THE EFFECT OF VISUAL AIDS ON PRESCHOOL CHILDREN'S VOCABULARY AND BUILDING IN THE BLOCK AREA

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Abstract

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Thesis Advisor: _____

This 5-week study examined effects of using visual aids before play time on children's block building and vocabulary. Participants included 15 preschool children (9 boys; 6 girls), aged 3 to 5 years old, attending an urban public school in northern New Jersey. All were from a low socio-economic Hispanic background, mainly of Mexican descent. Spanish was the main language spoken at home for 13 students and English for 2 students.

Storybook lesson plans and community photographs were created introducing the target vocabulary. Pre-intervention and post-intervention observations were recorded using work sample photos, block building stages chart and recall word checklist. Data collection also included observation chart, field notes, and recall word checklist.

Data analysis revealed visual aids motivated children to build different block structures and increased vocabulary. Results also indicated children learned from each other through interactions and shared experiences and looked for adults for support and guidance.

ACKNOWLEDGEMENTS

I would like to dedicate this accomplishment to my daughters _____. Thank you for your patience and understanding. I would like to thank my parents for their support and encouragement. And most important, to my God Whom I give all the praise for His unfailing love and His everyday strength over my life during this journey.

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CHAPTER I

Introduction

Overview

As children grow and develop new interests and abilities, they must be given the tools to develop their play and literacy skills. When children build they value their own block constructions whether or not they represent specific things. As they build they use mental representations. They allow one object to stand for another and/or they use concrete materials to make a representation of an object he/she imagined. Since block play is open-ended, its possibilities have no limit. Some children do not have a specific image to realize, but as he/she manipulates the blocks, its openness could give way to different creations. However, these creations are only limited to the images they have at hand. When the child does not have a previously conceived idea or concept, it makes it difficult to explore and discover the world around them.

Almost every preschool classroom has a block play area. Blocks are a staple in many preschool classrooms because the block play area is believed to support children's development and learning. Block play provides many opportunities for children to develop and learn in physical, social, emotional and the cognitive areas (Hirsch, 1994). When children play with blocks, they interact with their peers and use their imagination based on prior knowledge and their interests. Block building helps them gain skills in building social relationships. Children make structures that are meaningful to them. Their constructions are an attempt to put their ideas into something more concrete. Blocks are open-ended materials that allow children to impose meaning on them.

Children also engage in oral language communication as they speak with each other and adults about their block constructions. Acquiring vocabulary is so important during the preschool years. Children who come from low income homes may come from loving homes, however, parents may not have the means to provide educational experiences, nor be they equipped to know how and when to do it. Children need to be exposed to rich vocabulary and have knowledge of their surroundings. Their future is shaped through the kinds of experiences they are exposed to. When children acquire vocabulary they can bring together any prior knowledge, different skills and learned concepts. They can increase their ability to represent scenarios and objects in a more confident and creative manner, thus giving way for a richer vocabulary.

Furthermore, teachers can elicit longer descriptions with extended vocabulary by asking children appropriate questions. When teachers ask children about their block play, it stimulates oral discussion and develops language. Hirsch (1994) added that "As soon as children have obtained the concept (the idea), but lack the label, a new word will help them to remember and to talk about their construction" (p. 131). Play is one of the starting points for children to develop literacy skills. Through play children are introduced to important concepts needed for success in early literacy development.

Statement of the Problem

Children who come from low socio-economic homes often have limited resources, language, and low parental educational attainment. Children from low socio-economic status often lack financial, social, and educational support unlike children from families with a high socio-economic status. When young children from non-English speaking homes first arrive in a preschool classroom in which English is used, they will have to cope with a variety of social and linguistic demands that children from English-speaking homes will not have to face (Tabors,

1997). This means that children from disadvantaged homes are in greater need of help. Teachers can give this help since many parents may not be able. Evidence suggests that disadvantaged children if given the right conditions are likely to improve their academic outcomes (Hart & Riesley, 2001).

It is vital that preschool teachers be effective in providing developmentally appropriate educational practices that meet the needs of each individual child regardless of socio-economic status and cultural background. Individual differences, although widely acknowledged, are also one of the most frequently ignored factors when making educational decisions (Bredekamp & Rosengrant, 1992). Preschool teachers must continue to keep high expectations for all children while planning to meet their varied needs.

A significant component of a preschool classroom is the block area. Most children want to explore this area, thus making it one of the most visited learning areas in many preschool classrooms. Play time in the block area promotes social skills, independence, and creativity. Children become involved in exploring and learning. During this time they are engaged in hands-on activities that introduce materials, concepts and vocabulary. Through play, children from any cultural background learn about themselves and the world. They are able to bring their family experiences and cultural background into their play. Certainly, children's culture plays a great part in the content of construction and their language development.

Construction requires that the child have an image in mind that he or she then represents. By incorporating themes from an earlier story into dramatic play or making neighborhood in the block area after a discussion of different kinds of houses, they can engage in problem solving and make successful constructions. In order to achieve the most advanced levels of pretend play in the block area children must be provided with opportunities to demonstrate understanding

through representation. Children can demonstrate knowledge of neighborhood and community and develop an awareness of its physical features.

Children need to gain a better understanding of their surroundings in order to recreate the same structures, which is what they know and feel comfortable with. When they decide what to build, in the same instant they have an image in their mind that is then expressed in their play. If children do not have these mental images, their constructions and the language that comes along may be limited. Often during play, children are focused on their creations and they may not access other materials that could stimulate them to make other creations. They become fixated on what they want to build as they interact and share ideas with other children.

Purpose of the Study

The purpose of this study was to examine the effects of using visual aids before play time in the block area on children's block building and their acquisition of new vocabulary. It has been suggested that children need to be stimulated in order to develop their language, thinking skills, and imagination. This study investigated the effects of using books and community pictures on children's block building and their acquisition of new language. Do visual aids motivate children to build different structures and use new vocabulary?

I was interested in this study because I have noticed that ELL children have limited vocabulary during their block play. I wondered what I could do to expand children's vocabulary during their play time in the block area. I often interacted with children providing them with new vocabulary both in English and Spanish, but many times I felt that they did not have a mental picture of what I was referring to. I made reference to books available and offered to read. However, since most children showed interest in the block area, they became engaged in their play at that time, that they did not show interest in books.

Children bring to their play past knowledge and experiences. They seek to announce what they have learned or seen, yet they lack the vocabulary in either language. Would children benefit from a story and/or community picture before their play time in the block area? Most of the time with so many other activities, subjects to cover, and schedule to follow, I felt children were left with too little of something.

In my school, teachers plan around children's interests. Most of the time children have different interests and they don't last long enough, thus making it challenging to teach in depth. Since there can be so many interests, the lack of materials also makes it difficult. Often teachers read books at different times in the day in different settings. In this school in particular most of the time teachers read to children on a one-to one basis. In addition, although most classrooms may have pictures of communities, it is not enforced to have pictures of the community children come from. For this study, I was interested in providing children with the means that would enable them to develop a richer vocabulary through play in the block area. I hoped that this study would help clarify the effects of visual aids on ELL children in their block play and vocabulary.

The Research Questions

- What are children building during their play time in the block area?
- Do visual aids have an effect on their block constructions?
- Do visual aids have an effect on their language?

Definition of Variables

Block Area

In this study, block area referred to a learning area in a preschool classroom that has shelves of unit blocks as well as other materials such as foam blocks, cars, people, animals, traffic signs, legos, and dress up clothes. Children played in the block area during work time.

Block play language

In this study, block play language referred to the words associated with the books read to children prior to their play time in the block area. This was the specific list: fence, garage, porch, wall, gate, tunnel, bridge, pathway, street, highway, skyscraper, classrooms, roof, ceiling, backyard, driveway, sidewalk, and town.

ELL children

ELL referred to English Language Learners whose first language was other than English and who therefore were learning English at the same time they were learning curriculum content. For the purpose of this study, the first language was Spanish.

Visual aids

In this study visual aids referred to community pictures of the community children live in as well as children's books related to block building play.

Hypotheses

It was generally expected that children who were exposed to visual aids would be able to use prior experience learned to build constructions in a more confident and creative manner, thus giving way for a richer vocabulary.

Hypothesis I

It was hypothesized that children would generally build their house, their school, a race track, or a castle. Children would build what they were most familiar with because they did not have the vocabulary or the proper exposure to develop their structures.

Hypothesis II

It was hypothesized that children who were exposed to visual aids before their play time in the block area would extend or elaborate on their constructions using the cues from the visual aids.

Hypothesis III

It was hypothesized that children who were exposed to visual aids before their play time in the block area would be able to use new language learned.

Additional Research Questions

In addition to the formal hypothesis of this study, the teacher-researcher was also interested in some related questions and observations.

1. Does gender play a role on how visual aids are perceived and used in the block area?
2. Which visual aid method had more effect on their building?

CHAPTER II

Review of the Literature

This study explored the effects of books and community pictures introduced before children's play time on the use of vocabulary in the block area. The literature review has been divided into three sections. 1) The Block Area and Language Acquisition section describes the stages of block building and the language children learn from their play in the block area. 2) The section on Book Reading and ELL Preschoolers describes how children learn vocabulary through book reading. 3) The section of the Community and Photographs discusses how bringing the community to the classroom through pictures may impact children's vocabulary.

The Block Area and Language Acquisition

An innovative young teacher, Caroline Pratt, the creator of the unit blocks in the early 1900's, noted the importance of blocks in children's development. Hirsch (1981) noted that since blocks are open-ended materials children can do anything with them, thus they could develop their creativity. As children built they share with others and gain understanding of how things work around them. Hirsch (1981) stated that through block building along with the proper experiences and guidance children learn other respectable disciplines as mathematics, science, and social studies. In addition, children learned literacy skills as they communicated with others about their creations, thus making it imperative to be able to produce language. As the teacher took note of what children were talking about, language was supported by making comments, discussing materials, and asking appropriate questions. She believed that children were more interested in learning vocabulary when it was given during their play since this was the time where they were free to express their ideas, choose their materials, and make up stories or act out their personal experiences.

Pickett (1998) conducted a study to observe whether there would be an increase in frequency of voluntary literacy behaviors during block play in an area enriched with literacy materials and with adults modeling literacy use as the children in 1st grade, boys of 6 and 7 years of age participated in play. The subjects were members of the same class and their literacy skills were varied. Most could be described as emergent readers. A daily self-selection, or free-choice period of 30 minutes was part of the regular curriculum. During this time, children chose from several activities, including block play, dramatic play, art, clay, science, and math centers, and reading/writing activities. For the first week children were observed in a not enriched block play environment with no literacy materials. Observations then took place every day in blocks of 30 minutes throughout the week. The second week children were observed for 30 minutes every day but this time the block area had been provisioned with various literacy related materials.

Adult modeling was introduced during the third week of observation for 30 minutes every day. Participant observation, field notes and video recordings were the primary means of data collection. Observations were made for a total period of 450 minutes (30 minutes for 15 days). Results showed that when both the adult model and enriched environment were present, literacy behaviors increased dramatically, with 51 behaviors observed during the final week of observations. However, the intervention that resulted in a major increase was the presence of an adult model. Perhaps in this study these boys needed experience with a more capable literate person in order for literacy to become part of their block play. In addition, children were also observed returning later to books that they had shared with an adult during the block play. After seeing an adult showing interest in the books and demonstrating a use for the information contained in them, the boys showed interest and also began to use the books. Pickett (1998) found through this study that adult interaction during block play, did contribute to an increase in

literacy behaviors. It appeared that play alone did not necessarily address the desired learning but the teacher had to get involved.

Newburger and Vaughan (2006) supported the fact that adults must assist children from an early age and on to learn language. As children developed in their play with blocks, the need for vocabulary increased. According to the authors, children pass through different periods of block building and at each one they develop in literacy skills. The role of the adults was somewhat the same in all the periods. They made comments about children's constructions while providing the names of the materials they used and how they used them. Adults paraphrased what children said and provided longer sentences with varied vocabulary relevant to their constructions. Additionally, adults answered questions and asked children open-ended questions about their constructions. Newburger and Vaughan identified that each period had its own challenges; however, in each one, children were learning different concepts important for their development.

Newburger and Vaughan (2006) divided each period according to how children develop in their play with blocks. Discovering was the first period. During this time children explored and found out very simple things about the materials they worked with. The next period was the towers and roads period. During this time children piled up blocks on top of each other, building as high as they could. They talked about what they were doing as they built. In the doorways and bridges period, children discovered that blocks can be balanced on end. Children explored the widths and ends of the blocks. Children then explored the edges of the blocks in the fences and walls period. During this period children learned the concept of corners, therefore they began to build houses and farms. In the patterns period children made buildings the same on both sides (symmetrical). They built structures with different heights and thicknesses of columns that were

symmetrical. When their buildings began to have a purpose, they built walls for rooms, made furniture for the rooms. This was the pretending period where if they say they are building a house, their building looks like a house. Lastly, in the making known things period children used all they have learned about blocks. They built structures they have seen outside their school. They began to ask questions and make connections about how things work around them. Newburger and Vaughan noted that when adults were engaged in children's play they named things for them, thus giving children the connection between the word and the object. When they saw the presence of an adult they felt important and were eager to share their thoughts and ask questions.

