The Home Literacy Environment Impact on a Struggling Reader and Emergent Reader's Readiness for a Pre-Kindergarten Program

Ashley Colarocco
St. John Fisher College

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Abstract
The goal of this study was to examine the impact the home literacy environment has on a struggling reader and an emergent reader. It was determined that the home literacy environment has a greater impact on a struggling reader and an emergent reader. Data was collected through teacher field notes, questionnaires, and student test scores. The data showed the home literacy environment does have an impact on both a struggling reader and an emergent reader. The more involved a parent is in their child’s academics, the more successful the child will be. Children will be more prepared for school and transition smoothly through the home and school discourse.

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The Home Literacy Environment Impact on a Struggling Reader and Emergent Reader’s Readiness for a Pre-Kindergarten Program

By

Ashley Colarocco

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Dr. Joellen Maples

School of Arts and Sciences
St. John Fisher College

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Abstract

The goal of this study was to examine the impact the home literacy environment has on a struggling reader and an emergent reader. It was determined that the home literacy environment has a greater impact on a struggling reader and an emergent reader. Data was collected through teacher field notes, questionnaires, and student test scores. The data showed the home literacy environment does have an impact on both a struggling reader and an emergent reader. The more involved a parent is in their child’s academics, the more successful the child will be. Children will be more prepared for school and transition smoothly through the home and school discourse.
Home Literacy Environment Impact on a Struggling Reader and Emergent Readers 

Readiness for a Pre-kindergarten Program

The topic that I have chosen to research and conduct research on is the home literacy environment and its impact on a student’s readiness for pre-kindergarten. Upon entering kindergarten, children are expected to know their colors and alphabet. While enrolled in a pre-kindergarten program, it is expected that children are exposed to their colors and alphabet on a daily basis. I would like to discover if a student’s home literacy environment impacts a student’s readiness for a pre-kindergarten program. Children who reside in a home where education is valued will learn their numbers, colors, and alphabet before entering pre-kindergarten. Children who reside in a home where education is not a priority fall behind those students and do not enter pre-kindergarten with the knowledge of letters, colors, and numbers. This poses a challenge for the teacher as they are dealing with varying abilities of those pre-kindergarten children in the classroom. Therefore, my topic addresses the impact of a home literacy environment on a student’s success in a pre-kindergarten program.

The idea for this research stems from my experience working as a universal pre-kindergarten teacher. Universal pre-kindergarten, also known as UPK, is a special program established by the New York State Education Department and local school districts to provide a preschool experience for the children of eligible families. The program starts each year in September, and applications are accepted from those children who will be four years old by December 1st of the current school year and live in a school district which is providing UPK. The UPK program that I teach provides a safe and stimulating environment for children. Through the use of educational games and hands-on activities, which foster social interactions with peers, the children acquire literacy skills. In addition, social skills are enhanced and skills are further
developed through reading, literacy activities, and outside play. However, children who are exposed to their colors, numbers, and letters from simply watching television are gaining some of the needed skills to succeed in a pre-kindergarten program.

Children who reside in a home environment where academics are valued will enter pre-kindergarten with the needed skills and academics to succeed. Goodman (2001) also believes that in order to be able to function successfully in a society and its culture, children need to develop a wide range of language competencies and they need to use that language effectively in a variety of settings. Children in a literacy rich home environment are submersed in rich language and social interactions every day, all day. Children who experience home environments that do not value literacy and academics lack the needed skills to succeed in a pre-kindergarten program. They fall behind their peers academically and become very frustrated that they can’t write words or keep up with their peers. Parents should be engaging their children in reading and writing activities as well as supporting their children academically by playing games and reading to them.

The purpose of this study was to determine if the home literacy environment has a great impact on a struggling reader and an emergent reader. According to Barker and Scher (2002), involvement with reading activities at home has significant positive influences not only on reading achievement, language comprehension, and expressive language skills, but also on students’ interest in reading, attitudes towards reading, and attentiveness in the classroom. Through observations, questionnaires, and the use of student test scores, it was determined that the home literacy environment proved to have a great impact on an emergent reader’s readiness for a pre-kindergarten program. Based on these findings, there are multiple implications for teachers when planning classroom instruction. The results of this study also revealed that the student who
saw their parent reading for pleasure enjoyed reading as well.

Theoretical Framework

Parental involvement begins in infancy in the home, as all children have different initial exposures to what they come to school knowing. A parent’s role very early in a child’s academic career is to provide ample opportunities for authentic literacy experiences. These include meaning conversations and interactions among themselves and their child. Parents should model authentic reading and writing situations, such as reading and writing for a purpose. By creating these literacy experiences early in a child’s academic career, they are showing their support and interest in the child’s academics, hence, the sociocultural theory begins to shape this importance. In Larson and Marsh (2005), sociocultural learning theory defines the “child as an active member of a constantly changing community of learners in which knowledge constructs and is constructed by larger cultural systems” (p. 100). Literacy, as a tool, is informed by social, cultural, and historical differences amongst members of diverse communities. Furthermore, this theory describes the process of human development by participating in sociocultural activities in communities that are continuously changing, which thereby shapes curriculum and classroom learning. Learning that is socially constructed focuses on the meaning and analysis of participation in everyday life. Social interaction supports literacy development as children interact and socialize with others. From previous coursework, the sociocultural learning theory supports the use of pre-kindergarten as literacy is acquired through social interactions and daily experiences. According to Goodman (2001), children develop notions about literacy in the same way that they develop significant learning; they discover and invent literacy as they participate actively in a literate society. As school-oriented parents and their children interact in the preschool years, adults give their children, through modeling and specific instruction, ways of
taking from books which seem natural in school and in numerous settings such as banks (Heath, 1982). Children who observe their parents reading for pleasure and who experience authentic literacy learning activities will enter pre-kindergarten with a larger vocabulary and more letter and vocabulary knowledge than their peers. Children from a ‘literate society’ learn custom beliefs and skills that will recur repeatedly through the life of the mainstream children (Heath, 1982). Children who observe their parents reading for pleasure will instill a love for learning in their child and therefore their child will enjoy looking at books. Vygotsky (1978) believed that parents, caregivers, peers, and the culture at large are responsible for the development of higher order functions. In McGee (2008), the sociocultural learning theory states that:

Nearly all children grow up experiencing many kinds of language in their home communities, especially instrumental and social language, but some children have far fewer experiences than other children with academic forms of spoken and written language like those that will experience in school. (p. 38).

Children discover and invent literacy as they participate actively in a literate society. There are many personal as well as environmental factors that play a role in literacy development. Children’s development of literacy grows out of their experiences, views, and attitudes towards literacy they encounter as they interact with social groups (Goodman, 2001). Literacy is also informed by social and cultural differences among the children in a classroom. The use of language at home will impact students’ literacy development at school as well as their success in a pre-kindergarten program. Children in cultures or homes whose parents aren’t aware of what should be taught before a pre-kindergarten program will enter the program educationally younger than their peers. According to Heath (1982), Culture children learn as they grow up and have ways of taking meaning from the environment around them. Social interaction supports literacy
development as children interact and socialize with others. Children who live in a home environment rich in literacy and academics are interacting and socializing with their parents every day and those children with parents who do not value academics or do not have a rich literacy environment are lacking that interaction. Cohen and Cowen (2011) state that “If children are not literate, they cannot succeed in school, in our society, or participate in our democracy as effective citizens, as literacy is the key to personal, professional, and global growth in our world” (p. 4). Knowing that children acquire language and literacy skills through social interactions and experiences, the question remains if the home literacy environment impacts a student’s readiness for a pre-kindergarten program.

**Research Question**

Children learn through social interactions and experiences with others; therefore, this research paper addresses the effectiveness the home literacy environment has on a struggling reader and an emergent reader’s readiness for a pre-kindergarten program. Given that literacy is a social practice and learning occurs during social interactions, this action research project asks, how does a home literacy environment impact a struggling reader and an emergent reader’s readiness for a pre-kindergarten program?

**Literature Review**

In order to produce a well-rounded and informed action research study, it is imperative to review the previous research that has helped set the foundation for this particular topic of home literacy environment impacts on a student’s readiness for a pre-kindergarten program. In the following literature review, an examination of three distinct themes will be unveiled. The first theme investigates the home literacy environment to determine if socio-economic status has any effect on the child’s early literacy development. The importance of the home literacy
environment has been recognized for many years, anchored on the notion that the home is generally the setting in which a child first encounters language and literacy, and the setting that provides opportunities to observe, explore, and participate in literacy activities (Bracken & Fischel, 2008). Next, the second theme continues to build upon this knowledge by examining storybook reading in the pre-kindergarten setting as well as the home environment and the impact on that child’s emergent literacy development. Storybook reading has been specifically linked to oral language and vocabulary development as well as the development of phonemic and phonological awareness (LaCour, McDonald, Thomason, & Tissington, 2010). Lastly, the third and final theme that will be examined is the parent’s expectations of a child’s success in a pre-kindergarten program. Parents are widely recognized as children’s first teachers, providing cognitive and affective input that helps children build literacy-related skills (Hindman & Morrison, 2012).

