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THE CREATIVE CHILD AT HOME

Ellen Herget

98 Pages

This case study examined how two children showed creativity in their home environment. The study analyzed how the children engaged in four aspects of creativity, including problem solving, imagination, artistic expression, and play. Both children demonstrated many aspects of creativity when making artwork in their own home. The more the children were engaged in the artwork, the more involved they were in the act of creativity. The girl demonstrated more problem solving skills, whereas the boy, due to his younger age, showed more imagination and play. While the children were working on their art projects, they showed imagination and problem solving through the association of their experiences, both inside and outside of the home. The home environment proved to affect the children's creativity in many positive ways through the access of resources familiar to the children. Having the parents present helped the children feel comfortable with problem solving.

KEYWORDS: creativity, play, imagination, artistic expression, problem solving, critical thinking.

THE CREATIVE CHILD AT HOME

ELLEN HERGET

A Thesis Submitted in Partial
Fulfillment of the Requirements
for the Degree of

MASTER OF SCIENCE

School of Art

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THE CREATIVE CHILD AT HOME

ELLEN HERGET

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This thesis is dedicated to my cousins and their children. They are one of the most dedicated and heartwarming families I know.

I would also like to acknowledge my professors for expanding my mind to the art education world and showing me the importance of being a lifelong learner.

E. H.

CONTENTS

	Page
ACKNOWLEDGMENTS	i
CONTENTS	ii
CHAPTER I: INTRODUCTION	1
The Problem and Its Background	1
Purpose of Study	1
Need for the Study	2
Research Question	4
Definition of Terms	4
CHAPTER II: REVIEW OF LITERATURE	6
Creative Thinking Skills	6
Children's Acquisition of Problem Solving Skills through Art Making	7
Parent and Teacher Role in Education	8
Characteristics of Creativity	9
Children's Play	10
CHAPTER III: METHODOLOGY	13
Imagination	14
Play	14
Artistic Expression	14
Problem Solving	15
Participants	16
Demographic Information	17

Limitations	17
Summary	18
CHAPTER IV: ANALYSIS	20
Data and Analysis	20
Questionnaire	20
Day One: Project One and Two (Appendix B)	22
Project One: Craft Stick Trees - Closed Ended	22
Project Two: Under the Sea, Crayon Resist - Open Ended	26
Day Two: Projects Three and Four (Appendix C)	30
Project Three: Cup and Nylon Snakes - Close Ended	30
Project Four: Out of the Zoo - Open Ended	31
Day Three: Projects Five and Six (Appendix D):	38
Project Five: Recycled Maracas- Closed Ended	38
Project Six: Painted Rocks- Open Ended	41
Day Four: Projects Seven and Eight (Appendix E):	44
Project Seven: Puzzle Piece Picture Frame - Closed Ended	44
Project Eight: Textured Prints - Open Ended	46
CHAPTER V: DISCUSSION AND RECOMMENDATIONS	49
Creative Activities	49
Imagination	50
Play	52
Artistic Expression	54
Problem Solving	55

Affects of Home Environment	57
Reflection and Recommendations	59
REFERENCES	66
APPENDIX A: Questions for Parents	70
APPENDIX B: Lesson One	71
APPENDIX C: Lesson Two	73
APPENDIX D: Lesson Three	75
APPENDIX E: Lesson Four	77
APPENDIX F: Pictures	79

CHAPTER I: INTRODUCTION

The Problem and Its Background

As an art educator, I have taught all age levels in school settings and have always been fascinated with children's creative abilities. Zimmerman (2009) noted that "many contemporary psychologists and educators agree that creativity is a complex process that can be viewed as an interactive system in which relationships among persons, processes, products, and social and cultural contexts are of paramount importance" (p. 386). My curiosity about my students' creativity focuses on wanting to know how their families' lifestyles have an impact on their creativity. Growing up with three sisters, I have found that we all have a certain knack for something creative. When I reflect on my sisters' interests, they each demonstrated a passion for a different aspect of the arts. I realized, as a child, I had better fine motor skills for making things, whereas my younger sister was involved more with the act of play and using her imagination. Growing up with limited funds, my parents encouraged us to "make our own fun." We did not have endless art supplies and toys, so we had to use our imaginations and create the world in which we wanted to play. My mother taught us how to sew and would work with us to create doll clothes. These were special to us because they were original designs that no other children had, yet were affordable for our parents. Early into our childhood this taught us problem solving skills and how to be creative.

Purpose of Study

Daniel Walsh suggested that children were shaped in profound and decisive ways by the experiences available to them (Thompson, 2003). When I think about how I have become an artist and art educator, I can always trace it back to my home-life as a young child and the opportunities my parents provided. What I remember most significantly, as a child, was

exploring my surroundings and being creative with what I could locate. My parents also gave me that opportunity. There are many ways to seek out how children are engaging their minds in creative activities. The purpose of this study was to observe two children's creative behavior in their own home environment and note how the environment affected the outcome of art lessons taught to these two siblings.

Need for the Study

Creative thinking skills are crucial when it comes to schooling and future employment (Gustina and Sweet, 2014). A study showed that children start to show imagination and creative thinking skills in pre-school around the ages of five and seven (Taneri, 2012). Taneri stated that most parents were not aware of the meaning of creative thinking skills, therefore, it is necessary to increase parents' and teachers' awareness of these skills. Parents and guardians would benefit knowing how to use this awareness to encourage their children's problem solving and creative thinking.

Young children learn how to interact with other children and the environment in which they live. According to Bresler, Thompson, Chapman, and Ayers (2002), children learn both through their interactions with materials and through dialogue and activity that is shared with parents, teachers, and other children. The authors observed that development and learning are sociocultural phenomena. Wertsch (1998) stated,

We, as humans are meant to explore and figure out our environments. The mastery of the tools and symbols valued by the child's home culture and the acquisition of "higher mental processes" are made possible by the child's immersion into society. (p. 90)

Murphy, Rowe, Ramani, and Silverman (2014) believed that children begin to acquire the ability to process information and to discern between alternatives at a very young age through

interactions and experiences with others in their homes and communities. Schooling merely represents an extension of the acquisition of such capacities. Thompson (2003) stated:

It seems completely logical, and somehow deeply comforting, to think of children's lives as seamlessly integrated, their agenda for discovering the world, orderly and sequential. It makes sense to think that their approach to drawing evolves in predictable ways as the experiences they strive to depict become increasingly expansive and complex. It is reassuring to assume that the structure of children's drawing reflects the evolving structures of meaning that allow children to make sense of the particular circumstances of their lives. (p. 137)

Gardner (as cited in Perlmutter & Kaufman, 1991) believed that exposing children to different materials at home will create problem solving skills and therefore will help children find their strengths, passions and interests. Green (2014) stated that parents played a critical role in nurturing their children's creativity, but many wondered how to infuse more creativity in their routines. Hadani (as cited in Green, 2014) stressed, "The key is to foster a sense of creative confidence in children so they are not afraid to express their unique ideas" (p. 66). Parent researchers, such as Howard Gardner, have previously used family members as research participants to study intelligence, giftedness, and child development. Gardner identified nine intelligences (linguistic, logic-mathematical, musical, spatial, bodily/kinesthetic, interpersonal, intrapersonal, existential, and naturalistic) (Ozier, 2016). Gardner then illustrated this through a case study using his son (Perlmutter & Kaufman, 1991).