Although the support of an adult can be of great benefit, other researchers noted, it must not become overpowering. Children also benefit from peer interactions in the cognitive, social, and emotional areas. In contrast to Pickett (1998), Johnson-Pynn and Nisbet (2002) studied the influence in learning children have among themselves during play. Their study examined if preschool-aged experts (with task experience) would spontaneously assist novices (without task experience) when working in pairs on constructing a house with blocks. In other words, peer tutoring, which was one way children engaged in joint problem solving which involved an experienced peer assisting an inexperienced peer in completing a task. This study consisted of 28 pairs of children. Children were selected to work in pairs, as an expert or a novice, on a block construction task. The materials in the study included a set of parquetry blocks, a white card with a picture of a house composed of squares, triangles, and diamonds in four colors, and a blank card to use as a base to reproduce the picture of the house.

A block construction task was used to investigate the extent and nature of peer tutoring shown by preschoolers. This study took place in three different classrooms. As this was a

laboratory school, children were accustomed to being tested in these locations by professionals conducting research. Activities of the pairs were video-recorded, which was also a familiar situation to this population thus ensuring children were comfortable with the testing context. The results showed that preschoolers as young as 3 years of age assisted their classmates spontaneously. Johnson-Pynn and Nisbet (2002) noted that the variety of aid that preschoolers demonstrated was impressive. However, the results showed that preschoolers were less likely to provide verbal cues about the shape and color of the blocks because they were less certain or less familiar about these qualities of the blocks. It also showed that preschoolers may have difficulty clearly articulating verbal directives to their tutees. The researchers indicated that preschoolers are capable of helping their peers in a variety of complex ways, suggesting that they can assume the role of a tutor even without being specifically instructed to do so.

In addition, it was noted that teaching and learning were likely to take place in the preschool classroom in the absence of structured, teacher-directed activities. Johnson-Pynn and Nisbet (2002) further stated that interactions between preschoolers exposed them to a rich foundation of thinking and interpersonal interaction that would benefit them both academically and socially. In the same manner, the amount of verbal interactions that occurred during play with the blocks whether or not there was peer tutoring going on supported language development since communication between children was elicited.

In agreement Stroud (1995) noted that a number of skills and abilities developed through block play. Block building served as an introduction to symbolization because the blocks themselves became symbols for other objects, just as printed letters and words were symbols for objects and ideas. Visual discrimination, a reading skill that was enhanced by block play takes place as children select the blocks they need during the building process. Children looked at,

compared, and matched blocks of varying shapes and sizes. Stroud noted that this process also happens during the time blocks have to be put away. Blocks of the same shape and size had to be found, sorted, and returned to a labeled area on the shelves. "These playful activities provide opportunities to practice and refine the visual discrimination necessary for distinguishing similar letter and word formations during reading process" (Stroud, 1995, p. 10). Another relationship between block play and literacy development Stroud identified was the oral language that developed when children build with blocks. Inevitably, block building provided a desire to communicate. Stroud felt that children want to talk about what they build, describe, and discuss their structures to others. They were eager to share their experiences and receive responses that would challenge what they already knew.

Two of the most prominent researchers ever to influence early childhood education scientist Jean Piaget and psychologist Lev Vygotsky, help us to understand that "children's development is both pushed by inside forces and pulled by outside forces. As teachers, the more we understand these forces, the better we are able to provide instruction that is directly in tune with children's ways of thinking" (Owocki, 1999, p. 41). By this, it was noted that constructing knowledge derives internally and through the social world. Owocki (1999) remarked that children constructed their understandings about the world for themselves as they go about their daily lives. She believed that they develop ideas about the way things work and as they gain new experiences they improve on information learned earlier.

As previously stated, it is essential that teachers learn and understand children's world in order to facilitate learning. When children manipulate materials it gives the teacher a concept of the child's development. That is, if only the teacher is has knowledge of their development of play in the different areas. As children play with blocks they go through stages in their block

play. Not all children develop in the same way or go through all the stages at the same rate. Therefore, it is important to understand the stages of block play as it gives the teacher realistic expectations of each child.

In *The Block Book*, Hirsch (1981) noted that whether children were introduced to blocks at the age of 2 or at the age of 6 they seemed to pass through all the stages (except Stage 1) described by Harriet Johnson. Hirsch described these stages as follows. Stage 1: Blocks are carried around, not used for construction. This stage applied to the very young child. Stage 2: Building began. Children made mostly rows, either horizontal (on the floor) or vertical (stacked). There was much repetition in this early building pattern. Stage 3: Bridging - two blocks with a space between them, connected by a third block - was used. Stage 4: Enclosures - blocks placed in such a way that they enclosed a space - were made. Bridging and enclosures were among the earliest technical building problems that children had to solve. They occurred soon after a child began to use blocks regularly. Stage 5: With age, children became steadily more facile and imaginative in their block building. They used more blocks and created more elaborate designs, using pattern and balance. Stage 6: Naming of structures for dramatic play began. Before this stage, children also may have named their structures, but the names were not necessarily related to the function of the building. Stage 7: Block buildings often reproduced or symbolized actual structures the children knew, and there was a strong impulse toward dramatic play around the block structures (Hirsch, 1981, p. 142-148). Knowing the block stages can be very useful to teachers as they are able to make individual plans and evaluations. How children play with blocks gives the observer an idea of the life experiences of each child.

Book Reading and ELL Preschoolers

Capps, Fix, Murray, Ost, Passel, and Herwantoro (2005) reported that according to the statistics bureau, rapidly rising immigration meant that immigrants represented an increasing share of all parents giving birth each year. Thus the highest share of children with immigrant parents occurred among children who were born most recently. Following this age distribution, there were more children of immigrants in the lower grades, with the highest share in kindergarten. Capps et al. (2005) stated that according to this logic, it was expected that children of immigrants had been at an even higher share of children in pre-kindergarten than in kindergarten. The authors further stated that however, children of immigrants made up a relatively small share (16%) of those enrolled in pre-kindergarten, suggesting that there was substantial under-enrollment. The lowest rates of early education enrollment tended to be among children from lower-income families and those whose parents had less formal education and more limited English skills. These characteristics were common among many immigrant families, especially those that were undocumented and from Mexico and other Latin American countries (Capps et al., 2005).

A study by Farver, Xu, Eppe, and Lonigan (2006) examined the relations among characteristics of Latino children's home environment and two important school readiness skills: their oral language and social functioning. The authors also examined the mediating role of children's interest in literacy-related activities in the relation between characteristics of the home setting and their school readiness skills. The participants in this study were 122 preschoolers (65 girls; 57 boys). For all children recruited in this study this was their first experience in any preschool program. Fifty-seven of the families spoke only Spanish in the home, 22 spoke only English, and 43 were bilingual households. The data were collected by a team of bilingual

graduate and undergraduate psychology students. Parents and teachers completed several questionnaires. Parents completed the family demography, parenting stress, and the home literacy environment questionnaire and teachers completed the Behavior Assessment. Children were given a vocabulary test to measure their receptive vocabulary. They were tested in the language in which they were the most fluent, based on parents' report, teachers' experiences with the child, and a short conversation the research assistants carried out with the children prior to their assessment.

The results of this study by Farver et al. (2006) showed that conditions in the home such as family size and SES were factors which potentially restricted the possibilities for children's development in general. Further, the results also showed that parents' direct involvement in and encouragement of literacy-related activities and mothers' perceived parenting stress levels, were associated with both school readiness skills. These findings illustrated how parents can be instrumental in preparing their young children for school by being proactive in their efforts and by altering aspects of their home environment that were within their capability to change. This study also focused on stress because it had been identified as one of the major factors in the parent-child system that may contribute to the development of behavioral problems in young children. On the other hand, the researchers noted it may be possible that children's literacy interest originated with parents or other adults. Regardless of the quality of their home environments and despise basic limitations in resources, children who have had an enduring interest in literacy and school-related activities, may seek out opportunities and experiences on their own which could contribute to their eventual school success (Farver et al., 2006).

In general, Farver et al.'s (2006) findings suggested that children benefited from exposure to literacy related environments. It was found that the language of the home

contributed to children's school readiness, particularly with regard to their emergent literacy skills. The researchers noted that their findings provided evidence that not all parents show little concern for their children's academic success. In contrast, there were low-income families that supported their children's education through involvement in school activities and educating themselves to be able to help their children. Furthermore, the limitations in this study identified by the researchers must also be noted. One was that parents might have had trouble estimating the frequencies of their own behavior and that of their children when completing the questionnaires. The researchers felt that because most parents know that they are supposed to read to their children, mothers may have over-reported the frequencies of their literacy behaviors. Also, because the sample in this study was drawn from inner-city neighborhoods located in Los Angeles, which had a high concentration of immigrants from Latin America, these variations might have taken different forms when examined in other urban or suburban areas and among different ethnic groups. In addition, the authors noted that measurement of children's literacy skill development was assessed using only a one-word receptive test. Additional aspects of early language development would have provided a clearer picture of children's potential (Farver et al., 2006).

Collins (2010) investigated the effects of rich explanation, baseline vocabulary, and home reading practices on English language learning (ELL) preschoolers' sophisticated vocabulary learning from storybook reading. The goals of this study were twofold. The first was to identify the effect of rich explanation on target vocabulary learning in English learners. The second was to identify whether rich explanation made a unique contribution, over and above other factors, such as baseline vocabularies in L1 and L2 and home reading practices, on preschoolers' English vocabulary acquisition from storybook reading. Eighty typically developing, 4- and 5-year-old

native speakers of Portuguese (42 males and 38 females) who were second language learners of English participated in the study. Three school districts in the northeastern United States were recruited for participation. Six preschool classrooms that had similar amounts of instruction time, curricular themes and components (i.e. teacher made curriculum), activities, and routines were selected. All six teachers included story book reading in daily plans. Preschoolers were pretested in L1 (Portuguese) and L2 (English) receptive vocabulary and were assigned to experimental or control groups. Experimental participants heard books read three times over a 3-week period with rich explanations of target vocabulary. Controls heard stories read without explanations.

Eight commercially available picture books were read to children. The books were divided into four pairs based on similarity in plot structure, length, and style of illustration. The target words were not words already in the texts. Rather, the target words were selected by the researcher through careful scrutiny of illustrations and text then checked for frequency on rare word lists of English vocabulary to ensure that they would be unfamiliar to children. Collins (2010) explained that "words already in the texts were not selected as target words because many children's books do not contain sophisticated vocabulary. Moreover, of those that do, sophisticated words may not be easily definable, may vary in number of occurrence, may not be adequately depicted in illustrations, and may have varying degrees of importance to the story" (p. 88). Thus, inserting words into the texts allowed the author to control the sophistication level of the word, to equalize the number of occurrences in the text, to ensure words' adequate illustration, and to select words that were equivalently related to the story line. Words selected for use were either inserted as synonyms for existing words in the texts or were inserted within whole sentences added to text. Between five and nine target vocabulary words were inserted

within the text of each book. Of the total 56 words selected, 24 were verbs, 21 were nouns, and 11 were adjectives. None were cognates in Portuguese and English (Collins, 2010).

A battery of measures for this study was used to assess language, home reading practices, target vocabulary, and story comprehension. To establish a baseline of children's initial language skill, children's English (L2) and Portuguese (L1) was measured. Parents completed questionnaires on the frequency of reading per week, types of material read to children, topics of discussion, types of materials read by adults, children's interest in being read to, and language of home reading and discussion. A picture vocabulary test was also constructed to test children's knowledge of target words (Collins, 2010).

Results of the study showed significant effects of several variables found for ELL preschoolers' target word acquisition in a read aloud context. Specifically, rich explanation was the strongest contributor in the model of factors accounting for variance. Other predictors for target word learning included frequency of home reading. Four and five year old English learners acquired meanings for 33% of the new words in stories by simply hearing the words in their story context; however, their performance was not significantly greater than would be expected by a chance. These findings indicated that hearing words accompanied by rich definitions prompts significantly more word learning than only incidental exposure. Children learned words through incidental exposure and through explanations provided during the three readings of each book, which spanned approximately three weeks for each pair of books. A three week expand is substantially longer than periods found in previous research and may be more helpful to learning because children have more time to process the words. The author (Collins, 2010) also noted that other factors, perhaps motivation to learn new words, memory, and frequent reading at home may have made significant contributions to ELL preschoolers' English vocabulary acquisition

from storybook reading. One of the limitations identified in this study was that it included only children with Portuguese L1s, therefore, the results were generalizable only to native speakers of Portuguese.

