ |

| PATTERNS AND RELATIONSHIPS | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Sort & classify objects according to 1 or 2 attributes (color, size, shape) | ✓ | ✓ | ✓ | ✓ |
| 2. Identifies simple patterns (AB) | ✓ | ✓ | ✓ | ✓ |
| 3. Recognizes simple patterns (AB) in the environment | ✓ | ✓ | ✓ | ✓ |
| | | | | |

## C. SCIENCE

| SCIENTIFIC INVESTIGATION, REASONING & TOOLS | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Identify basic properties of objects by direct observation | ✓ | ✓ | ✓ | ✓ |
| 2. Describe objects using pictures and words | ✓ | ✓ | ✓ | ✓ |
| 3. Sequence objects according to size | ✓ | ✓ | ✓ | ✓ |
| 4. Separate a set of objects into 2 groups based on 1 attribute | ✓ | ✓ | ✓ | ✓ |
| 5. Compare the length___ and mass___ of different objects | | ✓ | ✓ | ✓ |
| 6. Identify body parts: eyes__, ears__ mouth__, nose__ hand__ | ✓ | ✓ | ✓ | ✓ |

| FORCE, MOTION & ENERGY | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Describe the effects magnets have on other objects | | ✓ | ✓ | ✓ |
| 2. Describe the effects magnets have on other magnets | | ✓ | ✓ | ✓ |

| MATTER | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Identifies colors: red__orange__yellow__green__ | ✓ | ✓ | ✓ | ✓ |
| blue___ purple___ white___ black | | | | |
| 2. Identify textures (rough/smooth) and feel (hard/soft) | ✓ | ✓ | ✓ | ✓ |
| 3. Describe relative size and weight (big/little___, large/small___ | ✓ | ✓ | ✓ | ✓ |
| heavy/light___, wide/thin___, long/short___) | | | | |
| 4. Recognize water in its three forms): solid___, liquid___, gas___ | | | ✓ | ✓ |
| 5. Describe speed (fast/slow) | ✓ | ✓ | ✓ | ✓ |

| LIFE PROCESSES | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Describe what living things need to live and grow | ✓ | ✓ | ✓ | ✓ |
| 2. Recognize that baby plants & animals are similar but not identical to their parents and to one another | ✓ | ✓ | ✓ | ✓ |

| INTERRELATIONSHIPS IN EARTH & SPACE | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Creates a shadow___ & describe how a shadow is created___ | | ✓ | ✓ | ✓ |

| EARTH PATTERNS, CYCLES, & CHANGE | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Makes daily weather observations | ✓ | ✓ | ✓ | ✓ |
| 2. Observes and classifies the shapes & forms of natural objects | ✓ | ✓ | ✓ | ✓ |
| 3. Recognizes the order/stages of animal & plant growth | | ✓ | ✓ | ✓ |
| 4. Describes home & school routines | ✓ | ✓ | ✓ | ✓ |

| RESOURCES | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Identify objects that can be recycled | ✓ | ✓ | ✓ | ✓ |
| 2. Identify objects that can be reused | ✓ | ✓ | ✓ | ✓ |
| 3. Identify ways that energy can be conserved | ✓ | ✓ | ✓ | ✓ |

## IV. HISTORY AND SOCIAL SCIENCES

| HISTORY/SIMILARITIES AND DIFFERENCES | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Recognizes likenesses & differences in people | ✓ | ✓ | ✓ | ✓ |
| 2. Describes his/her own unique characteristics | ✓ | ✓ | ✓ | ✓ |
| 3. Identifies self as member of family & classroom | ✓ | ✓ | ✓ | ✓ |
| 4. Engages in pretend play | ✓ | ✓ | ✓ | ✓ |
| 5. Participates in activities & traditions associated with different cultural heritages | ✓ | ✓ | ✓ | ✓ |