This study added to the research by demonstrating how two young siblings show creativity, in different developmental stages, within their household. There are very few studies that have correlated creativity with the home environment at a young age. Hein, Tan,

Aljughaiman, and Grigorenko (2014) focused on characteristics of the home context for the nurturing of gifted children in Saudi Arabia. This concept focused more on the parents' education level and how it related to children being educationally gifted. Researchers like Laura Berk (2013), studied children's developmental level. Berk stated that, in Piagetian theory, children's ability increases in cognitive stages as they learn to process information (p.282). Berk also cited Siegler's *model of strategy choice*, which highlighted children's experimentation and use of different mental strategies that are the results in differences in children's cognitive ability. Since there are very few recent studies that focus on the young child being creative in their home environment, it is critical for additional research to be done in order for us to have a better understanding of children's capabilities for creativity at home.

Research Question

In order to focus this study, I formulated the following research questions:

1. In what ways, if any, do children engage in creative acts when making artwork at home?
2. How do children use their imagination to problem solve outside of a school environment when presented with activities in the arts?
3. In what ways, if any, does the home environment affect children's creative actions?

Definition of Terms

Artistic Expression: According to Amorino (2009), artistic expression is an engagement that involves an integration of sensory, emotional, kinesthetic, and cognitive ways of knowing and can lead to introspection and truth-producing processes. Children can form hypotheses and experiment with color theory and mix colors to see what they will become. They are able to achieve personal goals if given the time and support.

Creative Thinking: the process of thinking about ideas or situations in an imaginative and unusual manner so as to comprehend these ideas or situations better and to respond them in new and constructive ways (Taneri, 2012).

Critical Thinking: critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action (Scriven and Paul, 1987).

Imagination: The ability to (1) detach oneself from the tangible world and move beyond concrete situations; (2) not be restricted to the immediate perceived world; (3) internalize perceptions; (4) separate action and objects from their meaning in the real world and give them new meanings; (5) bring together and integrate experiences and perceptions; and (6) contemplate what is not but might be (Duffy, as cited in Pitri, 2013, p 44).

Play: a state of being, purposeless, fun and pleasurable (Stuart Brown, MD as cited in Tartakovsky, 2012).

Problem Solving: Converting an actual current state into a desired future state. Thinking creatively and critically about increasing the quality of life, you are actively involved in problem solving (Rusbult, 2001).

CHAPTER II: REVIEW OF LITERATURE

This chapter will explore the research behind the developmental stages of the creative child as well as the influences and impacts of the home environment. I have broken the research down into the subtexts of creative thinking skills, problem solving, parent-teacher role in education, characteristics of creativity, and children's play.

Creative Thinking Skills

Creativity plays a crucial role in the development of a child (Sefton-Green, 2000). According to Burris and Garton (2006), in today's societies, we are lacking skills in communication, problem-solving, multi-faceted thinking, and creative thinking; these are the necessary skills for employment and are needed to adapt to today's world and the world of the future. Martin, Craft, and Tillema (2002) defined creative thinking as the process of thinking about ideas or situations in an imaginative and unusual manner so as to comprehend these ideas or situations better and to respond to them in new and constructive ways. The authors argue that creative thinking skills teach people to learn, view ideas in a new perspective, and put information together that generates new ways of thinking. Taneri (2012) argues that, "creative thinking can be supported by developing a unique set of thinking skills, such as problem solving, analyzing, criticizing, and inquiring skills" (p. 94). Parents may not be aware of what creative thinking skills entail. Many people may think that to be creative one must be talented in art or a genius. According to Zimmerman (2009), this is not the case. Teachers and parents need to be aware of what creative thinking skills are and how one can encourage their student or child to think creatively. These are taught and developed skills, and must be encouraged at a young age (Bresler, et al., 2002).

According to Wiles and Bondi (1980), creativity does not have to be subject-specific. Creative thinking skills can be found and implemented in all subjects. Creativity in children is enhanced with education, and many researchers have noted that preschool and early childhood education can especially help to develop creative thinking (Taneri, 2012; Singer & Singer, 2005). Calvert and Wilson (2010) suggested that early imagination is the building block of creativity, and childhood experiences helped to determine creativity and problem solving skills for adulthood.

Children's Acquisition of Problem Solving Skills through Art Making

The process children need to learn in solving problems consists of being aware of the problem, asking questions, and being committed to solving it. According to Pitri (2013), there is a connection between creative problem solving skills and problem finding, investigation, planning, commitment, imagination and flexibility. Investigation is a result of one being curious; this links to the original idea of how creative thinking can be developed through problem solving, analyzing, and criticizing, and inquiring. Robert Marzano (1988) stated that critical and creative thinking complement each other and share similar attributes. Marzano believes that:

All good thinking involves both quality assessment and the production of novelty.

Critical thinkers generate ways to test assertions; creative thinkers examine newly generated thoughts to assess their validity and utility. The difference is not of kind but of degree and emphasis. (p. 17).

An example would be a student being able to think imaginatively about how he or she will formulate an idea for a project.

Arnheim (1969) believed that there is a natural relationship between art and thought. Thinking needs visual images and images need thought. Arnheim (1969) concluded that the

visual arts are a home ground for thinking. Visual thinking has always been part of the human sensorium. By looking at visual images humans are using sensory thinking. According to Pitri (2013), art making allowed children who are curious to hypothesize about their broad interests and act through experiments and tests with both ideas and materials. Children can form hypotheses and experiment with color theory and mix colors to see what they will become. They are able to achieve personal goals if given the time and support.

Art making includes the imagination. Duffy (as cited in Pitri, 2013) defined imagination as “the ability to detach oneself from the tangible world, not being restricted to the immediate perceived world, giving objects from the real world new meanings, and integrating experiences and perceptions” (p 44).

Flexibility is another aspect of children’s problem solving. It allows children to adapt and adjust to new situations. It also helps children consider other people’s ideas and perspectives when problem solving (Duffy, 1998). Pitri (2013) stated that it is important for problem solvers to make choices, which can be explained. Teachers and parents should be asking children questions while they are creating or solving problems. This helps children reflect on their thinking process and helps them perceive the organizational structures they are using to processing data.