An article by Beck and McKeown (2007) reported on two studies with kindergarten and first-grade children from a low-achieving elementary school that provided vocabulary instruction by the students' regular classroom teacher of sophisticated words from children's trade books that are typically read aloud. Study 1 compared the number of sophisticated words learned between 52 children who were directly taught the words and 46 children who received no instruction. This study used what the authors called Text Talk, which was a method of discussion of narratives that is more complex than those children could read on their own. Beck and McKeown noted that children's thinking capabilities are advanced compared to their reading abilities, and so Text Talk was a way to take advantage of that as it provided them with opportunities for rich language development. Vocabulary instruction occurred after a story had been read, discussed, and concluded. In this manner, the story usage of the words provided a way in which understanding was built.

Beck and McKeown (2007) reported that Study 2, a within-subject design, examined 76 children's learning of words under two different amounts of instruction, either 3 days or 6 days. Student's vocabulary was assessed by a picture test where students were presented with pictures that represented different words and were asked to identify which picture represented the word that the tester provided. The findings in Study 1 indicated that there was significantly more vocabulary learning in the instructed group compared to the group that received no instruction. Thus, it was concluded to be feasible to teach words that are associated with mature language users to young children. As such, the researchers noted that Study 1 might be considered a step

in the direction of teaching vocabulary that is essential for more advanced literacy development. In Study 2, the results indicated that more instruction was beneficial, with gains about twice as large for words given more instruction, in both kindergarten and first grade.

The studies reported by Beck and McKeown (2007) showed that more instruction brings better results. Because the learning varied so widely in this study, it was stated that the frequency of a word within the text, repetition of the story, direct explanation of the word's meaning, and the story itself, could have been factors. In this study the authors stated that oral conversation was the primary source from which young children learn the words they know. Since everyday conversations almost always contain the same words and stories that children typically read have the same words, books that provided more advanced vocabulary must be presented. Recently researchers have proposed more specific considerations for choosing words (Beck, McKeown, & Kucan, 2002; Biemiller, 2005). Biemiller advocated focusing on words that are partially learned, those that between 20% and 70% of a target group of students know, because according to his thinking, students can make the greatest gains on these words. In contrast, Beck et al. (2002) suggested that word selection should depend on the nature of words themselves. Beck et al.'s position was that words for vocabulary instruction should be selected from the portion of the word stock that comprised sophisticated words of high utility for mature language users and that were characteristic of written language.

Another study by Hargrave and Senechal (2000) also examined the effects of storybook reading on the acquisition of vocabulary. In this study 36 preschool children who had poor expressive vocabulary skills were evaluated. The authors tested whether the beneficial effects of storybook reading would be greater when children were active participants as compared to children who participated in a regular shared book-reading situation. Two reading conditions

were included: a regular-reading condition in which teachers were asked to read in their customary manner, and a dialogic-reading condition in which teachers were trained to read in a dialogic manner. The design was such that children in the two conditions were exposed to the same books over the four-week intervention. Book reading occurred in groups of eight children, and all children were exposed to the same books, read twice.

Children were recruited from two day-care centers. The two centers catered primarily to low-income families. The participants were 36 children (21 girls and 15 boys) between the ages of 3 and 5. English was the only language spoken in the homes of 24 children, whereas English and another language were spoken in the homes of 11 children. Children were administered a test of new words introduced in the ten books read at the day-care. The test, labeled Book Vocabulary, required children to label 18 nouns from color photocopies of pictures taken from the books. Teachers at the dialogic-reading center received training in dialogic reading in a one-hour group session at the day-care during the week prior to the intervention. This study was designed for parents to participate in the home intervention portion. Twenty-eight parents agreed to participate, but not all did. A selection of 18 book titles (two copies of each title) was available for the home reading portion of the study. The parents and teachers were told that the purpose was to assess the importance of picture-book reading for the children's development of language. The intervention took place over a four-week period (20 weekdays). All teachers were instructed to provide the children with a daily minimum of 10 minutes of reading.

The results of this study (Hargrave & Senechal, 2000) revealed that children with poor vocabulary skills learned new vocabulary from shared-book reading episodes. Children in the dialogic-reading condition made significantly greater gains in language than did children in the regular-reading condition. This study extended previous findings by showing that dialogic

reading could be beneficial in groups larger than those previously investigated. It was also found that the beneficial effects of dialogic reading were produced in a shorter intervention period than used in other research. The four-week duration of this study further supported for the efficacy of a dialogic reading program on the development of expressive language. The researchers concluded that their study, however, failed to find significant effects on receptive language development for children in either condition. The researchers noted that two considerations must be taken into account for the results of this study. First, attendance across the two centers differed significantly. Children in the regular-reading condition attended day-care less often than children in the dialogic-reading condition. Secondly, the duration of the reading sessions differed across the two centers.

Furthermore, a study by Trivette and Dunst (2007) determined the relative effectiveness of three different approaches to teaching beginning reading. The three reading interventions constituting the focus of analysis were dialogic reading, interactive shared book reading, and shared book reading. The authors were interested in testing the hypothesis that active child involvement in learning to read would be a factor contributing to the benefits of the interventions. Thirteen studies were included in the three syntheses that involved reading instruction with 729 children. The largest majority of the children, on average, were between 48 and 52 months. Fifty-four percent of the children were male and 46% were female. Ethnicity was reported in 11 studies. Sixty percent were African American, 24% were Caucasian, 5% were Latino, and 2% were Asian American. The largest majority of the children were from low socioeconomic backgrounds. All of the studies were implemented in a preschool setting or a center-based program. All but one study involved group instruction. Two studies included both group and individual instruction. A single study used just individual instruction. The length of

interventions ranged from 6 to 64 days, with most lasting 30 days or more. Six studies investigated dialogic reading, four studies investigated interactive shared reading, and three studies investigated shared reading.

Results from this meta-analysis of prior research studies by Trivett and Dunst (2007) indicated that reading interventions that more actively involved young children in reading episodes were likely to result in more positive benefits. The two interventions that were most effective were dialogic reading and interactive shared book reading. Both procedures included a number of different techniques and strategies for engaging children in asking questions, prompting descriptions, asking for elaboration, completing part of a story, etc. Of these two methods, dialogic reading was the more structured procedure. The findings of this analysis were similar to other reading studies. There are a variety of ways to engage children into reading. However, this analysis showed that it was not so much the quantity of reading but the quality of how books were read. Although, the authors cautioned that was not to say that children do not have to be read to everyday. On the contrary, they advocated that children that are read to everyday using the dialogic reading method which allows children to get involved would benefit greatly in all areas of development.

Community and Photographs

Almost never, the community is looked as an educational tool. Education is solely viewed as the responsibility of parents and teachers while undermining the power the environment plays in the life of a child. It starts in early childhood when the community begins to be perceived differently. Strong-Wilson and Ellis (2006) wrote about educational literature on space(s) and early childhood education. Their work drew attention to the Reggio Emilia approach, as well as classroom-based practice. The notion of the environment as the third teacher

to classroom and teacher education, and how both pre-service and experienced teachers could use this knowledge to inform their practice was also discussed.

Strong-Wilson and Ellis (2006) further explained the Reggio Emilia approach as a method that adds the third educator. The two educators, parents and teachers as being in the classroom at any one time, and the third was the environment. This approach considers that when the environment was looked at from a different perspective and to the eyes of a child it can be noticed that its contributions can be enormous. They wrote that when children's experiences outside the classroom are limited, it is vital that attention is given to the places they are knowledgeable of. Strong-Wilson and Ellis (2006) advocated that when the community is brought into the classroom, it lends itself for active learning, that is children learn through experimenting with and manipulating objects. Incorporating the outdoors acknowledged children's curiosity about the natural and social worlds around them. The classroom was then a child's favorite place because it supported autonomy, social affiliation, and creative exploration and expression.

Strong-Wilson and Ellis (2006) believed that when the classroom was manipulated to meet children's needs, learning was unavoidable. They noted that the Reggio Emilia approach advocates that teachers pay close attention to their classroom in overall. Materials in the classroom should be such that spark children's curiosity and imagination. As a result of providing such materials along with their knowledge of the community, children's play can be scaffold to a higher level. Their ability to recreate an event or situation was possible by using the knowledge of his/her environment. In agreement, Provenzo and Brett (1983) stated that children represent their views of the world through their play. After children are exposed to something new they use this knowledge in the form of play to illustrate what they have learned.

Fraser and Gestwicki (2002) further explained that in order to create the environment as a third teacher the Reggio Emilia approach suggested a number of principles including "aesthetics, active learning, collaboration, transparency, 'bringing the outdoors in,' flexibility, relationship, and reciprocity" (p. 108). Children carry with them the memories and experiences from childhood to adulthood. The place they grew up in has a special meaning to their lives. When those experiences were given meaning in the classroom, it brought them awareness that their home lives matter to other people. It gave them a sense of power to be able to share with others what their lives were like outside of the classroom. Thus, the authors noted children began to view the classroom setting as a second home. Their view deepened as they feel comfortable in expressing their thoughts and sharing their knowledge of the world.

An article by Einarsdottir (2005) focused on the ways children think about their early childhood setting and the development of methods for listening to children's perspectives on their life. The article described and compared two approaches where cameras were used. One group used digital cameras to take pictures in their playschool while they showed the researcher important places and things in the playschool. Playschool was referred to all education programs for children up to 6 years old in Iceland. The other group was given disposable cameras that they could use unsupervised for a period of time. The participants were 22 children aged 5 to 6 years old. The methods of data collection included group interviews, children's drawings, children's photographs followed by individual interviews and a questionnaire administered through a cardboard game. In this article, however, the author focused on the part where children's photographs were used.

Each child in the first group was given a digital camera, and they were asked to take pictures while giving the author a guided tour around the playschool. The number of photos each

child took varied from 8 to 20 pictures. The second group which consisted of 12 children was given disposable cameras. They were told that they could take pictures of what they wanted and what they found important in the playschool. The two groups were interviewed and the interviews were recorded and transcribed. Einarsdottir's (2005) findings showed that when the children used the digital camera to take pictures of important things in the playschool during the guided tours, the most photographed space was the playground, and many took pictures of the dressing room where they put on and take off their clothing when they have been outside. The children also took photographs of their playthings. Blocks of various types were the most frequently photographed playthings. They also took pictures of their classroom from outside, and also of other classrooms where they had been before or where someone important to them was, like their friend, or sibling. Many of the children took pictures of other children who were their friends or they found important. Only three pictures were taken directly of the educational staff, although the educational staff appeared on other pictures.

The group that used the disposable cameras had a longer time with the cameras than the other group, and they also used the cameras without an adult's guidance. Some children were very excited about getting the camera, whereas others did not seem to be interested in the camera and only took a few pictures and then put the camera away until they were reminded of it. Some thought a lot about what to take pictures of and handled it in a systematic way by going around in the playschool and taking pictures of different play areas and playthings. For many of the children using the disposable cameras was play and they were playing with the camera. The results (Einarsdottir, 2005) further showed that although the two approaches seemed similar at first glance, they were dissimilar in some respects. When the children used the digital cameras, they were showing a guest around their early childhood setting and taking pictures of what they

found important to show to a guest. The use of the disposable cameras had, on the other hand, a different meaning for the children. The children photographed what they wanted to. They were not taking pictures of anyone but themselves. In both cases, children had an opportunity to take pictures of things that were important to them. In addition to these findings, the author also found that the pictures by themselves, without the children's explanation, only told the researchers the partial story. The interviews, therefore complimented on what the pictures told. Without the child's verbal input, the pictures could have been assumed to be what they were not.

Summary of the Literature

Pickett (1998) researched whether or not an enriched literacy area with adults modeling literacy would have an increase in voluntary literacy behaviors during play in the block area. The findings here showed that for this type of play children gained more literacy skills when the adult was present. The adult provided expertise, language, and actions. By having the influence of an adult, children were able to connect language with their play. Literacy materials alone did not have the influence unless an adult modeled its usage. Pickett said that was not to say that an adult must be present at all times during play. If so, the adult's presence could become an impediment for children to develop in their natural ways. Once the adult offers their support, children must be left on their own to process the information. Adults should go back and forth as children need their aid. Newburger and Vaughan (2006) affirmed the role of the adult during children's play and how beneficial it was to their development. The authors stated that children go through different periods as they manipulate blocks. In each period children acquired language and learned other content areas.

On the contrary, Johnson-Pynn and Nisbet (2002) found that children can teach each other without the presence of an adult. Peer tutoring was examined to determine how it would

take place during play in the block area. In their study they wanted to analyze the influence in learning children have among themselves. It was reported that preschoolers demonstrated an impressive variety of aid. However, it was also found that preschoolers were less likely to provide verbal cues and had difficulty articulating verbal directives. The amount of verbal interactions that occurs during play benefits children both academically and socially. However, when children have limited vocabulary it reflects on their play. Children would often be driven to reenact the same scenarios, thus using the same language over and over. The researchers concurred with Pickett (1998) that without the techniques and support of an adult, it makes it impossible for children to add different words to their vocabulary.