**Socio-economic Status Affects Home Literacy Environment**

The experiences, attitudes, and materials pertaining to literacy that a child encounters and interacts with at home compose a child’s home literacy environment (Roberts, Jurgens, & Burchinal, 2005). The broad home environment facts are often related to socioeconomic status (SES), which is usually measured by parental income, occupation, and/or education. It is well documented that the average reading performance of children from working class families is below that of children from middle class homes (Kirby & Hogan, 2008). In a study by Kirby & Hogan (2008) socio-economic status was estimated from the highest level of education achieved by the mother and father of 49 children participating in this study. The purpose of this study was to evaluate the aspects of the family literacy environment and socio-economic status to a child’s early reading development. Among other findings, Kirby & Hogan found, with this purpose in
mind, the homes of good and poor readers differed in many characteristics, including several aspects of home literacy, numbers of books in the home, and mother’s education. Weigel & Martein (2005) stated that when parents or other adults read books with young children, when parents value literacy, when a home environment is rich in literacy and language activities and materials, and when the overall home environment is supportive, then children’s emergent literacy abilities are greater as are their motivations to read. Before and after entering school, disadvantaged children may have limited access to print materials and home learning opportunities and their caregivers may face numerous challenges in addition to economic disadvantage (Parecki & Squibb, 2011). These disadvantages include low levels of education, multiple jobs, single-parent households, and higher levels of depression among parents that may make it difficult for them to assist their children in learning. Children who live in low socio-economic home environments also do not experience a rich literacy environment with books, trips to the library, a parent reading to them every night, or perhaps a parent teaching them their letters of the alphabet or counting to ten. Molfese, Modglin, Beswick, Neamon, Berg, Berg, & Molnar, (2006) states that letter knowledge was found to be a strong predictor of reading skills in English and non-English speaking children and five year olds from low socio-economic homes could name half as many letters as children from higher socio-economic homes. Within this study, children were assessed with a phonological awareness assessment, environmental print measure, and an early reading measure screen tool, Get Ready to Read!. In the fall and spring, 12 of the 57 four year old children in the study could name no letters, an additional eight children could name only one letter in the spring, and eight more children could name two or three letters. The 30 remaining students knew an average of 11 letters at the spring assessment. Children
growing up in low-income households are more likely to have difficulties learning how to read than do children growing up in more advantaged households (Cunningham, 2009).

The home and family environment, as well as the child-care environment, are two primary contexts that directly influence young children’s development. Child care is another powerful influence in the lives of many young children (Cunningham, 2009). Cunningham points out three ways to conceptualize the home literacy environment, which are labeled: the limiting home literacy environment, the passive home literacy environment, and the active home literacy environment. The limiting home literacy environment refers to the social demographic characteristics of parents and the home that has been shown to be correlated with children’s literacy and language development, such as parents’ level of education, school experiences, or household income. Cunningham reports a greater likelihood that children who have reading difficulties also will have parents with below average literacy levels. The second component, passive home literacy environment, correlates to parents’ reading behaviors, such as personal enjoyment of reading and time spent in reading, have been related to positive reading outcomes for children. Parents who read and write regularly may have larger vocabularies and children who see their parents reading are more apt to engage their parents in conversations about the materials by asking questions, and acquiring richer vocabulary from these interactions. The third component is active home literacy environment. Those parental efforts include directly engaging a child in activities designed to foster literacy and language development. Studies of early literacy development conclude that “the frequency of joint book reading has a positive effect on child literacy and language development” (p. 209). Parental reading beliefs about their role in the development of their children are related to children’s literacy and language outcomes. Cunningham found that “parental beliefs were highly predictive of both the degree to which
parents exposed their children to joint book reading and the quality of parent-child interactions while reading books” (p. 209). Books and book reading, which expose children to words and ideas outside of their daily experiences, are among the most influential tools for expanding children’s vocabulary (Hindman & Morrison, 2012). Davidse, Jong, Bus, Huijbregts, & Swabb (2010) states that shared book listening and reading at home has little impact on children’s understanding of print. However, activities focused on print in which “the children actively participate are best related to the development of orthographic knowledge” (p. 396). Shared book reading is more strongly associated with language comprehension skills than with print and decoding skills. When reading storybooks to children, “parents comment much more frequently on the content of the story than on print concepts” (p. 396). When children see or hear their parents pointing out different letters, they will pick up on that and start to do that while they are reading books. When learning how to read, children must first have strong letter knowledge before they can start learning the sounds those letters make and eventually putting the letter sounds together to form words. Parents who point out different aspects of print while they are reading to their child will encourage them to pay attention to the print rather than the story. Specific parent behaviors, such as asking open-ended questions, adding information, focusing on print concepts, and eliciting abstract language, are related to children’s early as well as later language skills (Roberts, Jurgens, & Burchinal, 2005).

The importance of the home environment is grounded in the fact that the home serves as a setting in which language and literacy is typically first encountered (Weigel, Martin, & Bennett, 2006). Lack of academic skills is identified by teachers as one of the most common obstacles children face when they enter school (Magnuson, Ruhm, & Waldfogel, 2005). When children enter pre-kindergarten, they are expected to be exposed to their numbers, some letters,
and some colors. Children who enter pre-kindergarten with no exposure to academics, they will tend to fall behind their peers who have been previously exposed to some academics. Data from a study conducted by Magnuson, Ruhm, & Waldfogel (2005) consisted of 10,224 children entering kindergarten. Of these children, 45% of these children were receiving center based child care, 17% were in a pre-kindergarten program, 16% were exclusively parental care, 12% of children received non-parental care, and 10% of children went to Head Start. These children were assessed on knowledge of letters and word recognition, beginning and ending sounds, vocabulary, and passage comprehension. The outcome of this study was that children who attended pre-kindergarten or preschool had the highest test scores, followed by those exclusively in parental care or receiving other types of non-parental care, Head Start enrolled children had the lowest scores in math and reading upon entering kindergarten. It was also observed that children who attended pre-kindergarten or preschool were least likely to repeat kindergarten (Magnuson, Ruhm, & Waldfogel, 2005). When a child enters a center-based child care program, they encounter an environment that incorporates learning activities to promote academic skills and enhance school readiness. Attention to preschool and pre-kindergarten children’s success should be a priority. High-quality learning environments in preschool and pre-kindergarten, specifically those that support language and literacy development, can help diminish early disadvantages and promote successful development in readers and writers of children growing up in low-income households (Cunningham, 2009). Stated by Chien et al. (2010), children’s school readiness, particularly for children from disadvantaged backgrounds, is enhanced in pre-kindergarten programs during the year before kindergarten. Children who are enrolled in pre-kindergarten are exposed to their letters, colors, and numbers on a daily basis. The teacher must
differentiate her instruction based on the needs of her students as not all children who enter a
pre-kindergarten program are going to be on the same level.

**Storybook Reading’s Impact on Children’s Literacy Development**

A relationship has been found between learning to read and a positive home environment
which encouraged reading development (LaCour, McDonald, & Tissington, 2010). Involvement
with reading activities at home has significant positive influences not only on reading
achievement, language comprehension and expressive language skills, but also on pupils’
interest in reading, attitudes towards reading, and attentiveness in the classroom (Baker & Scher,
2002). The inclusion of storybooks in the home environment is a key component for developing
early literacy skills. Through exposure to storybooks in the home, children began to understand
the purpose of books and reading. Research conducted by Silverman & Crandell (2010) stated
that young children learn words from interactions with adults. Children who are from home
literacy environments encounter many words before they enter pre-kindergarten. As children
encounter words in more and more situations, they learn to generalize words across contexts. The
more words children learn though this labeling process, the more likely they are to encounter
words that are related or sound similar. As children become more verbal, adults often define
words and use words across context so children can construct an understanding of things that are
not necessarily tangible or in here and now. Silverman & Crandell (2010) conducted an
observational study over the course of a school year in 16 early childhood classrooms. They
observed 90 minute language arts blocks and focused on practices of vocabulary instruction. The
sample consisted of 244 four, five, and six year old children who attended one of 16 participating
pre-kindergarten and kindergarten classrooms in an urban school district in the northeastern
United States. Silverman & Crandell focused on the teaching of vocabulary during read-alouds
for pre-kindergarteners and kindergarteners. It was found that the teacher’s use of vocabulary instruction practices during read-aloud time was positively related to children’s vocabulary learning. This showed that instruction in vocabulary is beneficial for children. This study suggests that certain vocabulary instruction practices, when implemented by teachers, are related to improved vocabulary outcomes for children (p. 336). Children who come to pre-kindergarten with a large vocabulary will benefit from vocabulary instruction during read-aloud time more than those children who come from home literacy environment where the parents do not use high frequency vocabulary words and read to them as often as their peers. As they enter a pre-kindergarten program, they will be much higher in their vocabulary skills as their peers are. They will recognize certain words during read-aloud time and will be able to comprehend the story books more than their peers. Children who are read to at least three times a week were more likely to know the alphabet, read or pretend to read, and write their own name (Nord, Lennon, Liu, & Chandler, 2000). Nord, Lennon, Liu, & Chandler (2000) suggest that it may not be the shared reading contributing to early literacy skills but the fact that homes where shared reading occurs are more likely to include other literacy activities such as parent teacher and academic games. Zucker, Justice, & Piasta (2009) found that shared-reading experiences in pre-kindergarten classrooms may be particularly important for children who are at risk for reading difficulties due to poverty, limited home support for literacy, or the presence of a developmental disability. Children who are from home literacy environments that do not value reading or academics will enter school with limited book knowledge. These children come from homes that do not value reading for the fact that they might not be able to afford books or their parents have two jobs and are not home to read to them as often as those children from home environments rich in literacy. According to LaCour, McDonald, & Tissington (2010), shared book reading is an interactive
way of reading books aloud with children that gives them a chance to be active participants in the reading session, thus providing a meaningful experience that stimulates learning. Shared book reading in the home leads to receptive language development which ultimately leads to reading. Storybook reading in the home, as a form of social interaction between the care-giver and child, was crucial for adequate emergent literacy development. The reading of storybooks in the home was proven to be a natural way to encourage the development of emergent literacy skills in children. Shared book reading is where an adult reads to a child, and where the focus is the story, not the printed text (Martini & Senechal, 2012). Shared book reading allows the parents and the child to have extended conversations and in many instances, increases the child’s vocabulary bank as the parent uses vocabulary words the student hasn’t heard before. In reading storybooks together, children begin to develop concepts of the form and structure of written language as well. When reading to a child, a parent might point out words or letters in the story to the child and the child picks up that letters makes words and words make up the story that they are hearing. While reading storybooks together, parents are demonstrating reading strategies that the children will use and master later in their literacy development. Once these children see their parents demonstrating certain reading strategies, they start to internalize those reading strategies they will use later on in their literacy development. Children who are from home environments rich in literacy encounter storybook reading and come to a pre-kindergarten program with advanced letter knowledge and book knowledge. LaCour, McDonald, & Tissington (2010) conducted researched that studied storybook reading in the home for the purpose of increasing emergent literacy development among pre-kindergarten children. Children from two Head Start centers in the Southwestern United States were the participants in this study. It was concluded that significant gains in readiness for reading scores among students who experienced storybook
reading at home compared to those students who were part of the control group and did not experience storybook reading in their home. These children who are constantly being exposed to storybook reading at home are gaining later literacy skills they will use and benefit from later on when they start to read. These children from homes that do not value shared book reading are lacking the understanding for the purpose of books. These children who don’t experience shared storybook reading do not understand that books have a purpose. The parental role model is especially important in motivating students and influencing attitudes to reading. Laakso, Poikkeus, Eklund, & Lyytinen (2004) state that exposure to books is thought to offer a natural and pleasant way to acquaint the child with the ‘contracts’ of literacy without intentional teaching, e.g., identifying print. This kind of shared experience with adults is believed to support the child’s later acquisition of literacy skills, by encouraging interest and motivation towards books and reading (p. 324). A child who shows more interest in literacy-related activities is likely to gain more from them with respect to language skills than a child who shows little or no interest towards book or reading. The early lack of interest in books and shared reading that appears to be characteristic of many children with later reading disabilities could be also linked to deficiencies in their language skills.