Parent and Teacher Role in Education

A study from Singer and Singer (2005) stated that after the age of seven, students’ creativity and acts of play start to decline because of the high stress placed on students’ performance on tests in the schools. They believed that parents and teachers are more focused on standardized tests than on children. Bresler, et al., (2004) believed that parents and teachers can help tremendously when it came to the development of creative skills in children. It was

important that parents realized how much impact they made on their children's future by having them work on problem solving skills, play, the use of fine motor skills, and imagination (Singer & Singer, 2005). Parents and teachers should be enthusiastic about their children solving problems and using their imagination. This focus on the child can be difficult for parents after a long day's work. However, according to Taneri (2012), for the child it is the most influential and critical time for learning. If parents are not knowledgeable about how to implement games and activities that encouraged creative thinking, they can start by observing their children's behavior and ask simple questions about what they are doing. For example a parent might ask "How did you come up with that idea?" or "What is your next step in this project?" Simple questions made the child think of scenarios and help create problem-solving skills. Books, games, and sometimes educational television can helped with these skills as well (Singer & Singer, 2005).

A large part of the development of the child took place at home and at a very young age (Sirota, 2010). If parents were more active in their child's education, better student performance and achievements can result (Barton & Coley, 1992; Yan & Lin, 2005). According to Taneri (2012), by giving children more responsibility, parents will facilitate their children's development of self-confidence and risk-taking. Having a safe and supportive home environment can be beneficial when it comes to children exploring their creative thinking skills, and does not necessarily correlate with household income.

Characteristics of Creativity

It is difficult to state what makes a child creative. According to Ellermeyer (1993), a creative child is one who would come up with many different, unusual, original, or detailed solutions to problems. Taneri (2012) believed that "creative thinking is one of the necessary skills to adapt today's and future's world" (p. 92). Today, society requires that individuals learn

the abilities of problem solving, multi-faceted thinking, communication, and creative thinking skills; these in turn create characteristics of greater employability.

Creativity and problem solving are requirements for critical thinking. Walsh and Paul (1988) stated how one should not relate intelligence and critical thinking with each other. They are both different from each other, yet have interdependent abilities. Critical thinking and creativity are skills that can be learned and improved over time. Critical thinking is important for enabling skills, processes and operations (Costa 1985; Howe and Warren 1989). According to Kaufman and Sternberg (2007), creative people solved problems in an appropriate, advanced, and high quality manner. Problem solving helps children feel in control, become aware of changes, and cope with challenges. The process of being creative requires problem solving. Olson (1980) stated that problem solvers are capable of recognizing problems, and engaging their minds to solve them. People who have developed good problem solving skills are open to their own ideas as well as the ideas of other's in order to solve problems. They are able to use their minds to transform and solve ideas for a usable result.

Children's Play

According to Ramugondo (2012), children's act of playing prepares them for their future. As children make up games and rhymes they are learning to be active agents in social change and continuity. Bloch and Choi (1990) observed that the act of free, informal play started disappearing towards the beginning of the early 19th century. At that time, children were directed to particular types of play and discouraged from using imagination and exploration. Discipline, orderly behavior, and encouragement of uniformity and control were the goals for children in the 19th century. It wasn't until the end of the 19th century that people began seeing the importance of independence, creativity, and freedom of play.

Sutton-Smith (1997) identified different forms of children's play currently permitted by adults. He listed them as Play as Progress, Fate, Power, Imaginary, Self, Identity, and Frivolity. The most popular was *Play as Self and Imaginary*, or giving the child freedom to express themselves and their imagination. The other forms of play were seen to not have been as great of an influence. Bloch and Choi (1990) and Sutton-Smith (1997) agreed that adults had a great deal of power and influence over the child's act of play. The family household appeared to have a significant hold on a child's play behavior. Play is a reflection of the family's unfolding narrative and is important for future social aspects of life. Ramugondo (2012) observed that the approach of play can translate into other future occupations, especially where differences in technological skills exist. The act of play, at a young age, can not only help to develop future social and occupational skills, but it can also translate into having a healthier life. Wilson (as cited in Sunday, McClure & Schulte, 2015) stated that

There is a difference between children's play art and the art that children produce in school. He describes children's play art as spontaneous; it is the art that children make for themselves, often outside the confines of the classroom. The art children make in school tends to be primarily initiated and guided carefully by the teaching adults. (p. 4)

Meador (as cited in Taneri, 2012) stated that creativity begins to decline when children start school. Meador is not arguing that education reduces creativity, but it indicates the inadequacy of the methods used in education to develop creative thinking skills for education. Parents and teachers focused on student performance on exams, rather than on creative thinking skills. Malaguzzi (as cited in Taneri, 2012) stated that in order to recognize children's creativity, adults should focus on the cognitive process instead of the achievement scores of children. Sunday, McClure and Schulte (2015) suggest that as a language and mode of communication, art

offers children the opportunity to play with ideas and generate conclusions about themselves and their experiences.

Carroll & Tucker (2007) explained that giving children open-ended assignments or elaborate problems to solve allows them to add personal significance to the project, and is good for all developmental levels of children. They explained that storytelling and making up stories is another activity that gives children the experience of play and problem solving, which can be fun, entertaining, and a behavioral process that can enhance their creativity. It is important that when working with a child, the parent or instructor expand everyday activities to be open-ended with materials that can encourage the testing of ideas and encourage problem solving. The environment should be open and comfortable so as to stimulate learning in children and help encourage their problem-solving skills, rather than being one of formal and direct instructions. Schools especially should not have such “serious” formal directed play, but rather be flexible and open to creative play in the classroom. Piaget (as cited in Berk, 2001) pointed out:

Pretending is mentally representing the world that, along with gestures, language, and drawings, develops rapidly in early childhood. Through it, children practice and strengthen their capacity to represent their experiences.

CHAPTER III: METHODOLOGY

According Anderson, Leahy, DelValle, Sherman, and Tansey (2014) a case study can be defined as a

descriptive, exploratory or explanatory analyses of a person, group, event, policy, project, decision, or institutions. Case studies explore a bounded system through in-depth data collection, involving multiple sources of information, and reporting a description of themes (p. 89).

This case study will provide me with the opportunity to answer my research questions and experience the process of art making in a home environment. I will obtain in-depth data through multiple sources and conclude themes based on the data.