| HISTORY/CHANGE OVER TIME | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Describes changes occurring from infancy to childhood | ✓ | ✓ | ✓ | ✓ |
| 2. Expresses difference btw past & present using words such as: before, after, now, and then | ✓ | ✓ | ✓ | ✓ |
| 3. Order/sequence events & objects | ✓ | ✓ | ✓ | ✓ |
| 4. Asks questions about artifacts from the past | ✓ | ✓ | ✓ | ✓ |
| 5. Recounts stories from the past | ✓ | ✓ | ✓ | ✓ |
| 6. Acts out a story/narrative from a specific time | ✓ | ✓ | ✓ | ✓ |
| songs, & music | | | | |

| GEOGRAPHY/LOCATION | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Identifies & describe features of the classroom, school, neighborhood, and community | ✓ | ✓ | ✓ | ✓ |
| 2. Engages in play with miniature vehicles, people, blocks | ✓ | ✓ | ✓ | ✓ |
| 3. Makes and walks on paths between objects | ✓ | ✓ | ✓ | ✓ |
| 4. Represents objects in the order in which they occur in the environment | ✓ | ✓ | ✓ | ✓ |
| 5. Relates seeing things from different elevations | ✓ | ✓ | ✓ | ✓ |

| GEOGRAPHY/DESCRIPTIVE WORDS | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Uses words to indicate relative location | ✓ | ✓ | ✓ | ✓ |
| 2. Uses words to describe places in the environment & in stories | ✓ | ✓ | ✓ | ✓ |
| 3. Uses direction words: on___under___over___away___ behind___near___far___above___below___toward___ | ✓ | ✓ | ✓ | ✓ |
| 4. Uses comparison words: close___farther away___ taller___shorter___higher___lower___alike___ different___inside___outside___ | ✓ | ✓ | ✓ | ✓ |
| 5. Uses attribute words (hard, soft, rough, smooth) | ✓ | ✓ | ✓ | ✓ |
| 6. Identifies labels & symbols found in community | ✓ | ✓ | ✓ | ✓ |

| ECONOMICS/WORLD OF WORK | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Identifies pictures of work & names the jobs people do | | ✓ | ✓ | ✓ |
| 2. Describes what people do in their community job | | ✓ | ✓ | ✓ |
| 3. Matches tools to job | | ✓ | ✓ | ✓ |
| 4. Matches job sites to work done | | ✓ | ✓ | ✓ |
| 5. Role plays the job of workers | | ✓ | ✓ | ✓ |

| ECONOMICS/MAKING CHOICES | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Identifies choices | ✓ | ✓ | ✓ | ✓ |
| 2. Recognizes that everyone has wants | ✓ | ✓ | ✓ | ✓ |
| 3. Chooses daily tasks | ✓ | ✓ | ✓ | ✓ |
| 4. Role-plays purchasing situations where choices are made | ✓ | ✓ | ✓ | ✓ |

| CIVICS/CITIZENSHIP | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Cooperates with others in a joint activity | ✓ | ✓ | ✓ | ✓ |
| 2. Recognizes the need for___& follows___school rules | ✓ | ✓ | ✓ | ✓ |
| 3. Participates in creating classroom rules | ✓ | ✓ | ✓ | ✓ |
| 4. States personal plans for learning center activities | ✓ | ✓ | ✓ | ✓ |
| 5. Participates in discussion of problems/solutions | ✓ | ✓ | ✓ | ✓ |
| 6. Shares thoughts & opinions in a group setting | ✓ | ✓ | ✓ | ✓ |
| 7. Identifies others' needs by helping them | ✓ | ✓ | ✓ | ✓ |
| 8. Handles classroom materials appropriately | ✓ | ✓ | ✓ | ✓ |
| 9. Participates constructively in group situations | ✓ | ✓ | ✓ | ✓ |
| 10. Stays in an activity for an appropriate amount of time | ✓ | ✓ | ✓ | ✓ |
| 11. Copes with minor disappointments | ✓ | ✓ | ✓ | ✓ |
| 12. Manages transitions | ✓ | ✓ | ✓ | ✓ |
| 13. Takes care of personal property | ✓ | ✓ | ✓ | ✓ |
| 14. Listens to and follows one-step directions | ✓ | ✓ | ✓ | ✓ |
| 15. Uses words and/or adults to resolve conflicts | ✓ | ✓ | ✓ | ✓ |
| 16. Follows classroom routines | ✓ | ✓ | ✓ | ✓ |
| 17. Manages personal hygiene | ✓ | ✓ | ✓ | ✓ |

# 2005 POVERTY LEVEL GUIDELINES

ALL STATES (EXCEPT ALASKA AND HAWAII) AND D.C.