Owocki (1999) noted that the most prominent researchers Jean Piaget and Lev Vygotsky advocated how important it is for teachers to understand children's development and to provide proper instruction that would lead them in learning about their social world. How children conduct themselves during play shows how they learned to view the world and it shows the life experiences they have had. Hirsch (1981) noted that children construct knowledge in different content areas during their block constructions. One of them was in literacy, as the need for language is essential. Stroud (1995) advocated that as long as children are not provided with language and learning experiences through different avenues they would not be able to reach their full potential.

English Language Learners on the other hand are at a higher risk of staying behind in academics than any other major group. Capps, Fix, Murray, Ost, Passel and Herwantoro (2005) reported that there was an increase in births in immigrant families. However, most children were not enrolled in preschool. Parents were not enrolling their children in school until they reached kindergarten age. Since most of these families were reported to have less education and limited

resources their children were at a disadvantage. Farver, Xu, Eppe, and Lonigan (2006) went further to examine the relationships between characteristics of Latino's home environment and their oral language and social functioning, along with children's own interest of literacy activities. It was reported that conditions in the home played a major role in the general development of children. For those children who showed interest in literacy activities it was concluded that parent's influence was the cause. The authors (Farver, Xu, Eppe, & Lonigan, 2006) cautioned that although the latest statistics pointed to Latino parents as less educated, it cannot be assumed for all that because of their lack of schooling they cannot motivate and help their children to learn.

Collins (2010) investigated the use of rich explanation on the acquisition of vocabulary through the use of books. In this study, words in the text were changed to provide children with more sophisticated words. It was indicated that hearing words in stories accompanied by rich explanation prompted more word learning. Beck and McKeown (2007) also examined the use of books to help children acquire sophisticated vocabulary along with the amount of time instruction was given. It was found that the amount of instruction was very beneficial on gaining vocabulary. Repetition and explanations helped children add up words to their list. The two studies (Collins, 2010; Beck & McKeown, 2007) analyzed the use of books to gain vocabulary and the results showed a great gain in language. However, the topics of the books also have an impact on the amount of learning. When the book was of interest to them and it was also appropriate for their age level, children learn at their best. Furthermore, Hargrave and Senechal (2000) and Trivette and Dunst (2007) also found that children's engagement during a reading activity determined their acquisition of vocabulary. Dialogic reading was found to be of greater

benefit than any other approach. Reading interventions where children were actively involved had a higher outcome in all areas of development.

While children enjoyed taking an active role in their learning, integrating other educational tools advanced their learning. The community, as the Reggio Emilia approach explained by Strong-Wilson and Ellis (2006) suggested, was a third teacher in the classroom. Children make a better understanding of their surrounding when they are purposefully exposed to them. They make community and school connections as they integrate their knowledge into their play. Children often make observations about their community; however, those observations would remain quiet unless children have the vocabulary in order to explain them. Through the use of pictures of the community children can gain vocabulary, since it is something close to them it is part of their lives. Fraser and Gestwicki (2002) also noted the benefits of the Reggio Emilia approach on children's academic gains. One of the principles mentioned was bringing the outdoors in which was noted to have great effect on children's learning. They felt that children view the classroom differently when they can include their community in their learning. Children want to share their experiences outside the classroom with teachers that are susceptible to what matters to them. They hope teachers would acknowledge what they say and be able to teach them more about what they already know. Moreover, Einarsdottir (2005) examined how children think about their classroom setting. Children were given disposable cameras to take photographs of their school. It was found that children took photographs of what was important to them. However, for some children it was hard to explain the photographs. Einarsdottir concluded that children must therefore acquire vocabulary in order to communicate their thoughts and that can only be done when teachers are in tune to children's academic needs.

Grounded in this summary, children benefit greatly from books when the teacher allows them to participate during reading activities. Books that are carefully chosen can be good material for vocabulary growth. Children use oral language during their play in all learning areas. The block area is one of the learning areas that contributes greatly to children's early literacy skills, as they naturally communicate with others about their block constructions. This study seeks to examine the effects of using visual aids before play time in the block area on children's block building and their acquisition of language. As children build they represent their environment. Children's environment is another major contributor to children's learning as it is so close to their daily lives. Because children gain experiences from the places they inhabit, their community must be taken into account in order to support and promote further learning.

CHAPTER III

Methods

Participants

The participants in this study were one class of 15 preschool children attending an urban public school in northern New Jersey. There were 9 boys and 6 girls ranging in age from 3 to 5 years old. Seven of them were 5-year-olds going to Kindergarten at the end of the school year and 8 of them were 3- and 4-year-olds who would be attending a second year of preschool the next school year. All of the children were from a low socio-economic status and from a Hispanic background, mainly of Mexican descent. Spanish was the main language spoken at home for 13 of the students. English was the main language spoken at home for two students.

The teacher/researcher was a Hispanic female whose first language was Spanish. She had been working as a preschool teacher for five years with no other prior experience in the education field. After receiving a bachelor's degree in Psychology, she was hired under the alternate route program to teach preschool. She then obtained the New Jersey P-3 certification and was currently completing final courses for a master's degree in early childhood education. Additionally, participants included the teacher's assistant. He was an African-American male who had been working in the same district as an assistant in preschool for eight years. He was currently taking courses towards a bachelor's degree in Physical Education. English is his first and only language spoken.

Materials

A variety of tools were used to gather information about the effect visual aids, books and photographs may have on children's constructions with blocks and how visual aids can have an

effect on their language. Below is a description of the assessment materials and classroom materials used in this study.

Assessment Materials

Block Building Stages Chart

The Block Building Stages Chart (Appendix A) was developed using Hirsch's seven stages of block building from *The Block Book* (Hirsch, 1994). It included the meaning of each block building stage. This chart helped the teacher/researcher organize the information collected from the analysis of the work sample photographs taken the first and last week of the study.

Work Sample Photographs

The teacher/researcher took photographs of children's constructions in the block area during the first and last week of the study. The photographs were printed and used along with the block building stages chart (Appendix A) at the end of weeks one and four.

Field Notes Chart

Field Notes (Appendix B) were used by the teacher/researcher to assess children's learned vocabulary during the intervention weeks, week two, three, and four. It was used upon arrival time, breakfast time, greeting time, and lunch time. The teacher/researcher chose these times of the day as she had noticed children's tendency to have more conversations among each other and with the teacher/researcher and the teacher's assistant. The chart consisted of the children's names, daily routine, and vocabulary words.

Observation Chart

This chart (Appendix C) was created by adapting other observational charts found in the textbook, *Building Structures with Young Children* (Chalufour & Worth, 2004). The chart had sections for the child's name, target vocabulary words, other vocabulary words they used, and

what their structures were. The teacher/researcher used it during the intervention period until the last week of the study to observe the block area and noted what the children were doing there as well as the language they were using.

Recall Word Checklist

This checklist (Appendix D) was created to collect information from children after their work time in the block area. Once children finished putting toys away the teacher/researcher and the assistant gathered children in two small groups and asked them what they had done during their work time. The teacher/researcher and the teacher's assistant used this chart each day throughout the five week course of the study only for those children who played in the block area.

Intervention Materials

Story Book Reading Lesson Plan

Lessons (Appendix E) for book reading related to play in the block area were used. The teacher/researcher read books to the children in a large group prior to work time in the learning areas. There were a total of three books read during the intervention period. One book per week was read twice on consecutive days.

Small Group Community Photographs Lesson Plan

Small group community photographs lesson plan (Appendix F) was made to introduce photographs of the community during small group time. There were two different pictures introduced during each small group. Each child was given a set of pictures to look at. The teacher/researcher and the teacher's assistant engaged children in conversations and provided new vocabulary. Each small group lesson provided different pictures. Small group time was held

twice a week for the intervention period for a total of six small group lessons and a total of 12 community photographs.

Community Photographs

The teacher/researcher took photographs of the community prior to the beginning of this study. The photographs included the following: fence, garage, porch, gate, tunnel, bridge, highway, skyscraper, pathway, backyard, street, and driveway. The photographs were 5" x 7" in color. The teacher/researcher decided to take the photographs above based on the vocabulary she noted children were missing.

Block Area

The block area is one of the learning areas in a preschool classroom among the house area, the toy area, and the art area. The block area in this classroom consisted of 350 unit blocks, 45 hollow blocks, and 110 foam blocks, as well as toy people and animals, dolls, big cars and trucks, traffic signs, community garages, books, writing materials such as crayons and paper, a cash register, a telephone, stuffed animals, dolls, and dress up clothes. All these materials were available to children during their play time in the block area. In addition the block area in this classroom was located beside the house area. The space for the block area was 63 square feet.

Procedures

The nature of this study lends itself towards qualitative data collection, or experience based, rather than quantitative data collection, or numeral based techniques. Qualitative research includes such sources as observations, field notes, photography, and tools for questioning (Mills, 2003). Since I would be observing the children, keeping notes on them, and asking questions, qualitative data collection was more appropriate. This study was conducted over a five-week period. Table 1 provides a schedule of materials and activities of the study.

Table 1

Schedule of Data Collection Materials and Intervention Activities

	Week 1	**Week 2**	**Week 3**	**Week 4**	**Week 5**
MATERIALS	Work Sample Photo Stages Chart Recall Word Checklist	Field Notes Observation Chart Recall Word Checklist	Field Notes Observation Chart Recall Word Checklist	Field Notes Observation Chart Recall Word Checklist	Work Sample Photo Stages Chart Recall Word Checklist
ACTIVITIES		Book Reading Day 1 & 2 Building a House By Byron Barton (roof, wall) Community Photographs Day 3:Garage, porch Day 4: Gate, Ceiling	Book Reading Day 1 & 2 With my Brother By Eileen Roe (backyard, driveway) Community Photographs Day 3: Pathway, fence Day 4: Highway, street	Book Reading Day 1 & 2 School House By Donald Crews (town, sidewalk) Community Photographs Day 3: Bridge, tunnel Day 4: Skyscraper, railroad	

Daily Routine

Since this study was carried out towards the end of the school year, children were very familiar with the daily routine. They had built relationships with classmates and teachers and had learned to use the different learning areas. The teacher/researcher and assistant spent time in each learning area during the day while scaffolding children's play and explaining the use of materials. Work time in this school was 2 hours and 10 minutes. Work time was divided in two periods. One period was in the morning (1 hour) and the second period in the afternoon (1 hour 10 minutes). For this study the teacher/researcher chose to make the observations and interventions during the morning work time. At the beginning of the school year children were divided into two small groups of mixed ages and genders. The group of the teacher/researcher consisted of 7 children and the group of the teacher's assistant consisted of 8 children. During small group time the teacher/researcher and the teacher's assistant provided children with activities covering math, literacy, science, and other topics of interest. Reading time was also part of the schedule. Most children in this class particularly enjoyed books.

Week One

During this one week, the teacher/researcher took pictures of children's constructions each day for four days during their morning play in the block area. She remained in the block area for 40 minutes while taking pictures of their constructions. The teacher/researcher took pictures of children's constructions when they seemed to have finished building. For the next 20 minutes the teacher/researcher interacted with children playing in the other learning areas. Children had seen the teacher/researcher on a few occasions take photographs of their constructions prior to the start of this study.

At the end of this first week, the teacher/researcher printed the pictures, and analyzed them by using the Block Building Stages Chart (Appendix A) to determine where each child was on the stages of block building. The teacher/researcher scored holistically based on the number of work sample photographs taken per child. That is if a child made four structures and four photographs were taken, the teacher/researcher would analyze them and give one score accordingly for that week for that child. The main purpose for the use of the photographs along with the stages chart was to see what stage of block building children were in before the interventions began.

Each day, after work time was over, children put their toys away and gathered in their small groups for recall time. These were the same small groups as they had been in all year. Children knew clearly what group they belonged to at the time of this study and they also knew this was where they gathered for recall time as well as for small group time. During this time the teacher/researcher and assistant asked each child what they did in the learning areas they chose. The Recall Word Checklist (Appendix D) was used to note if children were using any of the vocabulary in this checklist. This chart was only used for the children who worked in the block area. Prior to the beginning of this study the teacher/researcher met with the teacher's assistant to go over this checklist and how it was going to be implemented during the course of the study. After the first day of her using this checklist, the teacher/researcher reviewed the form with the teacher's assistant to ensure consistency and to answer any questions or ambiguities noted.