This case study took place at a family's home with two children, ages three and six. This study explored how children created art activities when in a home environment. The children were engaged in different art projects once a week for a month (four, one-hour sessions) to gain knowledge about the production of art. The projects had a one-hour time cap and had the children participate at the same time of day during each visit. The children participated in a closed-ended project then finished with an open-ended project during each visit. The close-ended project had directions that I gave to the children in a step-by-step manner. The open-ended project the children participated in was loosely instructed; I proposed ideas, and I asked the children questions about their work. I explored creativity in four categories using Taneri's (2012) description: imagination, play, artistic expression, and problem solving. Due to the children's different ages, I also noted stages of cognitive developmental growth. The following identifies each of the four categories.

Imagination

Art making should include the use of the imagination. Duffy (as cited in Pitri, 2013) concluded that to imagine is to:

(1) Detach oneself from the tangible world and move beyond concrete situations; (2) not be restricted to the immediate perceived world; (3) internalize perceptions; (4) separate action and objects from their meaning in the real world and give them new meanings; (5) bring together and integrate experiences and perceptions; and (6) contemplate what is not but might be. (p 44)

Play

In relation to play, Wilson (as cited in Sunday, McClure, Schulte, 2015) described children's play art as spontaneous; "it is the art that children make for themselves, often outside the confines of the classroom" (p. 4). Storytelling and making up stories is another activity that gives children the experience of play (Carroll & Tucker, 2007). According to Ramugondo (2012), children's act of playing prepared them for their future. As children make up games and rhymes they are learning to be active agents in social change and continuity. I noted whether the children made up stories, made up games, made up rhymes, were spontaneous with project, and whether they developed social skills.

Artistic Expression

I looked for the children engaging in artistic expression. According to Pitri (2013), art making allowed children who are curious to hypothesize about their broad interests and act through experiments and tests with both ideas and materials. Children can form hypotheses and experiment with color theory and mix colors to see what they will become. They were able to achieve personal goals if given the time and support. I made note of whether the children were

curious, made hypothesis, experimented and tested out ideas, used materials to test out ideas, and whether they exhibited flexibility in their approach to the work they made.

Problem Solving

I looked at how the children conducted problem solving. Problem solving helped children feel in control, become aware of changes, and cope with challenges. The process of being creative required problem solving. Olson (1980) stated that problem solvers are capable of recognizing problems, and engaging their minds to solve them. People who have developed good problem solving skills are open to their own ideas as well as the ideas of other's in order to solve problems. They are able to use their minds to transform and solve ideas for a usable result. I noted whether the children were aware of challenges, were recognizing problems, were open to their own ideas, were showing confidence, were open to the ideas of other's, were looking for a usable result, and whether they were asking questions.

Finally, I looked at the different approaches each child used to complete each project. I noted stages of cognitive development. According to Berk (2013), preschoolers between the ages of three and four, perform better in situations in which they follow commands. "In more complex tasks, requiring children to inhibit distracting stimuli, marked gains occur from early to middle childhood" (Berk, 2013, p. 290).

For documentation and reviewing purposes, university Institutional Review Board approval gave me authorization to video record the four lessons. I also received permission to take pictures of the children while they were working on their projects. During the four sessions, I documented each time one of the children showed one of the four aspects of creativity.

This study included parent interviews to understand the children's interests and to put the children's creative experiences into context, also to learn about the additional art activities that

the children engaged in at school and at home. The goal within this qualitative research was, through rich description, to analyze the art making experiences of the child participants under study.

The questions I asked the parents were:

- What visual art activities do you generally do with your children at home?
- What is your definition of visual arts?
- How long have your children been in school/daycare?
- What do they do for visual art activities in the school/daycare?
- What do you think your child's favorite activity is?
- What is your routine with your children during the week?

I videotaped each session with the children with parent permission and child assent. I had open-ended conversations with the children so they would tell me about their artwork or activities. I conducted these open-ended questions throughout the closed-ended projects as well as the open-ended projects.

The questions that were asked to the children were:

- What are your plans for the next step?
- What are you going to use to make this?
- Can you do it another way?
- Why did you make these choices?
- What would someone else do?

Participants

I studied my cousin's two children who are Caucasian and are ages three and six years old. The participants' identities will remain confidential. The three-year-old boy is in pre-school

and attends every day. The six-year-old girl is in the first grade and attends a private elementary school. Their parents are married; both are 36 years old and live in the same household in a Midwestern city. The parents are both lawyers working full time at different law firms. The mother received her undergraduate degree at the University of Illinois and her law degree at Washington University in St. Louis, Missouri. The father received his undergraduate degree at Illinois Wesleyan University, his law degree at Washington University in St. Louis, Missouri and his MBA at the University of Chicago.

Demographic Information

According to city-data.com, this family lives in an urban area in the heart of a Midwestern city with a population of 115,828, which is 62% white, 26.9% African American, 4.6% Asian, and 4.9% Hispanic or Latino (xx, Illinois, 2016). They own a home that has a backyard with a play-set for the children. Within their neighborhood the values of the homes range from \$130,000 to \$379,000. The city is known to have a range of neighborhoods with varying socioeconomic levels. The schools are demographically mixed. The estimated median household income in the city is \$42,189. The city's main employers are a heavy equipment manufacturer and a large hospital. According to the girl's school website (xx Academy, 2016) the children in this private school test on average two to three points higher on every category in state standards for their age.

Limitations

The time frame was limited to one month. Parents could decline to answer interview questions. Parents could also decline to have their children videotaped. Observation dates were varied according to parents' or children's plans or illnesses. The parents were able to read

interview scripts, observation notes, and review videos if desired. They had the right to redact any information.

I chose my cousin's children for several reasons. The first of these reasons was the children's level of comfort with the researcher. This level of comfort removed a potential barrier of child creativity that may have been present if the researcher chose children who were otherwise unknown. With that barrier in place a child may have muted their creativity. As the researcher, I wanted a true study of the children showing creativity in their own home environment. The two children who are being studied live in the same home and have conceivably been exposed to similar conditions. Studying additional children would have required either meeting all of the children in a commonplace (i.e. each other's home or a neutral ground) or studying in multiple households. Meeting at each other's homes or at a neutral site would affect creativity as the children may not have felt comfortable in another home or in a "test room" and ultimately may have defeated the study's purpose. Study in multiple households would have limited the time spent with each child and may have proven logistically infeasible for the researcher. Attempts to remove bias included engaging the two children in the same activities and allowing them to determine how and for how long they engaged with them. Both written and video recorded responses by the children were made. The parents were allowed to review and approve the data collected.

Summary

This study made observations about how young children show creativity at home and how that creativity may be encouraged or discouraged. Creativity is an interactive system in which relationships among persons, processes, products, and social and cultural contexts are of supreme importance (Zimmerman, 2009). The study aimed to inspire the participating parents to

either sustain or increase their efforts to enhance creativity within their home and encourage their children to use their imagination to problem solve independently outside of their school environment. It was designed to demonstrate the affects the home environment has on creative action.