Within the preschool years, young children who are reared in literate families and communities develop a basic interest in print as an aspect of their environment that carries meaning and an awareness of written language forms and features (Zucker, Justice, & Piasta, 2009). Children who are just beginning to recognize print are at the emergent stage of literacy development. These children are recognizing the relationship between alphabetic symbols and the sounds they represent. During the emergent literacy stage, children are learning the purpose of books and the language that books represent. The child must first develop a realization that a
book is for reading and that pictures in a book are representing a meaning before they learn how to read. A key component of the home literacy environment that helps lead a child to an understanding of print is the parent/child social interaction of reading a storybook. Parents who engage in many literacy activities with their children develop positive attitudes towards reading. Knowledge of letter names prior to formal instruction is a strong predictor of later reading achievement (Bradley & Jones, 2007). A beginning reader who does not know the letters of the alphabet cannot learn to which sounds those letters make. Knowledge of the alphabet at entry into Kindergarten is one of the strongest predictors of short and long-term literacy success.

Although letter-name knowledge is positively correlated to later reading achievement, evidence suggests that letter-sound knowledge accounts for more variance in early reading achievement and delays in early literacy skills may be linked to delays in letter-sound knowledge (p. 453). As children learn letter sounds, they learn that a letter’s name often provides a clue for the sound that the letter represents. Once a child masters letter sounds, they then begin to sound words out and gain an interest in reading. In a study conducted by Bradley & Jones (2007), seven pre-kindergarten and six kindergarten teachers were observed reading aloud numerous alphabet books to their children. Results from the study concluded that while the teachers were reading the alphabet books aloud to the children, they asked questions or made comments to encourage the children to become involved in the reading and to make connections with the text. The teachers in this particularly study also pointed out what sounds each letter made while they were reading aloud to the children.

The two processes that interact when children engage in literacy tasks are outside-in and inside-out processes. Outside-in processes represent sources of information or influences existing outside of the written word, such as knowledge of particular vocabulary words or understanding
of narrative structure. Outside-in skills, or comprehension-related knowledge also include learning word meanings, learning to answer explicit and implicit questions about stories, developing syntactic knowledge, and increasing conceptual knowledge. Inside-out processes represent sources of information or influences from within the written word, such as knowledge of print concepts and phonological awareness. Print knowledge refers to young children’s print interest and awareness and knowledge of printed words and letters. Young children’s knowledge about print and sounds has been linked to later literacy achievement, thereby highlighting the importance of early literacy skills, concepts, and knowledge (Welsch, Sullivan, & Justice, 2003).

A home literacy environment that enhances emergent literacy provides children with many opportunities to engage in reading, writing, singing, and storytelling activities. A study conducted by Zucker, Justice, Piasta (2009) found that adult’s use of explicit print-referencing techniques can significantly increase pre-kindergarteners print knowledge. Shared reading has been viewed as a direct support to children’s development of print knowledge. There has been a strong association between shared reading and children’s comprehension-related knowledge. Studies of emergent literacy have highlighted the importance of the early literacy environment and experiences in developing children’s knowledge and skills related to reading acquisition (Levy, Gong, Hessels, Evans, & Jared, 2006). A study of 474 participants, ages 48 to 83 months, explored aspects of a child’s home literacy environment in the development of print concepts and early reading. A home literacy experience questionnaire, completed by parents of the participants, consisted of a variety of questions regarding frequency of reading different types of children’s books to the child (eg., alphabet books, storybooks, poems, magazines, chapter books, classics, nonfiction) and of engaging in 21 literacy activities (eg., learning letter sounds, reading signs, visiting public libraries, tracing/copying letters). Data from this study suggests it is
important that children’s early literacy experiences include activities that lead them to explore details of the print itself.

Parents’ Expectations of a Child’s Success in a Pre-Kindergarten Program

When parents, educators, and researchers are asked about the origins of academic differences among children entering kindergarten, the most commonly given answer usually involves some aspect of the home literacy environment that parents provide for their pre-kindergarten children (Burgess, Hecht, Lonigan, 2002). It was found that children from lower socioeconomic and nonmainstream cultures demonstrated lower levels of interest in literacy. Exposing children to a home environment rich in literacy activities is beneficial to literacy and language development (p. 408). A home literacy environment includes the resources, whether material or interpersonal, to which children have access that can foster their learning about critical content (Hindman & Morrison, 2012). A home literacy environment should include a broad range of family activities, such as exposure to literacy, parent-child storybook and picture book reading, and many opportunities for literacy interactions among family members. Parents should provide children’s books, frequent reading to and with their children, special space and opportunities for reading, positive parental attitudes and models of reading, frequent visits to libraries, and many parent-child conversations (Metsala, 1996). Children from home environments that are not rich in literacy are lacking all the experiences children are receiving who live in home environments rich in literacy. Burgess, Hecht, & Lonigan (2002) conducted a study to determine if there is a relation between the home literacy environment and letter knowledge in 97 middle-income four and five year old children in a one year longitudinal study. The results of this study indicated that the home literacy environment was statistically significant related to letter knowledge. Children who were exposed to literacy activities regarding letter
knowledge showed significant growth during this study. It was also determined that the home literacy environment may have an early and potentially lasting influence on reading and language development (p. 413). Martini & Senechal (2012) performed a study that examined the formal literacy component of the home literacy model by documenting the relations among formal literacy at home, parent expectations, child interest in literacy, and young children’s early literacy acquisition. There were 108 children who took part in this study. The findings suggested that parents who reported teaching about literacy had higher expectations regarding their child’s knowledge about the alphabet, word reading, and printing. Moreover, parents who reported teaching had children who showed more interest in learning about literacy. Children who received teaching at home showed a greater knowledge about the alphabet and interest in literacy than the students who did not receive that teaching at home. In contrast, some parents may feel strongly that it is their role to actively encourage and foster their children’s emerging literacy skills, whereas other parents may not hold those same beliefs (Weigel, Martin, & Bennett, 2006). Parent beliefs are manifested in the environments parents provide, their parenting practices and behaviors they engage in, and the nature of the interactions they have with their children.