Weeks Two, Three and Four

During week two until week four the teacher/researcher followed the classroom regular daily schedule; there were no changes made in the schedule for the purpose of this study. The interventions were embedded in the daily activities. Children were read books related to the

block area: *Building a House* by Byron Barton, *With my Brother* by Eileen Roe, and *School Bus* by Donald Crews. The books were read prior to work time on day 1 and day 2 for each of the three intervention weeks. Reading time was 15 minutes. The teacher/researcher created story book reading lesson plans (Appendix E). There were a total of three books read during these three weeks. Each book was read twice first on day 1 and then on day 2. On day 1 the teacher/researcher opened with book title, author, and illustrator, began to read the book, encouraged children to participate by asking questions and provided feedback to children's comments and questions. On day 2 the teacher/researcher began by asking if anyone remembered the story, the story was read again following same procedure as day 1, but this time emphasis was given on the target vocabulary words (Appendix E and F) by pointing at pictures and naming them. At the end of the story the teacher/researcher asked children what vocabulary words they remembered from the story.

On day 3 and 4, the teacher/researcher created a small group community photographs lesson (Appendix F) to introduce the photographs. The children were each given two photographs of the community on each day. There were a total of 12 photographs used during the three intervention weeks. The photographs were discussed during small group time prior to work time in the learning areas. Children had the opportunity to talk about the pictures as the teacher/researcher and the teacher's assistant provided them with new vocabulary. Small group time was 15 to 20 minutes.

Data Collection

Week One

Data collected during Week One provided baseline data for comparative purposes. The Block Building Stages Chart (Appendix A) was scored based on photographs of children's block

buildings to provide a baseline of children's block building stage of development at the start of the study. Recall Word Checklist (Appendix D) provided a baseline for children's vocabulary use at the start of the study.

Weeks Two, Three, and Four

Field notes (Appendix B) were taken upon children's arrival, during breakfast time, greeting time, and lunch time. The teacher/researcher noted the vocabulary children were using as per the vocabulary list in the lesson plans (Appendix E and F). This chart was used to record if the children were using the target vocabulary during other daily routines.

Children were observed by the teacher/researcher using the Observation Chart (Appendix C) as they worked in the block area for 4 days each week for the intervention period, weeks two, three, and four. She stayed 30 minutes each day for the work time period in the block area to have enough time to make observations and still interact with children playing in the other learning areas. The observation chart was used to record who was there, what the children were doing, and the vocabulary they used. This observation chart was kept on a clipboard. This process of observation was very familiar to the teacher/researcher since teachers in this school use it as a data collection strategy. Teachers are constantly making observations about their environment and making changes as a result (Mills, 2003). In addition, children were familiar with the same process. They were comfortable with the teacher/researcher's presence whether she interacted with them or not. During the time the teacher/researcher was present in the block area the main purpose was to make observations and not to interact with the children. However, if the children interacted first the teacher/researcher was made available.

After work time was over and the toys were put away, children were gathered in their small groups for recall time. During this time the teacher/researcher and the assistant asked

children questions about what they did in their learning areas. This information was gathered using the Recall Word Checklist (Appendix D) and only for the children who had played in the block area. This checklist was used during the intervention period, which was 4 days a week for the three-week intervention period.

Week 5

During this week, the teacher/researcher took pictures of children's constructions each day for four days during their morning play in the block area. She remained in the block area for 40 minutes while taking pictures of their constructions. The teacher/researcher took pictures of children's constructions when they seemed to have finished building. For the next 20 minutes the teacher/researcher interacted with children playing in the other learning areas.

At the end of this week the teacher/researcher printed the pictures, and analyzed them by using the Block Building Stages Chart (Appendix A) to determine where each child was on the stages of block building after the interventions. The teacher/researcher scored holistically based on the number of work sample photographs taken per child, as it was done in week 1.

The data collected in this study were used to determine the effects of book reading and community photographs introduced to children prior to work time in the block area and how it affected children's block construction and language. As the teacher/researcher, I was observing while participating with the children. Teachers often serve as observers, while participating with children (Goodwin & Goodwin, 1996). The effects of the interventions were measured by using field notes, an observation chart, a recall word checklist, work sample photos, and the block building stages chart. Table 2 graphically displays and organizes the data collection methods according to hypothesis 1, 2, and 3.

Table 2

Data Collection Methods

	OBSERVATION CHART	FIELD NOTES CHART	RECALL WORD CHECKLIST	WORK SAMPLE PHOTO	STAGES CHART
Hypothesis 1: Block Constructions			X	X	X
Hypothesis 2: Visual aids: constructions	X			X	X
Hypothesis 3: Visual aids: language	X	X	X		

CHAPTER IV

Results

Overview

The data collected in this study were used to determine the effects of using visual aids before play time in the block area on children's block building and their acquisition of new vocabulary. An observation chart was created by the teacher/researcher (Appendix B) and it was used to record if children were using any of the target vocabulary during their play time at the block area. The observational chart had sections for the child's name, a column next to their name to note what word they had used, and the list of target vocabulary words at the bottom of this chart. There was additional space to note their actions and comments. A recall chart (Appendix D) was also used to ask children after they had finished cleaning up what they had built at the block area so as to note the use of the target vocabulary. The charts not only provided a vehicle to note the use of the target vocabulary but they also helped to note the use of the language as they interacted with each other and with the teachers. In order to examine triangulation (Mills, 2003) of results field notes were maintained noting children's use of the target vocabulary throughout different times of the day.

The block area was observed a week prior to the intervention period by the teacher/researcher who took photographs of what children were building and used the recall chart to note if children said any of the target words. During the next three weeks which were the intervention period the target words were introduced using picture books and photographs of buildings and other structures in their community. These visual aids were introduced before children went to play at the block area for a period of three weeks. Books were introduced on day 1 and 2 and pictures were introduced on day 3 and 4. Data collection took place four times a

week for the five-week course of the study. During the entire intervention process the teacher/researcher recorded if target words were said on the observation chart, recall chart, and the field notes. For the last week of the study, photographs of their buildings were again taken as in week 1 to note their stage of block building and the recall chart was used to note the use of the target language.

The data collected in this study were analyzed to explore whether children learned and used the target words from the books and the photographs during their play with the blocks and at other times of the day. The data were also used to analyze the block building stage of the children before and after the interventions. The teacher/researcher looked at the observation chart, the recall chart and the field notes to see the amount of times the target words were said for the children that mostly visited the block area. A total of 8 children visited the block area more often during weeks 1 to 5. The data collected were analyzed only for these 8 children. During the pre-intervention observation, most children did not use the target words. The only words they used were descriptive words such as big and long while talking about their buildings.

Analysis of Data

Hypothesis 1 – The effects of lack of exposure on block building and vocabulary

It was hypothesized that children would generally build their house, their school, a race track, or a castle. Children would build what they were most familiar with because they did not have the vocabulary or the proper exposure to develop their structures. To test this hypothesis, a photograph of their construction was taken and analyzed based on what the child said he was building. The Block Building Stages Chart was used to record what stage the photograph revealed to assign a block building stage at the end of the first week. The Recall Word Checklist

was used to record the target vocabulary words in addition to other vocabulary words they used when recalling about what they built with the teacher/researcher and the teacher's assistant.

Eleven children visited the block area this week. But data was only analyzed for 8 children since they visited the block area throughout the intervention weeks and during the post-assessment week as well. These children were also the ones who visited the block area mostly during the course of the study. The number of visits during this week were as follows: Child A: 4, Child B: 2, Child C: 2, Child D: 1, Child E: 1, Child F: 3, Child G: 1, Child H: 1. There were a total of 11 structures built. Child A and C built a racetrack on 2 different days = 2 photographs. Child A built a racetrack alone = 1 photograph. Child A and B built a farm = 1 photograph. Child B and D built a house = 1 photograph. Child D and E built a school = 1 photograph. Child H and E built a store = 1 photograph. Child F built 3 bridges = 1 photograph. Child G and H built a house = 1 photograph. There were a total of 11 structures built. It is assumed the child who built bridges learned to build them because of his interest in them and his past constant access to books in the block area. Children may have been building farms due to time devoted the weeks before to animals in the zoo versus animals in the farm.

Stages were assigned to children based on Hirsch's (1994) stages of block building. Since children almost always built with partners children were assigned a block building stage according to the structures they built and the teacher/researcher's best judgment. For the children who built with partners on some occasions and not on others, the final block building stage was assigned by examining the structures they built alone. One of the techniques to interpret data is to connect findings with personal experience (Mills, 2003). The interpretations of the data were not only based on the analysis of data such as the photographs and the recall

word checklists, but also on previous memories of how children played with the blocks in the past. The results showed that four children were in stage 3 and four in stage 4.

There were a total of 4 recall word checklists for this week since the block area was visited on all 4 days. The vocabulary target words if used were noted on the recall word checklists. The teacher/researcher and the teacher's assistant also used it to note what vocabulary children were using in addition to the target vocabulary words when talking about what they had built. This information also helped the teacher/researcher for the analysis of the photographs.

Children's use of target vocabulary words was analyzed by counting the amount of times they used the target words during recall time for the week. Table 3, shows that children did not say most of the target words during this first week of the study. Only three children knew the target word bridge, two children knew the target word street only in Spanish and one child whose native language was English knew the target words: highway, street, and bridge. In total, 3 of the 18 target vocabulary words were used. Bridge was said by 3 children. Street was said by 2 children in Spanish and by 1 in English. Highway was said by 1 child.

These results partially supported the hypothesis predicting that children often build what they are most familiar with and that their vocabulary was limited to the structures they built. Children built more varied structures than it was hypothesized, however their structures did not have much detail in them. Their vocabulary was limited to what they knew about the structures as well. Table 3 illustrates the children's structure, the block building stage assigned and the vocabulary words used by each child. Child E was the only child that used more target vocabulary words. This child's native language was English and she was very outspoken. She was the only student who did not speak Spanish although she understood some.

Table 3

Analysis of Children's Structures, Block Building Stage and Vocabulary Words During Week 1

Children	A	B	C	D	E	F	G	H
Structure/ Photograph	Race-track Farm	House Farm	Race-track	School House	Store School	Bridge	House	Store House
Stage	4	3	3	3	4	4	3	4
Vocabulary Words	Bridge Farm	House Farm	Calle (street)	Escuela (school) Casa (house)	School Bridge Highway Street	Bridge	Casa (House) Calle (street)	Store House

Hypothesis 2 – The effects of visual aids on children's constructions

It was hypothesized that children who were exposed to visual aids before their play time in the block area would extend or elaborate on their constructions using the cues from the visual aids. During the three weeks of interventions, the teacher/researcher read three picture books to the children. Each week a book was read twice, once on day 1 and then again on day 2. On day 1 the teacher/researcher opened with book title, author and illustrator, began to read the book, and encouraged children to participate. On day 2 the teacher/researcher began by asking if anyone remembered the story. The story was read again following the same procedure as day 1, but emphasis was given on the target vocabulary words by pointing at pictures and naming them.

On day 3 and 4, the teacher/researcher created a small group community photographs lesson (Appendix F) to introduce the photographs. The children were each given two photographs of the community on each day. There were a total of 12 photographs used during the three intervention weeks. The photographs were discussed during small group time prior to work time in the learning areas. Children had the opportunity to talk about the pictures as the teacher/researcher and the teacher's assistant provided them with new vocabulary words. Small group time was 15 to 20 minutes.

Children were observed by the teacher/researcher for 30 minutes, 4 days per week for each of the three intervention weeks. Data collected during these three intervention weeks included the Observation Chart (Appendix C) which was used to record vocabulary words in addition to the target vocabulary words children used during their play time in the block area. The teacher/researcher also recorded what the structures were according to children's conversations and what they shared with the teacher/researcher during their play. The observation chart was used to record who was there, what the children were doing, and the

vocabulary they used. Photographs of children's structures were not taken during the intervention weeks due to technical difficulties, therefore the Block Building Stages Chart (Appendix A) was not used.

Following these three weeks, post-intervention data were collected to compare children's constructions before and after the intervention weeks. Data collected during the post-intervention week included photographs of the children's block structures to record what they were building, and the Block Building Stages Chart (Appendix A) was used to analyze the photographs and assign a block building stage.

To test this hypothesis, data from the Observation Chart were analyzed to see what children were building during the intervention weeks. Since the data collected was large in quantity, it needed to be reduced to a manageable form. By coding the data, patterns and meaning in the data were able to be found (Mills, 2003). The teacher/researcher reviewed the observation charts for the 12 days of intervention. Grouping the charts by week, she highlighted the children's names and then highlighted in a different color what the children were building. She tallied how many children visited the block area and how many visits they made by week. The teacher/researcher then re-read the charts again for what the children were building and grouped them into categories. Lastly she reviewed the chart for the notes taken about the structures and coded these based on patterns that emerged in the details.