CHAPTER IV: ANALYSIS

Data and Analysis

The purpose of this study was to examine how children engage in creative acts within the household. The researcher explored creativity using Taneri's (2012) four categories: using imagination, play, artistic expression, and problem solving. There were three questions that guided the research for this study.

1. In what ways, if any, do children engage in creative acts when making artwork at home?
2. How do children use their imagination to problem solve outside of a school environment when presented with activities in the arts?
3. In what ways, if any, does the home environment affect children's creative actions?

This case study took place at a family's home with two children, ages three and six, who are my second cousins. The study explored how children created art activities in a home environment. I engaged the children in different art projects once a week for a month (four one-hour sessions) to gain knowledge about this aspect. The projects had a one-hour time cap and had the children participate at the same time of day during each visit. The close-ended project had directions that were given to the children in a step-by-step manner. The open-ended project that the children participated in was loosely instructed; I proposed ideas and asked critical questions.

Questionnaire

The parents each received a questionnaire with identical questions (Appendix A). Both had the option of answering it together or separately, as well as orally and written. Both chose written, and they answered the questions together. This chapter will first take a look at the parents' answers towards the questionnaire followed, secondly, by a detailed description of the

observations of the children's eight art projects. Throughout this chapter I will address the use of the four aspects of creativity shown by the children.

In the questionnaire the parents stated that their daughter had been in school for two years, and prior to that, was in daycare for almost five years. Their son, who is younger, has been in daycare for three years. The parents stated that at their children's daycare both were involved with coloring, drawing, and gluing on small objects. They used construction paper to cut shapes, used glitter to cover paper and used stencils for tracing. The daughter now does those same activities in her school, plus three-dimensional works, such as ceramics and turning ordinary objects into art. The parents' example of the daughter's three-dimensional artwork was a soda bottle made into a butterfly with pipe cleaners and tissue paper. They also stated that their daughter did more project-specific work; an example was her studying Andy Warhol and creating a painting inspired by him. The parents did not specify how their children used problem solving with these activities but according to Olson (1980), problem solving helps children feel in control, become aware of changes, and cope with challenges.

When the parents were asked what art projects they do at home they responded, "At home we do coloring, drawing, sidewalk chalk, color-by-number, construction paper activities, stencils, and a little bit of painting. We'll throw Playdough and Legos in there, too, as that's our version of sculpture! They do all of this pretty independently so there isn't much hands-on assistance that we give." The parents stated that their definition of visual arts is anything that someone can make or that involves color.

When the questionnaire asked the parents what their children's favorite activity was to do at home, they stated that their daughter's favorite activity is anything where she can engage in creativity, such as art projects, cooking, pretending, etc. They also said the close follow up

favorite activity for her is to watch television. The son's favorite activity is playing anything with his dad, along with playing Legos. The parents were asked what their routine was during the week and they stated:

Monday through Friday is pretty routine/busy until we get home from school/work. The children play or do Legos or projects while we get dinner ready, and then a little more after dinner and before their baths (probably 45 minutes or an hour total). Then we read before bedtime. Saturdays and Sundays we are a little more relaxed and try to get out of the house and do something fun.

Day One: Project One and Two (Appendix B)

Project One: Craft Stick Trees - Closed Ended

We began the research project on a Tuesday afternoon around four o'clock pm. The children were just picked up from their summer camps by their mother. When we first began this project the children were very excited to start. They ran over to their activity table, which was the perfect size for children, having two matching children's chairs and a roll of craft paper for them to color. This activity table was located in a wide, yet short hallway that connects the kitchen to the living room. It had a perfect viewing area for the parents no matter what room they are in. As the children and I began setting up the materials, the mother was working in the kitchen. The father was still at work. We cleared off markers, crayons, and paper so that we could begin the first closed ended project: a craft Popsicle stick tree.

For this closed ended project, the children were instructed to paint one side of all the craft sticks brown and let them dry. They had one large craft sticks and seven smaller craft sticks. They repeated this step on the other side of the craft sticks. Then they glued the mini craft sticks onto the jumbo craft stick as branches. While they were waiting for the craft sticks to adhere, the

children cut out leaves from foam or felt. Finally, I instructed the children to glue the leaves onto the ends of the branches.

I began by instructing the children to paint both the large stick and the five small sticks with brown paint. The six year-old girl hopped right into it and painted all of the sticks, whereas the three year old boy painted the big stick, waited a couple of minutes, then asked me if it was okay to paint the little sticks. The boy painted both the front and back of his Popsicle sticks, whereas the girl only painted one side of the Popsicle sticks, both showing artistic expression and problem solving. The boy did not like getting paint on himself, and he started panicking half way through the project and demanded to wash his hands. Both children knew how to handle a brush and paint, having had painted in preschool.

After they painted their sticks, they cut leaves out of colored foam. The girl initially decided to cut out five leaves from each foam color: red, orange, green and dark green. She explained to me that her leaf shapes were part oval and part triangle. I noted that the girl was very familiar with using scissors. The girl folded and cut into the middle of her foam. She later decided that she did not want to cut out five red leaves because she wanted to use the red foam to show me how to make a snow-flake. She then demonstrated how to make a snowflake. She continued cutting out the rest of her snowflakes and said that she cut out the light green leaves fat, the orange leaves medium fat and the dark green leaves skinny. The girl sat at the table throughout the process of cutting out the snowflake and leaves, and then towards the end of the project she stood to continue working. She asked what the material was with which she was cutting out the leaves. I told her it was foam and the boy replied “E.T. foam home.”

The boy initially struggled with the scissors. It was clear he had only used scissors a few times in his life, if any. He initially picked up the scissors and started cutting the leaves out with

his right hand, and then switched to his left. He switched back and forth between hands when using the scissors the entire time to cut out the leaves. The boy only wanted to use the red foam. When I asked him why, he responded, “Because I like red.” He used the corners of the foam and chopped away at the big piece of foam, cutting out many tiny triangles (leaves). The girl folded and cut in the middle of her foam.

When it came to glue on the sticks and leaves, the boy glued his small sticks horizontally across the vertical big stick. The girl whispered to me that he was doing it wrong. She glued her sticks at an angle, going up. She later decided it would be fun to put two sticks “branches” angled down so that the tree would look like a person too. Both the girl and the boy did not like how the glue was dispensing “slowly,” so they both opened up the bottle and stuck their paintbrushes in the bottle. The girl used the scrap foam for what she called her “placemat,” so it wasn’t as messy. While gluing, the boy got glue and paint all over his hands, which frustrated him, and he demanded to wash his hands right away. After he washed his hands, he continued to finish his project. The girl did not have a problem with getting messy. She commented on how an instructor from a summer-camp she recently went to, told her class how being messy shows you are working hard and being creative, and it is okay to get messy. She then, later commented on how she was going to make the “grandma oak tree” that she saw from her summer class. The boy said he knew the grandma oak tree, and the girl explained to him, “It was not a person, it was a tree.” The boy didn’t seem to understand.