Creating a better understanding of parents’ beliefs is particularly important because of the presumption that exposing children to a home environment rich in literacy opportunities is beneficial to young children’s literacy and language development (p. 192). Many parents have beliefs about how children should be taught to read. One dimension, labeled graphophonemic, is when parents rated phonics, sounding out words, and using books with structured vocabulary and familiar spelling patterns as most important. The second dimension, labeled constructivist, is when parents believed the best way to teach reading was to have readers rely on their general knowledge of the world, the language, picture clues, and the context of the text (Weigel, Martin,
Parents who teach their children how to read should make it an entertainment source. Children’s interest would be captured and they would be engaged in playing activities and learning the entire time. Weigel, Martin, & Bennett (2006) performed a study that investigated: (1) the nature of parents’ beliefs about children’s literacy development; (2) how parental beliefs are associated with other aspects of the home literacy environment; and (3) how parental beliefs are associated with children’s literacy development. Participants in this study consisted of 79 mothers and their children. Measures of this study consisted of parental literacy beliefs, home literacy environment, and children’s emergent literacy. Results for parental literacy beliefs were broken into two groups: facilitative and conventional. Fifty-three mothers fell in the facilitative parental literacy beliefs group. They believed that taking an active role in teaching children at home would provide opportunities for their children to do better in school. They also believed that reading books with children affords children many opportunities to learn vocabulary, knowledge, and morals, as well as communication and life skills. Twenty-six mothers in the conventional groups believed that pre-kindergarteners are too young to learn about reading, and that teaching children is within the purview of schools rather than parents. Consequently, they were less likely to believe that it is their role to teach children at home. Children of facilitative mothers observe literacy as a normal part of everyday life. Their mothers read to them and engage in language activities such as drawing pictures, singing songs, telling stories, and playing games. Conventional mothers spent less time reading books to their children and were less likely to play games, draw pictures, or sing songs. Children whose mothers were in the facilitative group showed greater interest in reading books and had greater print knowledge than those children whose mothers held conventional beliefs (Weigel, Martin, & Bennett, 2006). It appears that parents literacy beliefs are not only related to the literacy environments found in
the home but to also children’s emerging print knowledge and interest in reading. Having a belief in the importance of parents as educators of their pre-kindergarten children is only one part of engaging in a variety of other literacy practices which can lead to positive literacy outcomes for young children (Weigel, Martin, & Bennett, 2006). It is important for parents to understand that they are their child’s teacher and that learning never stops when a child walks out of school. Parents of children who are pre-kindergarten age need to engage their child in reading and instill a love of reading and learning into their child. Neumann, Hood, and Neumann (2009) suggest that a quality parent-child relationship predicted future literacy outcomes. During literacy experiences, the parent must be patient, attentive, and nurturing towards the child as well as capture their attention. When mothers do not provide adequate emotional support during a literacy activity, the child is less likely to become engaged in the reading. This emotional support creates a “learning climate” in the home where the child can readily acquire the language skills and behaviors needed to be ready for formal schooling.

Much research has demonstrated that parental belief’s and the home literacy environment serves as an important influence in the development of emergent literacy skills in young children. Weigel, Martin, & Bennett (2006) identified three key aspects of the home literacy environment. The first aspect is the demographic characteristics of parents, which help set the parameters within which literacy and language occurs. Social demographic variables, such as parents’ level of education and school experience, household income, and parents’ literacy levels have been correlated with children’s literacy and language development. The second key aspect is the parental literacy habits that expose children to models of literacy. Parents’ own reading behaviors, such as personal enjoyment of reading and time spend reading; have been related to positive reading outcomes for children. The third key aspect of the home literacy environment is
parents’ efforts that directly engage children in activities designed to foster literacy development, such as shared book reading and language activities. Such activities provide direct experience and opportunities for young children to develop literacy and language skills. In homes that value literacy and education, parents create a culture of literacy with their behaviors and beliefs. When parents believed literacy to be an important aspect of their child’s development, they tended to spend more time at home working with their child or reading with their child for pleasure. Roberts, Jurgens, Burchinal (2005) linked maternal sensitivity to children’s level of receptive vocabulary at age three and kindergarten entry. He states,

A sensitive, responsive, and supportive style by mothers during book reading and other literacy related activities is thought to support positive mother-child interactions, provide a child with the encouragement and motivate to participate in literacy-related interactions, and support language and cognitive development.

(p.347).

A study by Boudreau (2005) evaluated the use of a parent questionnaire in the assessment of emergent and early literacy skills of pre-kindergarten children. Participants for this study consisted of 40 pre-kindergarten age children with had been identified as with language impairment and a group of typically developing peers. Results showed that through the use of a parent questionnaire, families of the typically developing children reported that they began to read to their child at an earlier age than did families of children with language impairments (pg. 41). Understanding home experiences and parents’ perspectives on literacy are important prerequisites to building connections between home and school, especially when the cultures of home and school are dissimilar (Metsala, 1996). Child care plays important roles both in facilitating parental employment and as an influence on children’s early growth and
development. Some children begin nonparental care at very early ages, generally because of parental demands to return to work soon after a child’s birth (Fram, Kim, Sinha, 2011). Center-based child care settings tend to have more educationally oriented and child-care activities and are associated with the greatest cognitive gains among pre-kindergarten aged children (p.481).

In general, through analyzing various research papers, a child’s literacy development relies heavily on their home literacy environment and parental beliefs regarding their literacy education. Socio-economic status plays a major role in emergent literacy for the fact that students need to be exposed to meaningful texts and rich literacy experiences for them to become exposed to print and gain alphabet knowledge. Children who live in low socioeconomic literacy environments are at a disadvantage when they enter a pre-kindergarten program. They are just experiencing print in books while some of their peers are well on their way to reading the print in the book. All of this literature suggests that not all home literacy experiences affect children’s early literacy skills and motivation in the same way. Each child’s home literacy environment and the literacy experiences they share with their family are unique and affect their development in a unique way. In the current study, a pre-kindergarten classroom was examined to determine how their home literacy environment affected their child’s early literacy skills in pre-kindergarten.

**Method**

**Context**

Research for this study was conducted at a progressive day care center in a small rural community located in western New York. This child care center offers a range of child care for children six weeks through 12 years of age. The New York State District Report Card for the 2010-2011 school year indicated that a total of 2,451 students were enrolled within the district,
from Pre-Kindergarten through 12th grade. The student population in the 2010-2011 school year made up of 96% Caucasian, 1% Asian, 1% Hispanic or Latino, and 2% African American. Of this population, 16% of students were eligible for free or reduced lunch. Research for this study occurred in a child care center who is affiliated with the school district and its Universal Pre-kindergarten program. The classroom where the research was conducted consisted of 12 pre-kindergarten children, one teacher, and a classroom aide. Of these 12 children, five are female and seven are male. Children ages range from three years old to five years old.

Participants

The participants for this study included 2 out of the 12 students which comprise the before mentioned pre-kindergarten classroom. One participant is female, age four, and the second participant is male, age four. Both participants mother’s returned a questionnaire to be participants in this action research as well.

Nate (a pseudonym) is a four year old Caucasian male. He enjoys playing with his friends in the classroom and his brother at home. Nate currently lives with his mother, father, and eighteen month old brother. Nate was diagnosed with a Speech and Language Impairment in preschool. He has an IEP and is currently receiving speech services. Significant delays in his speech and language affect his rate of progress on age-expected activities. Despite a relatively positive attitude towards school, Nate’s motivation and ability to independently work attentively on any task is a daily struggle. He frequently shuts down when asked to complete an academic task that is new or challenging to him. Frequent incentives are required to motivate Nate when completing any academic task.

Connie (a pseudonym) is a four year old Caucasian female. She enjoys going to college with her mother on the weekends and learning about the world around her. Connie currently lives
with her mother and father. Connie has an IEP and receives services for speech but is currently being evaluated for declassification as she no longer needs speech services. Connie is a very motivated student and is able to master and generalize skills across various contexts. Occasionally, Connie struggles with school related behaviors such as raising her hand, taking turns, and sharing with her peers. Her mother and father are very involved in Connie’s educational progress and require daily updates.

Dat (a pseudonym) is a Caucasian female who is currently a stay at home mom. She enjoys listening to music and cooking. She enjoys coming in to the pre-kindergarten classroom and reading to the students.

Kat (a pseudonym) is a Caucasian female who is a teacher. She is very involved in her daughter’s educational career and progress in pre-kindergarten. She requires daily updates on her daughter’s progress in pre-kindergarten.

**Researcher Stance**

I am currently a graduate student at St. John Fisher College working towards a Master’s degree in Literacy Education, Birth-6th grade. I have a Bachelor’s degree in Childhood Education and am also certified in Early Childhood Education and Special Education. As a researcher in this study, I acted as an active participant observer, meaning that I actively engaged in teaching while simultaneously observing the outcomes of the study (Mills, 2011). Being an active participant allows opportunities for me to work as a “teacher’s aide,” while at the same time allowing me to withdraw, stand back, and watch what is happening during a particular teaching episode, moving in and out of the role of teacher, aide, and observer. In acting as an active participant observer, I will be able to remain “actively engaged in teaching” while monitoring and observing “the outcomes of teaching” (Mills, 2011, p. 75). Being an active
participant observer, I will be able to adjust my instruction based on my students’ needs as I see occurring throughout my research. As an observer as well as their teacher, I am able to observe and record their habits to determine if they are having an off day or if they simply do not participate in reading every day.

**Method**

During this study, I will collect qualitative data to examine the effects of the home literacy environment on a struggling reader and an emergent reader’s readiness for pre-kindergarten program. I will observe the participants of my student reading books during class time. I will note what occurs when/if they pick up a book and look at it. What do they look at? Do they hold the book the correct way? Do they read the book to themselves or do they read to their friends? These observations are done with field notes for three consecutive days. These observations will last however long the participant is reading the book. I will note if the students are reading these books in a one-on-one situation, small group, or large group with four or more students participating.

I will also use a questionnaire (Appendix A) for each student and each parent (Appendix B). The questionnaire will give me more information about their home literacy environment and feelings toward reading. One parent from each household will be asked to fill out one questionnaire and this questionnaire will have 15 questions. The student questionnaire will be filled about by the teacher during class time and will consist of 10 questions.