Data analysis of the Observation Chart revealed a total of 12 of the 15 children in the classroom visited the block area over the three weeks. There were 17 visits during week 2, 21 visits during week 3, and 18 visits during week 4. Of the 12 children who visited the block area at least once during the three weeks, 3 children visited 1-2 times, 3 children visited 3-4 times, 2 children visited 5-6 times, 3 children visited 7-8 times, and 1 child visited 9-10 times.

Data revealed children visited the block area on more occasions during week 3 of the intervention period. Although, the amount of times the block area was visited was approximately the same each week. It was noted that 3 children who did not visit the block area very often began to visit the block area during week 3 of the intervention period. Two of these children were girls and one was a boy. It is assumed they began to visit the block area as they noticed other children's constructions and noticed that the teacher/researcher continued to be present during their play. These children were also noticed to be curious about the photographs as they noticed other children building what was in the pictures.

The structures children built during the intervention weeks were noted on the Observation Chart as children talked about their structures. The 8 children who played in the block area during the pre-intervention week also visited the block area during the intervention weeks. The teacher/researcher isolated data for these 8 children regarding their structures. The visits per child for the intervention weeks were as follows: Child A: 8, Child B: 5, Child C: 7, Child D: 3, Child E: 4, Child F: 7, Child G: 5, Child H: 2.

Categories established of what the children were building from the Observation Chart included the following types of structures: garage, bridge, house, farm, railroad, school, tunnel, highway, skyscraper, and racetrack. Analysis of this aspect of the Observation Chart revealed a total of 8 houses, 5 stores, 6 schools, 9 garages, 8 bridges, 5 racetracks, 6 farms, 2 railroads, 7 highways, 3 tunnels, and 2 skyscrapers over the three weeks of intervention. Table 4 presents the number of children, their visits to the block area and the number of structures they built.

Table 4

Children's Visits and Structures During the Intervention Weeks

Categories	Week 2 # of children=4 # of visits = 17 # of structures created = 17	Week 3 # of children=5 # of visits = 21 # of structures created = 22	Week 4 # of children=3 # of visits = 14 # of structures created = 22	Total # of children = 12 # of visits = 52 # of structures created = 61
Racetrack	3	2		5
Garage	4	3	2	9
Bridge	3	3	2	8
House	3	3	2	8
Farm	2	4		6
Railroad			2	2
Highway		3	4	7
Store	2	2	1	5
School		2	4	6
Tunnel			3	3
Skyscraper			2	2

Analysis of the comments on the Observation Chart revealed some interesting patterns. Children built with more variety as the interventions progressed. Children learned to connect their structures together. It was noted children built different structures at once and began dramatic play around them. For example, the boys, mostly, built a garage then a highway and a tunnel, knowing the names of the structures and their function. They also added other materials such as toy people, animals, cars, and used pieces of carton boxes for a roof or walls. Children mostly built garages during the intervention weeks. They also continued to incorporate houses along with other structures.

To continue analysis of the data, the teacher/researcher compared the data from pre- and post-intervention regarding what the children were building. The 8 children who visited the block area during the pre-assessment week also played with blocks the post-intervention week. While other children may have visited the block area, data were only collected on these 8 children to allow for comparison to the pre-intervention week. The number of visits for the post-intervention week of the study were as follows: Child A: 2, Child B: 3, Child C: 1, Child D: 1, Child E: 1, Child F: 1, Child G: 1, Child H: 1 There were a total of 12 pictures taken. The analysis of the pictures showed that children had advanced to higher building stages after the interventions. They were between block building stage 5 and stage 7. Children at these stages were using more blocks for their structures while using pattern and balance. Some children were able to symbolize and name their structures and a lot of dramatic play around the block structures was observed. Table 5 illustrates the block building stage for each child as well as the structures they built and the vocabulary they used.

Table 5

Analysis of Children's Structures, Block Building Stages and Vocabulary Words During Week 5

Children	A	B	C	D	E	F	G	H
Structure/ Photograph	House Railroad	Highway Bridge Farm	Garage Bridge Tunnel	Garage	Sidewalk Town	Highway Tunnel Farm	Store	Town Skyscraper
Stage	7	6	5	5	5	6	5	7
Words	Roof Sidewalk Railroad Highway Bridge	Roof Bridge Highway Railroad Gate	Garage Bridge Tunnel	Garage Roof	Sidewalk Town	Tunnel Highway Fence Garage Bridge Railroad	Street Wall	Town Skyscraper Driveway

The teacher/researcher compiled all data collected from pre-and-post intervention weeks. The data showed that the number of visits during the pre-post intervention weeks were almost the same. Children's block building stages, however had increased compared to the pre-intervention stages. Children's constructions varied and were more in some cases. Table 6 contains the data collected for each child during the pre- and post-intervention weeks.

Table 6

Comparison of What Children Built Pre- and Post-Intervention & Stages

	Pre-Intervention Assessment		Post-Intervention Assessment	
Children	# Visits Stage	Structures Built	# Visits Stage	Structures Built
Child A	4 4	Racetrack Farm	2 7	House, Railroad
Child B	2 3	House Farm	3 6	Highway, Bridge, Farm
Child C	2 3	Racetrack	1 5	Garage, Bridge, Tunnel
Child D	1 3	School House	1 5	Garage
Child E	1 4	Store School	1 5	Sidewalk, Town
Child F	3 4	Bridge	1 6	Highway, Tunnel, Farm
Child G	1 3	House	1 5	Store
Child H	1 4	Store House	1 7	Town Skyscraper

Hypothesis 3 - The effects of visual aids on children's use of new vocabulary words

It was hypothesized that children who were exposed to visual aids before their play time in the block area would be able to use new vocabulary words. To test this hypothesis, observations were made during their play time in the block area to record if children were using the target vocabulary words that were introduced through the visual aids. The data collected through the Observation Charts were first sorted by week. A graph for each of the eight children listing the target vocabulary words and columns across for weeks 2, 3, and 4 was also created to record the amount of new vocabulary words children used. Whenever a child used a vocabulary word a tally mark was made on this list. Because children used the same vocabulary words more than one time, for the purpose of knowing how many words they learned in total for these weeks each word was counted only once. Table 7 illustrates the amount of words children learned as compared to the number of visits to the block area. The results showed for some cases no relation between the amount of visits to the block area compared to the amount of target vocabulary words used.

The Observation Chart was also analyzed to note which vocabulary words the children used mostly and which they used the least. The teacher/researcher looked at each vocabulary word and counted the times the vocabulary words were used by all the children. It was found that the most used target vocabulary words were garage, roof, wall, highway, street, and tunnel. The least vocabulary words used were ceiling, porch, and driveway. The words backyard and pathway were never used. Table 7 presents the amount of vocabulary words learned compared to the amount of visits to the block area during the intervention weeks.

Table 7

Total Amount of Vocabulary Words Learned Compared to the Amount of Visits to the Block Area

Children	A	B	C	D	E	F	G	H
Visits	10	8	8	4	5	8	6	3
Words	12	9	6	4	7	8	4	7

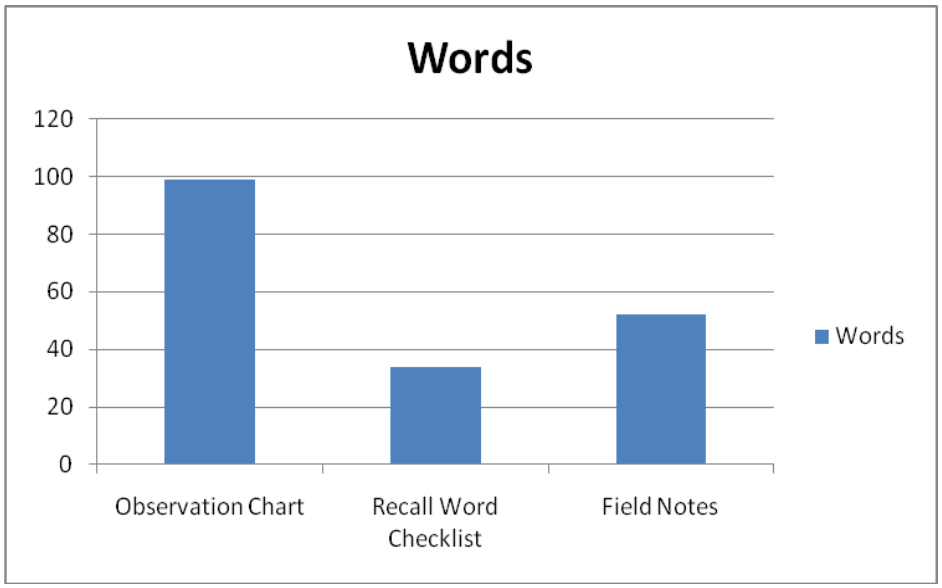
The Recall Word Checklists were used as a means to note if children were using the target vocabulary words when interacting with the teacher/researcher and the teacher's assistant. The Recall Word Checklists were sorted by week. The teacher/researcher made a list of the target vocabulary words and across weeks 2, 3, and 4. Next to each word a tally mark was made every time the target vocabulary word was noted. The data was analyzed only for the eight children who visited the block area during the pre- and post-weeks. Results showed that children used the target vocabulary words 34 times during the intervention weeks.

The same process was done to analyze the data collected using the Field Notes. Every time a child used the target vocabulary words a tally mark was made. The Field Notes were used to record the amount of times children used the target vocabulary words during other parts of the day. The results showed that the eight children used the target vocabulary words 52 times

The information that is collected through data must be summarized in an appropriate and meaningful format (Mills, 2003). Therefore, since the target vocabulary words were noted on all the data collection methods, the Observation Charts, the Recall Word Checklists and the Field Notes, a comparison of the three assessments was made. The results showed that the eight children used the target vocabulary words 99 times during their play in the block area during the intervention weeks. Figure 1 depicts the amount of target vocabulary words noted on each assessment method. The results can further show that making observations of children during their play while allowing interactions with the teacher/researcher may be the most effective method when collecting data from children at this age.

Figure 1

Amount of Vocabulary Words Noted on the Assessment Methods During the Intervention Weeks for the 8 Children



Moreover, in order to examine when the eight children began to use the target words as compared to the time they were introduced, an analysis was made. Again, the same data that was sorted by week previously was used. The data from weeks 2 to 4 were taken and a list of the target vocabulary words children used was created. The results showed that as the target words were introduced children began to use them that same week and the consecutive weeks. Table 8 shows when the target words were introduced and when they were used. It was noted that the target words highway, bridge, railroad and tunnel were used prior to the week they were introduced. It is assumed children who began to use these words had learned them from another source. Other children who began to use these words as well may have learned them from these children as they interacted during play.

Table 8

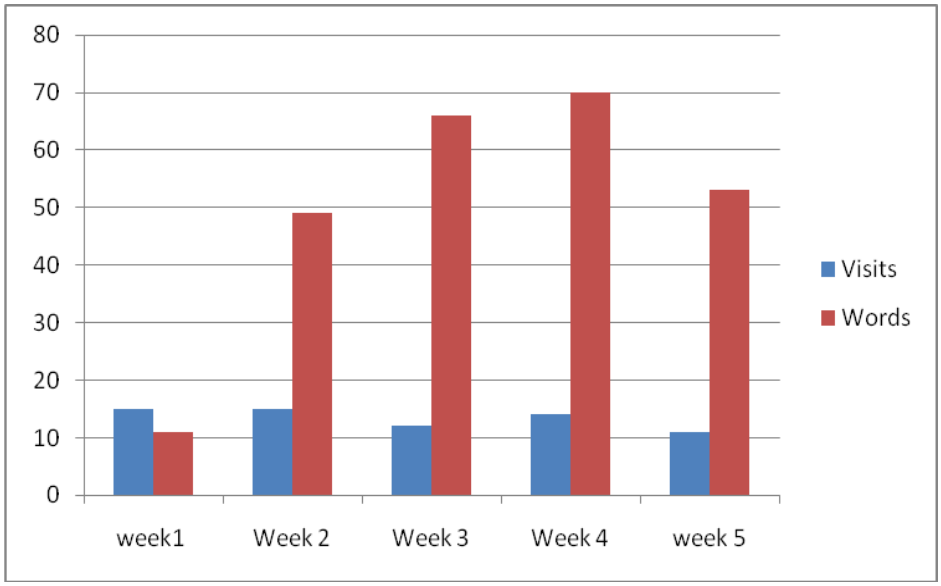
The Time of Introduction of Target Words Versus the Time of Use

	Roof	Wall	Garage	Porch	Gate	Ceiling	Backyard	Driveway	Pathway	Fence	Highway	Street	Town	Sidewalk	Bridge	Tunnel	Skyscraper	Railroad
Week 2																		
Week 3																		
Week 4																		

The results of the analysis supported the hypothesis that children who were exposed to visual aids before their play time in the block area would be able to use new vocabulary learned. To conclude, Figure 2 illustrates the total amount of visits compared to the total amount of vocabulary words for the eight children during weeks 1-5. The last week of the study children visited the block area the least, however, the amount of words children used that week was very high compared to week 1. The results further showed that children used the vocabulary words mostly during the third and fourth weeks of the study. The amount of visits to the block area does not relate to the amount of vocabulary words children used. Some children visited less than others and used more vocabulary words.