When both the girl and the boy started to glue their leaves on, the boy glued them onto the large stick instead of onto the ends of the little sticks (tree branches), as I had instructed. The girl said to both the boy and me that it is ok to glue it on the main tree because she had seen leaves come right off of the tree stump before. She also glued leaves onto both her stump and her

branches. When the children were done, they immediately helped clean up their spaces for the next project without me having to ask them.

While observing both children during the Craft Stick Tree project, I noticed them using their imagination, artistic expression, and problem solving. The girl showed artistic expression several times throughout this project by creating different shapes and sizes of leaves she cut out, as well as angling two of the Popsicles sticks down to represent a person. The girl showed imagination when she decided to make a snowflake out of the foam sheet instead of a leaf. The girl noticed the negative space of her scrap foam sheets, and that reminded her of the process of cutting out a snowflake. She imaginatively made the visual connection from one idea to another.

The boy demonstrated artistic expression and choice by painting both the front and the back of the Popsicle sticks brown. The boy demonstrated play, as defined by Sutton-Smith (1997) when he stated “E.T. foam home,” as an assonance on the word “phone.” The comment was spontaneous, purposeless, and fun (Sutton-Smith, 1997). The boy demonstrated a preoperational stage of development, stating, “E.T. foam home,” in which preschoolers use symbols, especially language and make believe play to represent earlier discoveries (Berk, 2001). He demonstrated imagination when positioning his sticks, or tree branches and leaves onto the tree trunk, since he created a patterned that he did not see, but only thought about.

It was difficult for the boy to decide which hand to use while cutting the foam. According to Berk (2013), “Handedness involves practice. Handedness reflects the greater capacity of one side of the brain – the individual’s dominant cerebral hemisphere- to carry out skilled motor action” (p.189). The boy showed problem solving when he was cutting out his leaves with the sheets of foam. He had to figure out which hand was easiest to cut with as well as the best way to cut from

the piece of foam. The girl was able to cut out of the middle of the sheet of foam, but the boy found it easier to start from the edge of the sheet of foam and work his way in.

The girl and the boy showed problem solving again when they were struggling with dispensing of the glue bottle as well as cutting out their leaves. They both decided to unscrew the lid of the glue bottle and dip their paintbrushes into the bottle to receive a quicker result.

When they both completed the project, they quickly cleaned up their work area in order to start the next project. They used problem solving to figure out that the sooner they clean up their mess, the quicker they can do the next activity. I believe this comes from their parents being consistent about requiring their children to clean up their messes before they move on to the next thing.

Project Two: Under the Sea, Crayon Resist - Open Ended

Once the children had cleaned up their messes, I explained to them that we were going to be creating a second work I called “Under the sea crayon resist.” The steps to this project are the following:

1. Show the children pictures of creatures in the ocean. Give them books about the ocean with pictures in them and have them explore the books for a few minutes.
2. Give the children a piece of paper and tell them to draw what they think is in the ocean right now. Give them crayons to draw their ocean scenes
3. When they are finished drawing, have them use watercolors to paint over their drawings to make it look under the sea.
4. The areas of crayon will resist or repel the paint.

I first gave both the girl and the boy a book of sea creatures to look at. They took a couple of minutes and flipped through the book. The girl went up to her bedroom and grabbed some of her

books with sea creatures in them including *The Little Mermaid* and *Rainbow Fish*. I then gave them each a piece of white paper and told them both to draw what they think is in the sea right now. I had placed a box of crayons in front of them, but did not tell them, they had to use the crayons.

The boy immediately picked up a blue crayon and started drawing what he said was a whale. He said that it was the belly of the whale. He ferociously drew. The girl took more of her time and wanted to find a black crayon. She could not find one, so she used a grey crayon instead. She then gently started drawing a circle using up a lot of the page and stated that she was going to draw a shark. She carefully placed the teeth in the shark and also gave it two eyes and a nose. She only drew the head of the shark with an open mouth and had it going off of the page.

The boy saw his sister's drawing of a shark and flipped his paper over and stated he now wanted to draw pink jellyfish. The girl then drew a jellyfish as well. The boy once again looked at the girl's drawing and asked his sister for help with his drawing. I was unsure if the boy was aware that his symbols were not up to his own expectation. His sister helped him and drew a shark and a jellyfish. While the girl was drawing for her brother, the boy asked his sister questions, "What are you drawing?" and "What is that going to be?" The girl quickly jumped into teacher mode and started telling her younger brother confidently what each drawing stroke was.

The boy became sidetracked and played with the camera I was using to tape the research. The girl continued drawing her sea life. She drew an eel, jellyfish, shark, and fish with fins. She then decided to color in all of her creatures with different colors and shapes. The boy was not interested in coloring his creatures in. Even though we had plenty of time to draw, the girl commented on how she was scribbling quickly, but was still making the drawing look beautiful.

The boy then moved on to add watercolor to his paper. I told him that he could use the water and watercolors to paint the sea. He painted over the crayon and decided he did not like that. He was upset about the paint being over the crayon. I told him to try using more water to spread out the paint, but he did not like that either. He then wiped off the watercolor from the crayon using a paper towel. The boy only painted one eighth of his painting before wanting to stop and play with his toys. He used all of the colors in the watercolor pallet. When the boy was finished painting he did put away his paintbrush and closed the lid to the watercolors.

The girl continued to paint, but did not want to paint directly on her creatures. When I asked her why she was doing that she stated that she did a little test in an area and decided that it wasn't the look she was trying to achieve. She used purple, blue, yellow and green for her sea. She commented on how she made turquoise, aqua with the green and blue she used together. She then talked about shading her colors, and she stated that she shaded because it made the painting look prettier. At first she got green on the yellow paint pallet and felt bad about it, and then after a while she didn't seem to care. One could tell she was previously taught at school how to properly use paint in the pallets. She later moved on to a bigger paintbrush, because she stated that it was taking her too long to paint with the tiny brush. She covered the entire paper with watercolor, carefully outlining the sea creatures. She called over her mom to look at her painting, and her mother said that it looked very nice.

The boy was able to identify the different parts of the shark, showing that he used previous knowledge about the animals to connect his own ideas. The boy demonstrated imagination by explaining what the parts of the shark were and the color of the jellyfish. He demonstrated artistic expression when he was ferociously drawing, making choices about an image he had in his mind. When the boy looked at his sister's drawing and flipped over his paper to start over, he

was problem solving how to make his drawing better. He was also problem-solving while making a critical judgement when he realized he did not like the watercolor over the crayon and wiped it off. The boy used all colors in the watercolor pallet, showing he was not confident in his selection of medium or color choice or that he was just experiencing the sensation of dipping the brush into the paint. The boy took a break from his art project to play with his Legos; preferring Legos over painting.