The last research tool I will use is artifacts. I will include test results from the Bracken School Readiness Assessment (Appendix C). This assessment will be completed before data collection to see what level students are performing entering pre-kindergarten. I will also include progress reports of those students.
Quality and Credibility of Research

In completing any action research, it is essential to evaluate and ensure the study’s quality and credibility. In order to do so, Mills (2011) has stated an argument from Guba’s article “Criteria for Assessing the Trustworthiness of Naturalistic Inquiries (1981)” that trustworthiness of qualitative inquiry requires four essential components: credibility, transferability, dependability, and confirmability. All four of these components have been thoroughly examined and put into place within the current research to ensure its trustworthiness.

Mills (2011) defines credibility of a study to the “researcher’s ability to take into account the complexities that present themselves in a study and to deal with patterns that are not easily explained” (p.104). To ensure credibility throughout this research, I practiced triangulation. Triangulation, defined by Mills (2011), is a “variety of data sources and different methods used to compare with one another to cross-check data” (p. 105). I used triangulation with this study through the collection and use of experiential, enquiry, and examination data. Actively observing students during free time reading with the use of descriptive field notes, collection of completed questionnaires from students and parents, and collection of artifacts were implemented throughout this study.

In addition to credibility, I also ensured transferability within my research. Mills (2011) defines transferability as “qualitative researchers’ beliefs that everything they study is context bound and that the goal of their work is not to develop “truth” statements that can be generalized to larger groups of people” (p. 104). In order to ensure transferability in this study, I collected detailed descriptive data which allowed me to compare my data to other contexts.

Dependability is another component of ensuring a valid and trustworthy study which has also been considered for this research. Mills (2011) states that dependability of action research
refers to the “stability of the data” (p. 104). To ensure dependability, I used overlapping data collection methods through the practice of triangulation. As previously stated, I used observations, student and parent questionnaires, and collection of artifacts throughout the course of this study.

Lastly, the final component of ensuring a valid and trustworthy study is confirmability. Mills (2011) defines confirmability as the “neutrality or objectivity of the data that has been collected” (p. 105). The triangulation process present throughout my study helped to ensure the component of confirmability. I practiced reflexivity by writing down reflections throughout the course of my data collection. In doing so, I was able to “reveal underlying assumptions or biases that course the researcher to formulate a set of questions in a particular way and present findings in a particular way” (p. 105). Throughout this process of meeting the criteria of the four components, I believe that the data collected throughout this qualitative study is trustworthy, and gives insight into the home literacy environment and its impact on a pre-kindergarten program.

Informed Consent and Protecting the Right of the Participants

Before beginning my research, I needed to ask for permission from the parents of all students who were going to be involved in the study. I provided each parent with a permission form that explained the purpose of the study and asked for their permission and signature to perform research. Because I am using parents as part of my study, I also provided each parent with an informed consent form that explained the purpose of the study and asked for their signature to perform research. I also needed to receive verbal assent from each student following the return of the parental consent. I explained to each student the purpose of the study as well as what I would be asking them to do. Both parents and students were notified that the names of the
participants would be changed to pseudonyms and that any names on artifacts would be removed to protect identities and ensure anonymity.

**Data Collection**

As mentioned previously, there were various forms of data that were collected to fulfill the purpose of triangulation. One form of data collection that was used was that of detailed field notes on each session of study. I actively observed the students during free time to see if Nate and Connie picked up a book and read it. I also observed what a student looks for when they picked up the book, if they paid attention to the print, and if they correctly held the book. Lastly, I observed if the students read the book to themselves or if they read to a friend.

I also collected questionnaires from Nate and Connie as well as their parents. The students were asked 10 questions regarding at their home environment as well as school. I wrote down the student’s answers to the questions as they were given to me. I also sent home a parent questionnaire for one parent of each household to complete and return to me.

I also collected an artifact from Nate and Connie. This artifact included test results that were administered October 4, 2012 to determine where the students were performing at the beginning of the pre-kindergarten program.

**Data Analysis**

After all forms of data were collected, I reflected back on each piece and analyzed what I observed. For examples, after the students selected books based on their interests, I thoroughly examined my field notes and later compared them to the student and parent questionnaires that I conducted. I wanted to make sure what each student said in their questionnaire matched with what I saw in my observations and then was reflected in their test scores. After I conducted all of
my field notes, I went back to make sure I included everything I observed during that period of time. When analyzing all of my data, I made sure to first read through each piece and then the second, third, fourth, and fifth times I was analyzing each form. When analyzing each student and parent questionnaire, I went through and looked for commonalities between each form. After common characteristics were found is when I was then able to identify my themes. The information that I received from the students and parents were organized in a case study format while reinforcing the major themes presented above. I chose to only analyze two participants; Nate and Connie, as they are the two participants that showed distinct differences.

Findings and Discussion

The results of this action research were very similar with the various sources that were used in the literature review. I collected data from ten student participants and eight adult participants. I analyzed all of the data into codes and themes and observed a difference between participants Connie and Nate. After further analyzing the data, I decided to focus on Connie and Nate and create case studies of them as readers. My data is represented throughout this research paper and is based off of three recurring themes: students’ perceptions and attitudes about reading, parental involvement and attitudes in the home literacy environment, and the classroom reading experience. These themes became apparent while analyzing my field notes, parent and student questionnaires, and student’s test scores.

Students’ Perceptions and Attitudes about Reading

Connie is an academically strong student who exhibits a positive attitude towards reading. She comes from an environment rich in literacy and is due in part of her parent’s attitude and belief’s toward reading. Connie is a very enthusiastic student and loves to learn new things. She loves to read to her peers and enjoys every aspect of learning (Field notes, 10/22/12).
Connie displays all the features of an emergent reader. On day one, she was observed picking up a children’s book and reading to three friends. As she was reading, she was using picture clues to guide her story. Connie was drawing her friend’s attention to the story by using her index finger pointing out the important elements of the picture on each page of the story. Upon finishing her story, she proceeded to ask the three friends questions about the story she just read. She asked the students to retell the story as well as pointing out the main characters in the story (Field notes, 10/22/12). During the student questionnaire, Connie was asked if she liked to read/look at books and she replied “yes, i learn new things” (Student Questionnaire, 2012). Connie’s response shows that she understands that books have meaning and the purpose of a book is to learn. Bradley and Jones (2007), agrees by explaining that a child must first develop a realization that a book is for reading and that pictures in a book are representing a meaning before they learn how to read.

During the parent questionnaire, Connie’s parent answered the question about activities they engage their child in and circled shared book reading (Parent Questionnaire, 2012). A key component of the home literacy environment that helps lead a child to an understanding of print is the parent/child social interaction of reading a storybook. Parents who engage in many literacy activities with their children develop positive attitudes towards reading (Bradley & Jones, 2007). When reading storybooks to children, parents comment much more frequently on the content of the story than on print concepts (Davidse, Jong, Bus, Huijbregts, & Swabb, 2010). While reading to her friends, Connie used picture clues to guide her reading of the story as she is unable to read many words at this present moment (Field notes, 10/22/10). She used shared book reading while she was reading to her friends as she pointed out important facts in the book through the use of
picture clues and asked the students to retell the book after she finished reading. It is apparent that Connie is experiencing shared book reading in her home literacy environment.

Nate is a student who exhibits a positive attitude towards reading in the sense of a listener. Nate is a great listener and enjoys listening to his teacher and parents read to him on a daily basis (Student Questionnaire, 2012). Nate states “I don’t know how to read but I like to look at books” (Student Questionnaire, 2012). Nate does not know how to read but however he states that he enjoys looking at books. While observing Nate during class time, it appeared that he did not enjoy looking at books as he didn’t pay attention to the book and instead flipped through the pages and looked around the classroom (Field notes, 2012). His favorite part of a book is “looking at pictures because they are fun to look at” (Student Questionnaire, 2012). While observing Nate looking at a book during class time, Nate was flipping through the pages and not paying attention to the pictures or print on the page. Nate shows the signs of a struggling reader as he hasn’t mastered the concept of a book. He hasn’t learned that a book is more than looking at pictures because they are fun to look at. When asked if he thinks reading is important, Nate replied “Yes, because if you don’t listen to a book, you don’t understand” (Student Questionnaire, 2012). Nate may have a strong enjoyment to listening to an adult read a book as he is not very confident in reading. On day one of observation, Nate was observed grabbing a children’s book, chapter book, and a wordless picture book at the same time. He flipped through the pages of each book and did not pay attention to the book. He looked around the room and talked to his friends. Nate showed no attention to print or pictures and was not interested in the books he chose (Field notes, 2012). The early lack of interest in books and shared reading appears to be characteristic of many children with later reading disabilities and could also be linked to deficiencies in their language skills (Laakso, Poikkeus, Eklund, & Lyytinen, 2004). On
the assessment administered to Nate, it was apparent that Nate struggles with letter recognition. He scored a 3/15 or 20% on that section (Bracken School Readiness Assessment, 2012). Nate’s struggling with letter recognition could be why he does not enjoy looking at books as he is struggling to master his knowledge of letters and becomes overwhelmed with all the words and letters on the page. When learning how to read, children must first have strong letter knowledge before they can start learning the sounds those letters make and eventually putting the letter sounds together to form words (Roberts, Jurgens, & Burchinal, 2005). During the parent questionnaire, Nate’s parent answered that she reads to him every night (Parent Questionnaire, 2012). However, she did not circle that she does shared book reading with him (Parent Questionnaire, 2012). Children from homes that do not value shared book reading are lacking the understanding for the purpose of books. These children who don’t experience shared storybook reading do not understanding that books have a purpose. The parental role model is especially important in motivating students and influencing attitudes toward reading (Laakso, Poikkeus, Eklund, & Lyytinen, 2004).