Figure 2

Amount of Visits to the Block Area Compared to the Amount of Vocabulary Words Used



Additional Research Questions

In addition to the hypothesis listed above, the teacher/researcher was also interested in some related questions and observations.

1) Does gender play a role on how visual aids are perceived and used in the block area?

In analysis of the data, the teacher/researcher noted that the block area was often visited by boys. Therefore, boys had more access to the picture books and photographs that were introduced during the intervention weeks since these visual aids were added to the block area following use in small groups. It was noted that during their play boys often referred back more to the photographs than to the books. Girls were found on a few occasions looking through the books and pointing out vocabulary words, but they paid little attention to the photographs. The amount of times boys and girls visited the block area was analyzed. There were 5 boys and 3 girls who visited the block area during the study. Girls visited a total of 17 times while boys visited 50 times. Boys visited the block area a greater number of times compared to the girls and the visual aids were structures that almost always attract the attention of the boys. Therefore, it can be concluded that boys and girls perceived the visual aids differently.

2) Which visual aid method has more effect on their language acquisition?

In order to determine which visual aid method had more effect the teacher/researcher examined what words were introduced using what method, against the words used the most. Vocabulary words introduced using the picture books were: roof, wall, backyard, driveway, town, and sidewalk. Out of this list children mostly used wall and roof. These words were from one of the books. It was noticed that children enjoyed this book in particular. The vocabulary words introduced using the community photographs were: garage, porch, gate, ceiling, pathway,

fence, highway, street, bridge, tunnel, skyscraper, and road. Out of this list children often used: garage, highway, street, tunnel, gate, railroad, and skyscraper.

The results showed that children mostly used words from the photographs. This may be because there were many photographs introduced compared to the amount of words introduced from the books. The photographs were also displayed individually in the block area where children had easy access to them. The books were on display as well, however the children were observed looking at the photographs more.

Summary of Results

The results of the study supported the hypothesis that children built the same structures and therefore their vocabulary was limited to the structures they built. As expected some children built a house, a school, and a racetrack. In addition to these structures some children built a farm a bridge, and a store. Children were learning about farms in the past weeks and the other structures were assumed children learned from different sources. Children's vocabulary words however were limited to what they built, there were no other descriptions offered about their structure, except for the one native English speaker who used more vocabulary words and the one child who knew about bridges.

It was then hypothesized that if children were exposed to picture books and photographs of the community before their play time in the block area they would be able to extend or elaborate on their constructions using the cues from these visual aids. The results revealed that children were able to elaborate on their constructions. Analysis of children's constructions during the last week of the study was made. Children were noted to build at higher block building stages compared to the first week of the study. Once the visual aids were introduced

children began to use more blocks and created detailed structures. Their buildings symbolized the structures from the picture books and the photographs introduced.

It was observed that children also used the vocabulary words introduced. These results supported the hypothesis that children would be able to use the target vocabulary words from the visual aids. Children were able to use the vocabulary words mostly during their play time in the block area. However, results showed children also used them throughout other parts of the day such as arrival time, during transitions and during outside time on the playground. The playground in this building (school) was located on the roof top. As children looked down at the different scenes from the playground they used many of the vocabulary words. Children were also found repeating the vocabulary words their friends mentioned during other play times.

Children's use of the vocabulary words was found to be less when interacting with the teacher/researcher and the teacher's assistant during recall time. When children were asked what they had done in the block area, most of them talked about who they had played with or just gave a general idea of what they had built with no details. Additionally, the results showed making observations of children's play while interacting with them was the best method for collecting data.

CHAPTER V

Discussion

The results of this study support the overall hypotheses that visual aids such as picture books and community pictures would motivate children's use of blocks to build different structures and to increase their vocabulary. Prior to the intervention weeks children built the structures they were most familiar with. Those structures were often a house, a school and a racetrack. Although children continued to build these structures during the intervention weeks, they were able to make them with more details. Children were also able to name the structures and its details using the new vocabulary words. The same new vocabulary words were carried out of the block area to other parts of the daily routine.

Hypothesis 1 – The effects of lack of exposure on block building and vocabulary

It was expected that children would generally build their house, their school, a race track or a castle. The results of the study partially supported this hypothesis as children continued to build some of the structures as expected. Children built a house and a school, but they also built a farm, a store, and a bridge. Although, children built additional structures, they used the blocks mostly at stage 3 and 4. They used blocks with space between them connected by a third block and they also used them to enclose spaces. It was noticed that children began to build bridges as one of the children had learned what a bridge is outside of the classroom and shared it with friends. This finding ran counter to the literature suggesting that children's verbal interactions during play in the block area support language development (Johnshon-Pynn & Nisbet, 2002). However, the results for the pre-intervention week showed the contrary in that children's verbal interactions were not enough to build a richer vocabulary. Children needed support in order to build a richer vocabulary. As indicated by Newburger and Vaughan (2006) as children develop

in their play with blocks, the need for vocabulary increases. Therefore, adults may need to assist children to develop and expand their vocabulary.

Hypothesis 2 - The effects of visual aids on children's constructions

It was expected that children who were exposed to visual aids before their play time in the block area would extend or elaborate on their constructions using the cues from the visual aids. The results of the study partially supported this hypothesis. Children's stage of block building was developed to a higher level as examined through pictures taken during the pre- and post-intervention weeks of the study. Because photographs were not taken during the intervention weeks and only for the beginning and the end of the study, the results cannot answer this hypothesis as expected. Photographs were not taken during the intervention weeks because of technical difficulties that prevented the teacher/researcher from using the camera.

In addition, as the children began to create more elaborate designs it was observed that the quantity of blocks available for them to use was not enough for the learning that was going on. While an adequate set of blocks were available for three or more children to build basic structures, this became insufficient as the study progressed and may have impacted results. Had there been more blocks available, more children may have elaborated on their structures. Children were also observed often building with partners. As the teacher/researcher analyzed the photographs in order to give each child a block building stage, it was found that some children had more than one photograph of the same structure and some had built a structure with friend(s). The teacher/researcher chose the photographs that showed a higher stage of block building and that score was given. Although a child may have built at a lower stage at one point if he/she built at a higher stage at another time it meant that child was capable of building at a higher stage.

Hypothesis 3 - The Effects of visual aids on children's use of new vocabulary words

It was expected that children who were exposed to picture books and community photographs before their time in the block area would be able to use new language learned. The results support this hypothesis and the children did learn new vocabulary words. Not only did the children learn new vocabulary but they were able to bring books into their play and use a richer vocabulary when talking about their community and in their conversations.

Hargrave and Senechal (2000) claimed that children that are read to while allowing them to become involved would benefit greatly in all areas of development. Books were indeed a method known for bringing in new vocabulary. However, it is vital to know what books to use for the outcome that is desired. When children were read to they were found to be interested in some books more than others. Thus, it became a challenge to get them to focus on the story the second time since books were read twice for the purpose of vocabulary acquisition. Or it could have also been because they were read to in a large group and it became hard for them to focus. These books were added to the block area and children had access to them, however not all children went back to use them for reference. For those children, who used the books in the block area, it was recorded in the data collected that they looked for the teacher to explain or say what the picture was again. Although, some children did not make reference to the books during their play in the block area, it was noticed children began to use books more frequently than in the past during other parts of the day. Children began to use books mostly to ask the teacher to read to them or to ask what a picture was. This finding correlates with a study by Pickett (1998) which stated that the intervention that resulted in a major increase in frequency of voluntary literacy behaviors was the presence of an adult model. However, for the purpose of this study this cannot be determined since adult modeling was not one of the intervention methods.

Although not a focus in this study, adult modeling and teacher interactions with students occurred naturally as the teacher was available and interrelated with students in the classroom setting. For the age level of the children in this study, repetition and modeling are important and they are done throughout the day for most of the daily activities. The results may have been different had the teacher/researcher planned to specifically model block building as an intervention strategy.

In the same manner once children were introduced to the community photographs, they had access to them in the block area. Some children were found looking at the photographs as they were building while some referred back to them to show friends they knew what it was or to have a conversation about how they knew what it was. As expected most children did not have the connection between the word and the object. However, children were found to have more conversations during the introduction of the photographs activities than when the books were introduced. It was noted that children became eager to share with others their past experiences and thoughts about the photographs. Strong-Wilson and Ellis (2006) advocated that when the community is brought into the classroom it lends itself for active learning, which is children learn through experimenting with and manipulating objects. In this study, the objects were photographs of buildings and structures that were in their community. It was observed that children became more conscious of the community and more comfortable when referring to it. It was found that besides children using the target vocabulary in the block area, they mostly used it during arrival time and during outside time. Children were found to have more conversations that targeted the vocabulary during the morning as they shared with the teachers their happenings of the night before. It was also observed that during their play outside in the roof playground students were more interested in looking at the community, thus having conversations among

each other and calling the teacher over to talk about what they had seen. These findings support the research of Fraser and Gestwicki (2002) in that they claimed that when children were given experiences that relate to their lives outside the classroom it gave them a sense of power and their views deepened as they felt comfortable in expressing their thoughts.

Collins (2010) found that hearing words accompanied by rich definitions prompted significantly more word learning. Therefore, the results of the vocabulary gained in this study could have also been caused by the teacher's interaction with the students during their play in the block area. The results of this study concur with Beck and McKeown (2007) who claimed that more instruction brought better results. Because children in this study were taught in various contexts, the frequency of the words, repetition of the story and direct explanation of the word's meaning were factors in the acquisition of the target vocabulary.

Furthermore, children were found using some words more than others. This could have been caused by their interests and past experiences. As children tied the object with the word, they became more comfortable in using the words during their play. Children gained new vocabulary words during this study and they used them during different parts of the day. Their visits to the block area remained almost the same while their vocabulary acquisition was higher.

Additional Research Questions

The findings in this study showed that the amount of visits to the block area by the boys was a lot higher than the visits by the girls. When at the block area girls showed more pretend play around their structures than the boys. Girls were also observed on more occasions looking through the books than the boys, although in general both genders did not make much use of the books. Unlike the boys which made reference to the photographs during their play, the girls did not show much interest in the photographs during their play in the block area. During the study

girls continued to be interested in setting up birthday parties and playing family roles. Girls were found to run back and forth between the house area and the block area. Perhaps, the approach the girls had to their dramatic play was related to their culture, in that many women in the Hispanic culture take on these roles.

Although girls' visits to the block area were not as many as the boys, girls were found using the target vocabulary more during other parts of the day. Because children showed more interest during the introduction of the photographs, for this study, in particular the photographs could have had a stronger effect on the vocabulary acquisition than the books. However, teacher and student interactions also have to be taken into account for the vocabulary gain.

Conclusions

In general this study indicates that introducing visual aids such as picture books and photographs of the community to children before their play time in the block area can serve as a positive method to develop their play and literacy skills. Children need what psychologists Jean Piaget and psychologist Lev Vygotsky referred to as "inside forces and outside forces" (Owocki, 1999, p.41). In this study what children could have already known or experienced was brought into the classroom for further investigation. The children in this study came from lower-income, urban homes where Spanish was the only language spoken. Many of them lacked educational experiences outside of the classroom as well as vocabulary words in Spanish and as well as English, therefore, it was imperative to find ways in which to enrich their play and literacy.

Through the use of the visual aids children were able to recreate some of the structures from the books but mostly from the community photographs. Provenzo and Brett (1983) advocated that after children are exposed to something new they use this knowledge in the form of play to illustrate what they have learned. However, in this study the structures the children

built were not analyzed as much as the vocabulary that they used during their play. This is an experimental flaw in this study because it did not determine how children developed in their play with blocks.

Children demonstrated what they had learned through the use of the new vocabulary words not only during their play in the block area but also during other parts of the day. The results in this study agreed with Hirsch (1994) in that "as soon as children have obtained the concept (idea) but lack the label, a new word will help them to remember and to talk about their construction" (p. 131). This gain was not solely due to the introduction of the visual aids although these methods may have given way for the use of new vocabulary. Other factors may have also played a role in this attainment such as peer interactions and teacher and student interactions.

Educational Implications

The results of this study indicated that children can learn new vocabulary words from different sources. Preschool children need language at all times. Language cannot be limited to lessons or certain parts of the school day. Teachers must take advantage of teachable moments and capitalize on children's interest. Children learn best when they are interested. In this study boys became interested in building tunnels, garages, and highways among other structures. These structures caught their interest and they demonstrated it during their play. On the contrary, these structures may not have been as appealing to the girls, therefore they continued building houses, and stores. Although, their structures remained almost all the time the same as in the pre-intervention week, girls were able to label their structures using some of the target vocabulary words.