When comparing the children's enthusiasm for each of these projects, I noticed that they were more excited and more willing to talk about the open ended sea life project. They had side conversations while working on their art projects. They did not seem as excited to make the tree, however, the girl made many science comments about trees, relaying information from her previous summer camps. The boy did not seem to know about these science facts, as he did not attend the same summer camps.

When I first gave instructions the girl ran upstairs and brought down two of her books. The boy seemed very confident in his ability to draw a whale with a crayon at the beginning of the second project. It was obvious he had used crayons before, and it was a skill he felt good about. However, as he observed his sister's more complicated drawings, he began to ask her for help and lost some of his confidence. He looked at her drawing, had difficulty imitating what she was doing, and became less confident in his ability. As he moved on to use watercolors, he became really upset when the paint touched the crayon part of his drawing. He did not like the two different textures of color touching. When his sister took over for him, the girl impeded his creative potential. She had more experience with these tasks and more self-confidence.

The different levels in fine motor skills between these two children were obvious. The girl had more skill due to more practice and memory of doing these tasks. The boy had less motor

control and became easily frustrated and left the project to go play with his toys, something he had more control over and experience with as he had played with them more.

Day Two: Projects Three and Four (Appendix C)

Project Three: Cup and Nylon Snakes - Close Ended

When I arrived for the second day of art making with the children, it was once again a Tuesday around four o'clock p.m. The children had once again come home from summer school, and the mother was active in the kitchen, and the father was at work. I read the assent to the children, I explained the projects to them and the boy screamed "Yeah! Let's do it!" The mom laughed and said, "There's your assent right there!"

The third project asked the children to create a cup and nylon snake. The instructions for this project were to use a pen to punch holes in the bases of the cups and to thread the cups onto the pantyhose leg, through the holes they had already punched. Once all of the cups were threaded through the nylon, the children were to cut and paste a construction paper tongue and draw a set of eyes onto the first cup. The final step was to cut a triangular piece for a tail and fasten it to the snake's body.

When I got to the activity table, I placed out all of the supplies to make the Plastic Cup Snake. The girl immediately started making noises with the cups by banging them on the table, and she wanted everybody to watch and listen to the music she was making. The boy just moved the cups around for a little bit, following his sister. When I explained that we were making a snake, they were very excited and wanted to begin. I demonstrated to both of them how they were to string the panty hose through the holes of the cups to make the snake's body. The girl immediately wanted to turn it into a competition to see who could string their cups through first. The boy tried to string the cups through the panty hose, but it was too difficult for him, and once

again said, “I can’t do it” and asked me for help. I helped him string his cups. I then helped the boy glue the tongue and eyes onto the snake. He played with it for a few seconds, slithering his snake on the table then said he was done and ran over to play with his Legos. He came running back to show me the ship he made out of the Legos. He said he made it himself.

Meanwhile, the girl was still trying to push the pantyhose through the holes of the cups. She started with a pencil to get the panty hose through the hole then switched to a pen. When I asked her why she switched to a pen she said, “It worked better to get the pantyhose through the hole.” She was right. The pen was more pointed, which helped the pantyhose glide through the cup. When the girl was half way through, she stated, “This looks terrible!” She was getting frustrated with the unevenness of the cups and the difficulty of stringing the cups through the pantyhose. The girl eventually asked for my help. As I helped her, the boy called everyone “pickle pants” and laughed. The girl stayed focused on her snake project and stated, “That’s his favorite word.”

The girl finished stringing the cups and glued on the snake’s eyes and tongue. When she was done and satisfied with her project, she stated, “That was a great idea Ellie!” (meaning she enjoyed the project). We were ready to move on to the next project, and the boy was still playing with Legos. His mom noticed he was not participating, and she re-directed him to his seat to participate in the project.

Project Four: Out of the Zoo - Open Ended

For the fourth project, the children were supposed to make a made-up animal using air dry clay. The first step to the project was to show the children pictures of different animals and have them identify what was special about each animal. Next, I asked the children if they could make an animal they have never seen before, what would it look like? I had the children sketch

out their new animal. I then demonstrated to the children how they could use air dry clay and how they can use it to make creatures.

Once the boy was back at the table I got out multiple books featuring animals. I had the children look through them and asked the children to identify different features that animals exhibited. I wanted the children to identify feathers, horns, and other features on the animals that make the animals unique. Both the girl and the boy looked through the books and identified the differences between the animals.

I then told the children that they were going to create an animal that they have never seen before. The girl said she did not like that idea because she wanted to make a rabbit. The boy again was frustrated and said he did not know how to draw. The girl offered to draw his animal, and the excited boy quickly said, “Yes!” The girl asked her brother what he wanted, and he said he wanted a bunny with wings. The girl explained to the boy that she was sketching, and he asked what sketching was. She explained that it was drawing out ideas.

While the older sister was drawing her brother’s animal, the boy asked many questions such as: “Does the bunny want to play with his fuzzball?” I could tell that his made-up animal was coming to life in his head.

Once the girl was finished drawing the bunny with wings, she started to draw her own made-up animal. She decided to draw a fish with wings and named him “Hurricane.” The boy heard how the girl named her animal and then he decided to name his “Fluffy.”

After their drawings were complete, I gave the children air dry clay. There were many different colors from which they could choose. The boy grabbed the clay, thinking it would be the consistency of Playdough. He immediately figured out it was a lot harder to mold than Playdough, and became frustrated. The boy automatically shut down, and decided he did not

want to do the project. The girl once again heard him whine and told her brother she could help roll out his clay. As the girl stopped her project and helped her brother with his, the boy picked up a piece of clay and said he had the urge to throw the clay. However, he did not throw the clay. I was curious as to why he did not throw it. My assumption, from knowing the family and children since they were born, was that the older sister would most likely tell on her brother, and he knew if he threw the clay he would get in trouble.

While the girl worked on the boy's project, he played with the snake he had previously made. The girl then told her brother to continue his project. As soon as the boy started working on his own project, he immediately became frustrated and told me he could not do it. I asked him if he wanted my help, and he said, "No, I want my mom to help." I said, "That is fine to ask her to help," but he did not ask her. I was curious as to why he did not want to ask his mom for help. I wondered if he knew his mom would not do it for him, but guide him, whereas his sister would do the project him.

The girl jumped back in to helping her brother after he complained and asked him what color he wanted for his wings. The boy said he wanted one blue wing and one green. He said he didn't want them to be matching colors. I asked him why not, and he said because blue and green were his favorite colors.