Connie finds enjoyment in books. She enjoys looking at them and how they are organized. Nate enjoys listening to a teacher read to him and is able to comprehend the elements of the story (Field notes, 2012). Nate does not enjoy listening to another student read a story to him (Field notes, 2012). Nate’s dissatisfaction of listening to another student read a story aloud may occur because he is embarrassed that he is unable to read a book and interpret the pictures like his friends. On the assessment, Connie scored a 22/22 or 100% on the sizes/comparisons section of the Bracken School Readiness Assessment. This section of the assessment tests a student’s vocabulary knowledge. Nate scored a 13/22 or 59% on this section. Cunningham (2009) states that parents who read and write regularly may have larger vocabularies and
children who see their parents reading are more apt to engage their parents in conversations about the materials by asking questions and acquiring richer vocabulary from these interactions. Connie’s mother answered that Connie sees her reading for pleasure every other day and Nate’s mother answered that he see her reading for pleasure almost never (Parent Questionnaire, 2012). Nate’s lack of observing his mother reading for pleasure may be why Nate does not enjoy reading and would rather listen to a book. Connie, on the other hand, sees her mother reading for pleasure every other day and therefore finds enjoyment in reading a storybook to herself as well as her friends (Field notes, 2012). Children who do not see their parents enjoy reading will lack that enjoyment as well. Nate’s mother indicated on the parent questionnaire that she started reading to Nate when he was one year old while Connie’s mother indicated that she started reading to Connie day one as she brought books to the hospital with her (Parent Questionnaire, 2012).

**Parental Involvement and Attitudes in the Home Literacy Environment**

Parental involvement begins in infancy in the home, as all children have different initial exposures to what they come to school knowing. A parent’s role very early in a child’s academic career is to provide ample opportunities for authentic learning experiences. According to the parent questionnaires, both parents stated they engage their children in many authentic learning experiences (Parent Questionnaire, 2012). Some common experiences include letter writing, puzzles, zoo, museum, park, singing songs, playing and watching sports, board and computer games, drawing, and coloring (Parent Questionnaire, 2012). By creating these literacy experiences early in a child’s academic career, they are showing their support and interest in the child’s academics (Larson and Marsh, 2005). Both parents also indicated that they visit the library with their child two times a month (Parent Questionnaire, 2012). Visiting the library two
times a month may show both parent’s value reading and providing their children with the utmost authentic literacy experience available.

Connie’s mother, Kat (a pseudonym), indicated that she likes to reading by circling a five on the parent questionnaire. She reads two hours a week and prefers to read fiction, magazines, and emails. She is seen reading for pleasure every other day by Connie (Parent Questionnaire, 2012). Connie displays a reading for pleasure in the classroom and she shares it with her friends by gather them and reading books to them during class time (Field notes, 2012). She uses the pictures to make up her story while she is reading and asks her friends questions about the story when she is done reading to them (Field notes, 2012). Kat also indicated on the parent questionnaire that she reads to Connie every night and that she has over 287 books. It appears Connie has a home literacy environment very rich in literacy and her enjoyment for books comes from watching her mother reading for pleasure every other day and being read to every night (Parent Questionnaire, 2012). As indicated on the parent questionnaire, Kat indicated that she started reading to Connie on day one and even brought books to the hospital to read to her. From day one, Kat was reading to Connie and was therefore stimulating an interest in sounds and helping Connie to develop listening skills (Kirby & Hogan, 2008). According to Kirby and Hogan (2008), reading helps to build a child’s vocabulary, stimulates their imagination, and improves their communication skills. Experiencing this early stimulation of Connie’s imagination, she therefore uses picture clues to help guide her to tell the story before she has even learned to read the words on the page (Field notes, 2012). Kat also indicated on the parent questionnaire that she engaged in Connie in shared book reading. Kat teaches the names of the letters in the alphabet and sounds while she is reading to Connie (Parent Questionnaire, 2012). According to LaCour, McDonald, and Tissington (2010), shared book reading is an interactive
way of reading books aloud with children that gives them a chance to be active participants in
the reading session, thus providing a meaningful experience that stimulates learning. Connie has
experienced shared book reading in the home literacy environment and therefore displays it in
the classroom by reading to her friends (Field notes, 2012). Kat also indicated that she teaches
the names and sounds of the letters of the alphabet to Connie (Parent Questionnaire, 2012).
Connie scored a 15/15 or 100% on the assessment in the section of letters (Bracken School
Readiness Assessment, 2012). Connie also names the letters of the alphabet several times a day
and writes and spells words on a daily basis (Parent Questionnaire, 2012). Weigel and Martein
(2005) state that when parents or other adults read books with young children, when parents
value literacy, and when a home literacy environment is rich in literacy and language activities
and materials, and when the overall home environment is supportive, then children’s emergent
literacy abilities are greater as are their motivations to read.

Nate’s mother, Dat (a pseudonym), indicated that she likes to read by circling a 5 on the
parent questionnaire. She reads three hours a week and prefers to read fiction/non-fiction,
magazines, newspapers, and emails. She however, is almost never seen reading for pleasure by
Nate (Parent Questionnaire, 2012). It appears that Nate does not enjoy reading or looking at
books because he does not observe his mother doing that at home (Field notes, 2012). He is
lacking the meaning of a book and his home literacy environment is teaching him that books are
not important because he is not experiencing anyone at home reading for pleasure. Dat indicated
that she reads to her son every night and that he has too many books to count (Parent
Questionnaire, 2012). It appears Nate has a home literacy environment rich in books and is read
to every night but is lacking the experience of seeing his mother read for pleasure to instill the
love of reading into him. As indicated on the parent questionnaire, Nate’s mother wrote that she
started reading to Nate when he was one years old. Therefore, Nate did not experience a home literacy environment until he was one year old. Research shows that reading to your child helps build their vocabulary, stimulates their imagination, and improves their communication skills (Kirby & Hogan, 2008). Kirby and Hogan (2008) also state that reading to your child also introduces them to the concepts of stories, numbers, letters, colors, and shapes, and gives them the information about the world around them. Nate might not find pleasure in reading a book because he was lacking all those experiences as a young child. He was not introduced the letters, shapes, colors, and numbers until a later age and therefore he could feel pressured to keep up with his peers who were exposed to their numbers, shapes, colors, and letters at an early age (Field notes, 2012). Dat also indicated on the parent questionnaire that Nate on occasion writes letters of the alphabet and writes his letters daily. I find this information interesting as Nate scored a 3/15 or 20% on the assessment in the letters section (Bracken School Readiness Assessment, 2012). He is unable to write or identify letters in the classroom setting and shuts down when I ask him to recite the alphabet verbally (Field notes, 2012). According to Nord, Lennon, Liu, and Chandler (2000), children who are read to at least three times a week were more likely to know the alphabet, read or pretend to read, and write their own names compares to their peers that aren’t read to. Also indicated on the parent questionnaire, Dat did not circle shared book reading as an authentic literacy experience that she engages Nate in. However, Dat indicated that she attempts to teach the names of the letters in the alphabet and sounds when reading (Parent Questionnaire, 2012). During shared book reading, children are learning to track print from left to right, enjoy and participate in reading, build a sense of the story, expand their vocabulary, learn letters and sounds, attend to concepts of print, and focus on the elements of the story. Dat also indicated on the parent questionnaire that Nate asks questions about the characters
and/or events during story reading. Dat’s answer on the parent questionnaire could indicate that she was unaware that everything she does while reading to Nate is included under the title shared book reading and she was unsure of what that meant and therefore didn’t circle that selection under activities that she engaged her child in. Nate, however, does not ask questions regarding the story elements during shared book reading or read aloud time during class (Field notes, 2012). Nate has never been observed naming the letters of the alphabet, writing the letters, or asking a teacher how to spell words (Field notes, 2012). Nate’s lack of interest in naming or writing his letters in the classroom could occur because Nate is shy and doesn’t want to be wrong and could possibly be worried he will be laughed at or picked on by his friends.

Kat and Dat are both great parents who engage their children in authentic literacy activities (Parent Questionnaire, 2012). Connie and Nate are both great children who love learning and being read to. Connie has been exposed to her mother reading books for pleasure and therefore finds pleasure in reading books to her friends and independently (Field notes, 2012). Nate almost never sees his mother reading for pleasure and therefore is lacking the meaning of a book and does not enjoy looking at them. He does not enjoy looking at pictures or print in a book and this may come from the lack of experience seeing his mother at home not reading for pleasure (Field notes, 2012). Connie, an emergent reader, has mastered her alphabet and Nate, the struggling reader, has yet to recognize the letters of the alphabet (Bracken School Readiness Assessment, 2012). Nate may be a struggling reader because he becomes overwhelmed by all of the print of the page and therefore does not like to look at books.