In order for preschool children to attain new vocabulary, the same vocabulary has to be repeated under different circumstances. During the intervention weeks the vocabulary words from each book were introduced on two different days during the same week. However, the vocabulary words from the photographs were introduced only once and there was a large quantity of words, given the length of the study and the age group of the participants. Children at this age can acquire vocabulary words if repeated officially in different lessons and through regular conversations.

A preschool classroom is usually seen as a busy classroom where the children work hands-on throughout almost all parts of the day. Children have conversations at all times and they talk just about anything. This has to be taken into account when collecting data. If the notes are to be taken throughout many parts of the day it becomes overwhelming and almost not possible to be done. Preschool children have social, emotional and physical needs and those needs need to be met in order for them to be ready to learn.

Overall, this study demonstrated that children learn best when taught in a variety of ways. Children benefit from small group lessons and large group lessons. They also benefit from each other as they interact and share what they know and their experiences. Adult interactions are also of great benefit to children. Children look for the teacher as a provider and the teacher must try to meet all their personal needs, while offering them educational experiences.

The results have impacted my teaching in many ways. I have learned that meaningful lesson plans can be created to teach a concept children can use throughout the different areas of early childhood education. However, in the absence of an adult to interact with the children beyond bringing forth the lesson, the concept or idea may not be learned. I have also experienced

how important it is to bring the community into the classroom. As I observed children making those connections I realized what a great tool it was to accomplish different educational goals.

Limitations of the Study

This study was limited by its duration. It took place during a 5-week period, therefore it was too short. It was done during the last weeks to the end of the school year and children had higher absences during the last two weeks of the study. The temperature in the classroom was also very hot on some days and children were uncomfortable. This study had a small sample size. There were 15 children in the classroom, but the data could only be analyzed for the children that visited the block area during the first and last week of the study. This study was therefore done with only 8 participants. It is possible that if more children had participated in the study, there would have been different results. Also, photographs of the children's constructions during the intervention weeks were not taken because of technological difficulties. This was another limitation of this study since children's block building stages were scored according to children's comments noted on the observation forms.

The main limitation of this study was that there were not enough blocks for children to build with. When children began to use what they learned they became more creative in their structures, therefore the need to use more blocks. Blocks became enough for only 2 children to build towards the end of the study. Other children then opted to play around what was already built or found other materials besides blocks to play with. Another great limitation was the choice of books. The books did not repeat the target vocabulary words throughout, so the teacher/researcher had to go over the words with the children at the end of the story. This was observed to be less attractive for the children.

Implications for Future Research

The results of this study partially supported Hypothesis 2, in that the children would extend or elaborate on their constructions using the cues from the visual aids because of the lack of building blocks and the analysis flaw in this study. Perhaps, further research can examine children's play development with the blocks choosing a specific group of children that would often play with the blocks. If materials are provided for more children to build there can be a greater possibility that they can each be observed building their own structure.

Additional research can also investigate whether or not English language learners would acquire vocabulary words faster when they are given to them in their native language than in English. In this study there was a mix of both languages and whether children said it in Spanish or English, it was accounted as part of the results. This was only possible since the teacher/researcher spoke their native language. For other teachers who did not understand their language, this could have not been done. Children were able to learn some of the target vocabulary words in Spanish as well as during the interactions with the teacher/researcher. If children asked the teacher in Spanish what an item was the teacher/researcher would also answer back in Spanish.

Another possible study, therefore, is the influence of an adult in children's vocabulary acquisition during their play. Preschool children are very curious about the world around them. A classroom setting is new for them and almost anything you show them is also new, especially for the population this study was done. It is almost unavoidable not to offer language to them at this age. Perhaps, a study can be examining the effects of vocabulary acquisition during a lesson or during teacher and children interactions at play.

APPENDIX A

Block Building Stages Chart

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7

Stage 1. Blocks are carried around, not used for construction. This stage applies to the very young child.

Stage 2. Building begins. Children make mostly rows, either horizontal (on the floor) or vertical (stacked). There is much repetition in this early building pattern.

Stage 3. Bridging—two blocks with a space between them, connected by a third block—is used.

Stage 4. Enclosures—blocks placed in such a way that they enclose a space—are made. Bridging and enclosures are among the earliest technical building problems that children have to solve.

Stage 5. With age, children become steadily more facile and imaginative in their block building. They use more blocks and create more elaborate designs, using pattern and balance.

Stage 6. Naming of structures for dramatic play begins. Before this stage, children also may have named their structures, but the names were not necessarily related to the function of the building.

Stage 7. Block buildings often reproduce or symbolize actual structures the children know, and there is a strong impulse toward dramatic play around the block structures.

Adopted from *The Block Book* (Hirsch, 1994)

APPENDIX B

FIELD NOTES CHART

Name	Arrival Time	Breakfast Time	Greeting Time	Lunch Time	Playground Time

Vocabulary words:

1. Backyard
2. Bridge
3. Ceiling
4. Driveway
5. Fence
6. Garage
7. Gate
8. Highway
9. Pathway
10. Porch
11. Railroad
12. Roof
13. Sidewalk
14. Skyscraper
15. Street
16. Town
17. Tunnel
18. Wall

Filled out by: _____ Date: _____

APPENDIX C

Observation Chart

Date _____

Child	Words	Action	Comments
	Backyard		
	Bridge		
	Ceiling		
	Driveway		
	Fence		
	Garage		
	Gate		
	Highway		
	Pathway		
	Porch		
	Railroad		
	Roof		
	Sidewalk		
	Skyscraper		
	Street		
	Town		
	Tunnel		
	Walls		

The stages of block building were adapted from *Building Structures with Young Children* (Chalufour & Worth, 2004).

APPENDIX D

Recall Word Checklist

Instructions: When the child says any of the words on the list below write down the word(s) next to his/her name under the "Vocabulary Words" column.

Names	**Vocabulary Words**

Vocabulary words:

1. Backyard
2. Bridge
3. Ceiling
4. Driveway
5. Fence
6. Garage
7. Gate
8. Highway
9. Pathway
10. Porch
11. Railroad
12. Roof
13. Sidewalk
14. Skyscraper
15. Street
16. Town
17. Tunnel
18. Wall

Filled out by: _____ Date: _____

APPENDIX E

Lesson Plans: Story Book Reading 15 Minutes

Week 2, Day 1 & 2		
Book	*Building a House* by Byron Barton	
Vocabulary	roof, wall	
	Day 1	Day 2
	- Open with book, title, author, and illustrator. - Begin to read the book. - Encourage children to participate by asking questions. - Provide feedback to children's comments and questions.	- Ask if anyone remembers the story. - Read the story again follow same procedure as Day 1 while providing vocabulary words by pointing at pictures and naming them. - Ask children what words were mentioned. -

Week 3, Day 1 & 2		
Book	*With my Brother* by Eileen Roe	
Vocabulary	backyard, driveway	
	Day 1	Day 2
	- Open with book, title, author, and illustrator. - Begin to read the book. - Encourage children to participate by asking questions. - Provide feedback to children's comments and questions.	- Ask if anyone remembers the story. - Read the story again follow same procedure as Day 1 while providing vocabulary words by pointing at pictures and naming them. - Ask children what words were mentioned. -

Week 4, Day 1 & 2		
Book	*School Bus*	
Vocabulary	sidewalk, town	
	- Open with book, title, author, and illustrator. - Begin to read the book. - Encourage children to participate by asking questions. - Provide feedback to children's comments and questions.	- Ask if anyone remembers the story. - Read the story again follow same procedure as Day 1 while providing vocabulary words by pointing at pictures and naming them. - Ask children what words were mentioned. -

APPENDIX F

Lesson Plans Small Group Time

Community Photographs

15-20 minutes

LESSON PLAN (Week 2, Day 3)	
Goal	Children will attach a vocabulary word to the object shown on the photographs.
Materials	Photographs of a **garage** and a **porch** 5" x 7" in color. Two sets for each child, one set for the teacher/researcher and one set for the teacher/assistant. A photo album.
Step 1	Introduce photographs by saying "Today I have some photographs I want to share with you." Give each child a set of two photographs. Ask children to make comments about the photographs. Allow children to share personal experiences.
Step 2	Acknowledge their comments. Provide vocabulary words for the photographs. Ask children to repeat the vocabulary words. Say "what is this picture of again?"
Step 3	Have children sort the pictures on the table in two piles one for the garage and one for the porch photographs. Use the photo album and place a set of the photographs in it. Announce that the photo album will be added to the block area for their use and that we will be adding more pictures later.

Lesson Plans Small Group Time

Community Photographs

LESSON PLAN (Week 2, Day 4)	
Goal	Children will attach a vocabulary word to the object shown on the photographs.
Materials	Photographs of a **gate** and a **ceiling** 5" x 7" in color. Two sets for each child, one set for the teacher/researcher and one set for the teacher/assistant. A photo album
Step 1	Introduce photographs by saying "Today I have some photographs I want to share with you." Give each child a set of two photographs. Ask children to make comments about the photographs. Allow children to share personal experiences.
Step 2	Acknowledge their comments. Provide vocabulary words for the photographs. Ask children to repeat the vocabulary words. Say "what is this picture of again?"
Step 3	Have children sort the pictures on the table in two piles one for the gate and one for the ceiling photographs. Use the photo album and place a set of the photographs in it. Announce that the photo album will be added to the block area for their use and that we will be adding more pictures later.

Lesson Plans Small Group Time

Community Photographs

LESSON PLAN (Week 3, Day 3)	
Goal	Children will attach a vocabulary word to the object shown on the photographs.
Materials	Photographs of a **pathway** and a **fence** 5" x 7" in color. Two sets for each child, one set for the teacher/researcher and one set for the teacher/assistant. A photo album
Step 1	Introduce photographs by saying "Today I have some photographs I want to share with you." Give each child a set of two photographs. Ask children to make comments about the photographs. Allow children to share personal experiences.
Step 2	Acknowledge their comments. Provide vocabulary words for the photographs. Ask children to repeat the vocabulary words. Say "what is this picture of again?"
Step 3	Have children sort the pictures on the table in two piles one for the pathway and one for the fence photographs. Use the photo album and place a set of the photographs in it. Announce that the photo album will be added to the block area for their use and that we will be adding more pictures later.

Lesson Plans Small Group Time

Community Photographs

LESSON PLAN (Week 3, Day 4)	
Goal	Children will attach a vocabulary word to the object shown on the photographs.
Materials	Photographs of a **highway** and a **street** 5" x 7" in color. Two sets for each child, one set for the teacher/researcher and one set for the teacher/assistant. A photo album
Step 1	Introduce photographs by saying "Today I have some photographs I want to share with you." Give each child a set of two photographs. Ask children to make comments about the photographs. Allow children to share personal experiences.
Step 2	Acknowledge their comments. Provide vocabulary words for the photographs. Ask children to repeat the vocabulary words. Say "what is this picture of again?"
Step 3	Have children sort the pictures on the table in two piles one for the highway and one for the street photographs. Use the photo album and place a set of the photographs in it. Announce that the photo album will be added to the block area for their use and that we will be adding more pictures later.

Lesson Plans Small Group Time

Community Photographs

LESSON PLAN (Week 4, Day 3)	
Goal	Children will attach a vocabulary word to the object shown on the photographs.
Materials	Photographs of a **bridge** and a **tunnel** 5" x 7" in color. Two sets for each child, one set for the teacher/researcher and one set for the teacher/assistant. A photo album
Step 1	Introduce photographs by saying "Today I have some photographs I want to share with you." Give each child a set of two photographs. Ask children to make comments about the photographs. Allow children to share personal experiences.
Step 2	Acknowledge their comments. Provide vocabulary words for the photographs. Ask children to repeat the vocabulary words. Say "what is this picture of again?"
Step 3	Have children sort the pictures on the table in two piles one for the bridge and one for the tunnel photographs. Use the photo album and place a set of the photographs in it. Announce that the photo album will be added to the block area for their use and that we will be adding more pictures later.

Lesson Plans Small Group Time

Community Photographs

LESSON PLAN (Week 4, Day 4)	
Goal	Children will attach a vocabulary word to the object shown on the photographs.
Materials	Photographs of a **skyscraper** and a **railroad** 5" x 7" in color. Two sets for each child, one set for the teacher/researcher and one set for the teacher/assistant. A photo album
Step 1	Introduce photographs by saying "Today I have some photographs I want to share with you." Give each child a set of two photographs. Ask children to make comments about the photographs. Allow children to share personal experiences.
Step 2	Acknowledge their comments. Provide vocabulary words for the photographs. Ask children to repeat the vocabulary words. Say "what is this picture of again?"
Step 3	Have children sort the pictures on the table in two piles one for the skyscraper and one for the railroad photographs. Use the photo album and place a set of the photographs in it. Announce that the photo album will be added to the block area for their use and that we will be adding more pictures later.

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