Income Guidelines as Published in the Federal Register on February 18, 2005

## ANNUAL GUIDELINES

| FAMILY SIZE | PERCENT OF POVERTY 100% | 120% | 133% | 135% | 150% | 175% | 185% | 200% | 250% |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 9,570.00 | 11,484.00 | 12,728.10 | 12,919.50 | 14,355.00 | 16,747.50 | 17,704.50 | 19,140.00 | 23,925.00 |
| 2 | 12,830.00 | 15,396.00 | 17,063.90 | 17,320.50 | 19,245.00 | 22,452.50 | 23,735.50 | 25,660.00 | 32,075.00 |
| 3 | 16,090.00 | 19,308.00 | 21,399.70 | 21,721.50 | 24,135.00 | 28,157.50 | 29,766.50 | 32,180.00 | 40,225.00 |
| 4 | 19,350.00 | 23,220.00 | 25,735.50 | 26,122.50 | 29,025.00 | 33,862.50 | 35,797.50 | 38,700.00 | 48,375.00 |
| 5 | 22,610.00 | 27,132.00 | 30,071.30 | 30,523.50 | 33,915.00 | 39,567.50 | 41,828.50 | 45,220.00 | 56,525.00 |
| 6 | 25,870.00 | 31,044.00 | 34,407.10 | 34,924.50 | 38,805.00 | 45,272.50 | 47,859.50 | 51,740.00 | 64,675.00 |
| 7 | 29,130.00 | 34,956.00 | 38,742.90 | 39,325.50 | 43,695.00 | 50,977.50 | 53,890.50 | 58,260.00 | 72,825.00 |
| 8 | 32,390.00 | 38,868.00 | 43,078.70 | 43,726.50 | 48,585.00 | 56,682.50 | 59,921.50 | 64,780.00 | 80,975.00 |

For family units of more than 8 members, add $3,260 for each additional member.

## MONTHLY GUIDELINES

| FAMILY SIZE | PERCENT OF POVERTY 100% | 120% | 133% | 135% | 150% | 175% | 185% | 200% | 250% |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 797.50 | 957.00 | 1,060.68 | 1,076.63 | 1,196.25 | 1,395.63 | 1,475.38 | 1,595.00 | 1,993.75 |
| 2 | 1,069.17 | 1,283.00 | 1,421.99 | 1,443.38 | 1,603.75 | 1,871.04 | 1,977.96 | 2,138.33 | 2,672.92 |
| 3 | 1,340.83 | 1,609.00 | 1,783.31 | 1,810.13 | 2,011.25 | 2,346.46 | 2,480.54 | 2,681.67 | 3,352.08 |
| 4 | 1,612.50 | 1,935.00 | 2,144.63 | 2,176.88 | 2,418.75 | 2,821.88 | 2,983.13 | 3,225.00 | 4,031.25 |
| 5 | 1,884.17 | 2,261.00 | 2,505.94 | 2,543.63 | 2,826.25 | 3,297.29 | 3,485.71 | 3,768.33 | 4,710.42 |
| 6 | 2,155.83 | 2,587.00 | 2,867.26 | 2,910.38 | 3,233.75 | 3,772.71 | 3,988.29 | 4,311.67 | 5,389.58 |
| 7 | 2,427.50 | 2,913.00 | 3,228.58 | 3,277.13 | 3,641.25 | 4,248.13 | 4,490.88 | 4,855.00 | 6,068.75 |
| 8 | 2,699.17 | 3,239.00 | 3,589.89 | 3,643.88 | 4,048.75 | 4,723.54 | 4,993.46 | 5,398.33 | 6,747.92 |

APPENDIX M

# APPENDIX N

International Review Board number (IRB): 07-24-78