The Classroom Reading Experience

Involvement with reading activities at home has significant positive influences not only on reading achievement, language comprehension and expressive language skills, but also on
pupils’ interest in reading, attitudes towards reading, and attentiveness in the classroom (Baker & Scher, 2002). Children who see their parents reading for pleasure will therefore read for pleasure themselves. Children will also have a positive outlook on reading when they have parents that value education and have a reading experience with their parents, such as shared book reading and witnessing parents read.

Connie is a four year old student who recently scored a classification score of very advanced and an age equivalent on the assessment of greater than six years eleven months old (Bracken School Readiness Assessment, 2012). She excelled in every section of the assessment and only missed two questions on the entire assessment (Bracken School Readiness Assessment, 2012). Connie has a great relationship with her friends and they enjoy listening to Connie read to them. She uses the strategies I teach to the students when I am reading and incorporates them when she is reading to her friends. Connie displays pre-reading strategies such as picture walks, using letter sounds to make words, and using pictures to reinforce what is occurring in the book (Field notes, 2012). All of these strategies are taught at home through the house of shared book reading, Kat reading to her every night, as well as listening to me read aloud to her every day (Field notes, 2012). Connie is showing signs of an emergent reader as she can identify signs and labels, shows the ability to read (retell a story in her own words), and can name all the letters of the alphabet and identify the sounds all the letters of the alphabet make (Field notes, 2012). Connie is currently writing two and three letter words as well as reading Guided Reading Level C books (Field notes, 2012). She is able to comprehend important details from the stories she reads and is able to accurately retell the story (Field notes, 2012). Connie has also mastered some of the Dolch pre-primer sight words (Field notes, 2012). She enjoys helping her friends by being
their cheerleader cheering them on to learn their letters and sounds of the alphabet (Field notes, 2012).

Nate is a four year old student who recently scored a classification score of average and an age equivalent on the assessment of four years one month (Bracken School Readiness Assessment, 2012). It is important to note that Nate’s score of average was one point above delayed on the assessment score sheet (Bracken School Readiness Assessment, 2012). Nate is currently struggling as a reader in pre-kindergarten (Field notes, 2012). He seems to be not enjoying looking at books and it appears that he finds no pleasure in reading a book (Field notes, 2012). He does, however, enjoy listening to the teacher read to him. He likes to listen to all kinds of stories and is able to retell the story and answer simple comprehension questions about the stories (Field notes, 2012). He is struggling learning his letters of the alphabet and therefore I believe this is causing him to become overwhelmed when looking at a book (Field notes, 2012). However, I have observed that Nate does not enjoy looking at picture books without any words (Field notes, 2012). He just flips through the pages of the book without even looking down at the pictures and acknowledging them (Field notes, 2012). Nate does have an IEP and is currently receiving services for speech. It is important to note that significant delays in his speech affect his rate of progress on age-expected activities. However, Nate’s motivation to work attentively on any task is a daily struggle and shuts down when asked to complete any academic task that is new and challenging to him (Field notes, 2012). Nate is present signs that he has no interest in wanting to learn how to read (Field notes, 2012). When learning how to read, children must first have strong letter knowledge before they can start learning the sounds those letters make and eventually putting the letter sounds together to form words (Roberts, Jurgens, & Burchinal,
2005). Nate does not experience shared book reading so he is therefore lacking the experience of his parent pointing out the different aspects of print while she is reading to him.

Connie and Nate both come from home literacy environments that involve rich literacy experiences that make them excel in the pre-kindergarten program. Bradley and Jones (2007) state that knowledge of the alphabet at entry into Kindergarten is one of the strongest predictors of short and long-term literacy success later on in the students educational career. As a teacher, I provide Nate with daily direct letter and letter sounds instruction and Connie with sight word recognition as well as teaching her different reading strategies. The interpretation of the data and research I have collected has affected my thinking and philosophy in how a classroom and home environment connection must work to make the most successful environment for the student.

**Implications**

Based on the understanding of this data, it is critical that parents are providing their children with literacy experiences that will enhance their skills before entering pre-kindergarten. Students that engage in these activities tend to be more successful than those students that are not exposed to real-life experiences that enhance literacy learning. These experiences are linked to the sociocultural theory in that nearly all children grow up experiencing many kinds of language in their home communities, especially instrumental and social language, but some children have far fewer experiences than other children with academic forms of spoken and written language like those that will experience in school (McGee, 2008).

Through the assessment and observation of two pre-kindergarten children with varying abilities, it has been found that the home literacy environment has an impact on a struggling reader and an emergent reader’s readiness for a pre-kindergarten program. Students whose parents reported that they read to their children every night had children who choose to read
books during free time instead of playing with toys. Children who choose to read books observe their parents on a daily basis reading and are being read to every night before bed. Students see their parents reading and come to know that reading is an enjoyable task and will do better in all facets of formal education. The findings of my research suggest several implications for myself as a teacher, as well as for other educators.

As a teacher, it is critical that I create a school to home and a home to school network where there is support provided in both settings in order to provide all students with the support and attention they need to be successful in pre-kindergarten. I have to provide my students with the strategies they need to be successful in their literacy learning and provide them much support because they may not have the support needed at home. I also need to provide parents with the support and understanding that they need to feel confident in the school and in helping their child be successful literacy learners regardless of their lack of resources.

My data is consistent with my findings from the literature review in that the home literacy environment impacts an emergent reader’s readiness for a pre-kindergarten program. Nord, Lennon, Liu, and Chandler (2000) discuss that children who are read to at least three times a week were more likely to know the alphabet, read or pretend to read, and write their own name. Connie sees her mother read two plus hours a week and is read to every night. Connie and Nate’s home literacy environment consists of over 200 books and monthly trips to the library, and daily arts/crafts. Connie experiences shared book reading in her home literacy environment. Shared book reading is the home, as a form of social interaction between the parent and child, is crucial for adequate emergent literacy development. Martini and Senechal (2012) discuss shared book reading as it allows the parents and the child to have extended conversations and in many instances, increases the child’s vocabulary bank as the parent uses vocabulary words the student
hasn’t heard before. All of this research supports my research study of ten pre-kindergarten students that have varying literacy experiences in and out of school. Connie is a very successful student and receives support frequently from her parents. Both Nate and Connie’s parents consistently take them to the library, which provides time for Connie and Nate to engage in a rich literature environment and the opportunity to bring the literature home to continue the experience.

One implication of my research is the insight into students home literacy environment. It is imperative for an educator to know the students home life to get the full picture of the student. There is great importance of bridging the gap between home and school as a necessary means of understating students and support their learning. A child does not stop learning once they leave the classroom. There must be a home and school connection in order for a child to succeed in academics. A child who is lacking books at home will not go home and read every night. Providing a student with a bag of books for the parents to read to them will simply improve that students home literacy environment. Some families are financially unable to go to places so having mini classroom field trip will increase the students out of school literacy opportunities. Allow parents to come in and observe the teacher reading books to the students. The parents can see how they pay attention to print and focus on letters and pictures present within the book. When reading to a child, a parent might point out words or letters in the story to the child and the child picks up that letters makes words and words make up the story that they are hearing. While reading, parents are demonstrating reading strategies that the children will use and master later in their literacy development. Children who are from home environments rich in literacy that encounter storybook reading and come to a pre-kindergarten program with advanced letter knowledge and book knowledge. Teachers must read to their students every day. Children who
do not experience story book reading do not understand that books have a purpose. The early lack of interest in books and shared reading that appears to be characteristic of many children with later reading disabilities could be also linked to deficiencies in their language skills (Laakso, Poikkeus, Eklund, & Lyytinen, 2004).

A second implication would be to have parents frequently visit the classroom. Make them feel like they are learning right along with their children. Parents are widely recognized as children’s first teachers, providing cognitive and affective input that helps children build literacy-related skills (Hindman & Morrison, 2012). Parents who are unsure of what they should be doing with their children to help them excel in a pre-kindergarten program should spend time in their child’s classroom to observe what activities the teacher does with the students. Having an open communication with parents is crucial for a student’s success in their educational career. Parents of children who are pre-kindergarten age need to engage their child in reading and instill a love of reading and learning into their child. It is important for parents to understand that they are their child’s teacher and that learning never stops when a child walks out of school.

**Conclusions**

The main question of this study is how the home literacy environment impacts a student’s readiness for a pre-kindergarten program? The importance of the home literacy environment has been recognized for many years, anchored on the notion that the home is generally the setting in which a child first encounters language and literacy, and the setting that provides opportunities to observe, explore, and participate in literacy activities (Bracken & Fischel, 2008). The theoretical framework of this study focused on the sociocultural theory as children develop notions about literacy in the same way they develop significant learning; they discover and invent literacy as they participate actively in a literacy society (Goodman, 2001). My findings and implications
show that students need to be exposed to a home environment rich in literacy as well as literacy rich activities outside of the home to excel in a pre-kindergarten program. Parents who are invested in their child’s pre-kindergarten success incorporate shared storybook reading and read alouds to their children on a daily basis. If these strategies are incorporated and exposed to young children, they will have an opportunity to develop the knowledge they need to become literate individuals.

If I were to do this study over again, there would be a few things that I would like to do differently. First, I would have liked to have more time. I was limited with the time allowed to assess my participants to see a significant difference. I did see significant variation among participants, but I am confident that with more time there would have been an even more significant variation in the children’s literacy skills. If I had more time, I would have researched my student’s home more in depth. I would have liked to visit their homes to see what their home literacy environment actually looks like. Secondly, I would have liked to have more in depth answers by the children on the questionnaires. They answered the questions with one word answers and it would have been intriguing to see how they really felt regarding the questions I was asking them.

After considering all of the implications that my research brings to mind, I have some questions for myself and for other educators. First, what else can I do as a teacher to help my students become more literate individuals? As a teacher, you do not know what is happening at home so it is hard to see consistent results based on your teaching in the classroom. Establishing a relationship with the students as well as their parents will allow a snapshot into their home and gage instruction and goals for that student based on that assessment. Secondly, how do you truly know if parents are willing to help their child succeed? Parent involvement and support is a
major issue when it comes to children’s lack of knowledge upon entering a pre-kindergarten program. Something that I would like to research more in depth is how a parent’s means of obtaining income affects their child’s readiness for a pre-kindergarten program. It would be interesting to examine a family socioeconomic status and if that has any impact on a student’s readiness for pre-kindergarten.

Overall, through my research and data collection, I have found that the more a parent is involved with their children’s academics, the more successful the child will be in a pre-kindergarten program. Parents that have successful children also engage their children in activities outside of school including frequent visits to the library, engaged in shared storybook reading, trips to the zoo and museum, and coloring. These authentic activities show the parental dedication to their children’s learning. Parents who provide children with engaging and authentic experiences in their primary discourse, they are also setting up their children for success in their secondary discourse, school.
References


Appendix A

Capstone Student Questionnaire

Name (pseudonym) _____________________________________________

1. Does your mom/dad read to you? Yes No

2. Do you get to pick out the book you want them to read to you or do they pick it out?

3. What would you rather do, listen to mom/dad read you a book or watch TV?

4. What is your favorite book?

5. Do you like to read/look at books? Why or why not?

6. What is your favorite part of the book? Why do you pick it up?

7. How many books do you have at home? ____________________________
8. Do you go to the library? How many times have you been?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

9. Do you like when your teacher reads a book to you?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________

10. Do you think reading is important? Why?
______________________________________________________________________________
______________________________________________________________________________
______________________________________________________________________________
Appendix B

Capstone Parent Questionnaire

Name ____________________________________________

1. On a scale of 1-5, how much do you like to read?

😊 1 2 3 4 5 😊

2. How often do you read each week? (Circle one)
   30 minutes  1 hour  2 hours  3 hours  Other _____

3. At what age did you begin to read to your child? _____________

4. What do you prefer to read? (Circle all that apply)
   Fiction  Non-Fiction  Magazines  Newspaper
   Emails  T.V. Guide  Poetry  Comics
   Other ___________________

5. How often does your child see you reading for pleasure?
   Daily  Every other day  Weekly
   Twice a month  Monthly  Almost never

6. How often do you read with your child? (Circle one)
   Every night  2-3 times a week  4-6 times a week

7. Does your child ask you to read to him/her? Yes  No

8. How many books does your child have? _____________

9. Does your child ask questions about characters or events during story reading? Yes  No
10. Do you visit the library with your child: Yes No
   How often: Weekly 2 times a month 1 time a month
   Other ______

11. What other activities do you engaged your child in? (Circle all that apply)

   Letter Writing  Puzzles  Zoo   Museum   Circus   Park
   Singing Songs  Playing sports   Watching sports   Board games
   Computer games  Card games   Drawing   Coloring
   Shared book reading   Other______________

12. Do you attempt to teach the names of the letters in the alphabet and/or alphabet sounds when reading? Yes No

13. Does your child name letters of the alphabet?
   Never/Rarely  On occasion   Weekly   Daily   Several times a day

14. Does your child write letters?
   Never/Rarely  On occasion   Weekly   Daily   Several times a day

15. Does your child ask you how to spell words/items?
   Never/Rarely  On occasion   Weekly   Daily   Several times a day
Appendix C

English Edition Record Form

Name ____________________________ M □ F □
School/Agency ________________________ Grade ______
Teacher ____________________________ Examiner ________________________

Pretest

<table>
<thead>
<tr>
<th>Date of Test</th>
<th>Year</th>
<th>Month</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronological Age</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Posttest

<table>
<thead>
<tr>
<th>Date of Test</th>
<th>Year</th>
<th>Month</th>
<th>Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronological Age</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Score Summary

<table>
<thead>
<tr>
<th>Subtest</th>
<th>Pretest/Posttest</th>
<th>Raw Score (# Correct)</th>
<th>% Mastery*</th>
<th>School Readiness Concepts to Target for Instruction/Remediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Colors</td>
<td>Pre</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Letters</td>
<td>Pre</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Numbers/Counting</td>
<td>Pre</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Sizes/Comparisons</td>
<td>Pre</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Shapes</td>
<td>Pre</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

School Readiness Composite (SRC)

<table>
<thead>
<tr>
<th></th>
<th>Pretest/Posttest</th>
<th>Raw Score (# Correct)</th>
<th>% Mastery*</th>
<th>Norms**</th>
<th>Standard Score</th>
<th>Confidence Interval</th>
<th>Percentile Rank</th>
<th>Descriptive Classification</th>
<th>Concept Age Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>88</td>
<td></td>
<td>N/L</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>88</td>
<td></td>
<td>N/L</td>
<td>to</td>
<td>to</td>
<td>to</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* See Appendix A for percent mastery calculations for each subtest and School Readiness Composite.

** For national norms (N) see Appendix B. Local norms (L) can be established at the discretion of each district/agency (see Appendix B).
### Subtest 1 Colors
Say, Look at all of the colors. Show me which color is...

<table>
<thead>
<tr>
<th>Item</th>
<th>Pretest Response</th>
<th>Score</th>
<th>Pasttest Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>red</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>blue</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>green</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>black</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>yellow</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>pink</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>orange</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>purple</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>white</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>brown</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
</tbody>
</table>

### Subtest 2 Letters
Say, Look at all of the letters. Show me...

<table>
<thead>
<tr>
<th>Item</th>
<th>Pretest Response</th>
<th>Score</th>
<th>Pasttest Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>the A</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>the W</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>the X</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>the S</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>the K</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>the H</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>the Q</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>the D</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>the m</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>the i</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>the b</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>the e</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>the t</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>the j</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>the g</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
</tbody>
</table>

### Subtest 3 Numbers/Counting
Say, Look at all of the numbers/pictures. Show me...

<table>
<thead>
<tr>
<th>Item</th>
<th>Pretest Response</th>
<th>Score</th>
<th>Pasttest Response</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>the one</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>the three</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>the two</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>the four</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>the zero</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>three flowers</td>
<td>1 2 3 4</td>
<td>NR 1 0</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>7.</td>
<td>six ducks</td>
<td>1 2 3 4</td>
<td>NR 1 0</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>8.</td>
<td>nine ants</td>
<td>1 2 3 4</td>
<td>NR 1 0</td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>9.</td>
<td>the five</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>the seven</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>the eight</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>the six</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>the nine</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>the forty-one</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>the eleven</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>the ninety-five</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>the twenty-seven</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>the fifty-three</td>
<td>NR 1 0</td>
<td>NR 1 0</td>
<td></td>
</tr>
</tbody>
</table>
### Subtest 4: Sizes/Comparisons

Say, Look at all of the pictures. Show me...

<table>
<thead>
<tr>
<th>Item</th>
<th>Pretest Response</th>
<th>Score</th>
<th>Posttest Response</th>
<th>Score</th>
</tr>
</thead>
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<td>1. which animal is big</td>
<td>1 2 3 4 NR</td>
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<td>2. which dog is small</td>
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<td>3. which girl has long hair</td>
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<td>4. which ball is little</td>
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<td>5. which animals are not the same</td>
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<td>6. which girl has short pants</td>
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<td>1 2 3 4 NR</td>
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<tr>
<td>7. which shoes match</td>
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<td>8. which fruits are different</td>
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<td>9. which fence is tall</td>
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<tr>
<td>10. which water is deep</td>
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<td>1 2 3 4 NR</td>
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<tr>
<td>11. which rock is large</td>
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<td>12. which balloons are the same</td>
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<td>13. which boats are alike</td>
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<td>14. which boat is wide</td>
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<td>15. which shoe fits exactly</td>
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<td>16. which person is reading something</td>
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<td>17. which animals are similar</td>
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<td>18. which cans are of equal size</td>
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<td>19. which book is thin</td>
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<td>20. which ribbon is narrow</td>
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<td>21. which glasses have unequal amounts of juice</td>
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<td>22. which water is shallow</td>
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### Subtest 5: Shapes

Say, Look at all of the pictures. Show me...

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<thead>
<tr>
<th>Item</th>
<th>Pretest Response</th>
<th>Score</th>
<th>Posttest Response</th>
<th>Score</th>
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<tbody>
<tr>
<td>1. the star</td>
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<tr>
<td>2. the heart</td>
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<td>3. the circle</td>
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<td>4. which children are in a line</td>
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<td>5. the square</td>
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<tr>
<td>6. the triangle</td>
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<td>7. the cone</td>
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<td>1 2 3 4 NR</td>
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<td>8. which one is round</td>
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<td>1 2 3 4 NR</td>
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<td>9. the diamond</td>
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<td>10. the oval</td>
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<td>11. the rectangle</td>
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<td>12. the check mark</td>
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<td>14. the pyramid</td>
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<td>16. the cube</td>
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<td>17. the curve</td>
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<td>20. the angle</td>
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<td>1 2 3 4 NR</td>
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