The girl said, for her animal she wanted matching wing colors, but non-matching fins. The boy picked up a clay ball and pretended he was a basketball player. As both were working with the clay, I noticed they were both humming to themselves. I did not recognize what the boy was humming, but I noticed the girl was humming *Bad Blood* by Taylor Swift. She stated that she heard the song being played in the car.

The boy left to go play with Legos for a few minutes while his sister was working on his Fluffy. He eventually came back on his own. The boy figured out he needed another wing. He picked up the Fluffy his sister had been working on and started to show us how Fluffy was going to fly. The boy then decided he wanted a snack.

While the boy ate his snack, the girl still worked on her clay. She grabbed the pencil she used to sketch out Hurricane and tried to use it as a knife to cut out a shape. While the girl was focused on cutting out her clay, she asked me to roll a ball of clay for her. I did what she asked and showed her my ball. I asked, "Is this ok?" and she said, "No, it needs to be more round." I realized how quickly the rolls reversed, and I became the student.

The boy came back and checked in on his sister's progress. He questioned her on what she was doing with his project. She explained to him all of the features she was putting on the creature. The boy seemed satisfied and returned to his Legos.

The girl traced and cut out more wings for her brother's project. The boy came over to the activity table, picked up a wing, and his sister sternly told him not to touch them! The boy dropped the wing and played with other pieces of clay. Even though his sister had completely taken over his project, she asked him every time what color he wanted for the different parts of his animal. The boy wanted a yellow head, and then the girl suggested a red mouth.

The girl was looking for a wing she had already made and could not find it. She quickly started to blame her brother for losing it and yelled at him to find the wing. He did not know where it was. I saw it on the floor next to the craft table and told the girl. She merely said, "Oh," returned to the table and did not apologize to her brother.

The boy came back to the table and started playing with the clay again. He mixed all of the colors together. The girl asked her brother what he was going to do with the mixed colored

clay, and the boy replied, “Eat it!” The girl then said she needed him to focus on choosing an eye color.

The girl next asked her brother, “Can you mix the clay?” and he immediately responded, “No, I can’t!”

Girl: “Why not?”

Boy: “Because I don’t want to.”

The girl continued working, and while doing so she told me about a game she played at school. She then scolded her brother for losing one of the creature’s eyes. She next laid out all of Fluffy’s body parts and started connecting them to the head. She explained to me how she was connecting the head. She told me to watch while she explained. She laid her brother’s animal on the drawing to compare. She told her brother his animal was done. The boy took Fluffy and flew it around, pretending it was living.

The girl then came back to the table and asked, “Can we make more than one imaginary animal?” I said, “Sure!” She proceeded to show me how to do a handstand while giving me a detailed description of each step. After the handstand lesson, she redirected herself and continued working on Hurricane. She started with the belly of her animal and decided to flatten the ball of clay with her thumb. She stated, “I think I have an idea” and grabbed a pen and drew in the clay. She stated, “This is like a stylus!”

The girl then started to cut out the wings and stated, “The wings are smaller than usual.” She then asked me if it was ok to steer away from her drawing, because in reality, “Hurricane’s four other wings would be wrapped underneath him, and I don’t have room to make it like that.” I said that it was perfectly fine to alter her design.

The girl stated, “I don’t know what to use to cut the wing.” She grabbed her pencil, did not like the look of how it was cutting, then ran to her play kitchen set and grabbed a plastic toy knife. She did not like how that one was cutting either, so she grabbed kid friendly scissors, opened them up and cut out the wings. She stated, “This is actually working pretty good!”

Meanwhile, the boy was playing with his Legos, trying to figure out how the parts attached to each other. He asked me to put together his Batman Lego. While I was trying to figure out Batman’s sword that supposedly attached to his hand, the boy asked me how strong I was and then told me about his strong friends. I told him I could not figure out how the sword Lego attached to the Batman Lego. He was slightly disappointed then realized it was the wrong Batman piece! He ran over to his Legos to find the two matching pieces.

I redirected my attention to the girl and asked her why she chose red for Hurricane’s eyes and she stated that red was her favorite color. She also said that magenta and velvet red were specifically her favorite colors. The boy said his was purple. The girl noticed the orange clay had not been used and decided to use it for her fin and tail. She told me to put my hand on the orange clay, and she pressed my hand down to smash the clay. She then drew out the tail and fins.

The girl added white clay to her fish tail, and I asked what that was. She said, “It’s the puffy stuff,” then stated, “It’s the eggs.” She claimed that Hurricane carried the eggs on its tail. She said that the eggs were actually inside the tail to protect them from predators. She noted that Hurricane was a girl, and the one she was sculpting had already laid her eggs; that’s why we could see the white on Hurricane’s tail.

As I was writing all of this information down, the girl became intrigued by my notes. She could read my handwriting upside down. She then worked harder on her attaching the eggs to the tail and eventually said, “Ellie, I noticed you didn’t ask me ‘when do the eggs hatch?’ Write

down ‘when do they hatch?’” She told me to also write down the answer, which was, “They don’t hatch at the same time.”

Once the girl came back to her project she used her artistic expression when deciding that she wanted matching wings, but not matching fin colors. She also showed artistic expression when explaining as to why she was using red for Hurricane’s eyes. It was her favorite color, but more specifically, magenta and velvet red. The girl used problem solving when using different utensils to cut out Hurricane’s wings, as well as having me roll out and smash a ball of clay, since I was more experienced. When she corrected me on how the smashed clay ball was not what she wanted, this showed me she used problem solving because she had a definite vision of how the finished project should be. The girl was very persistence in problem solving and was able to cope with challenges.

The boy demonstrated imagination by pretending the ball of clay was a basketball, naming and playing with Fluffy, and mixing the different colors of clay together, saying he was going to eat the clay. He then played with Fluffy by flying it around, and he played with his Legos. He showed artistic expression by saying how he wanted different colors of clay for his wings. The boy used problem solving when he realized he had the wrong Lego piece for the Batman. The boy’s creativity and problem solving was more involved with play and the ideas around play.

At first the boy did not like the texture of the clay as he thought it would feel like Playdough. Several times during these art projects he was frustrated by his sense of touch. The sensorimotor stage of exploring and touching is for infants (Berk, 2013); however, he seemed to still be affected by tactile stimulus in an emotional way. As he experienced working with the

clay he adjusted and began feeling comfortable enough to turn the clay into a game. He appeared to like what he is familiar with and did not like change.

Early on in the project, as the motor skills became more difficult for the boy he learned to get his sister's help. She often jumped in and did his project for him, and he was happy to let her do so. The boy was willing to forego the challenges and develop his own strategies. When the mother of the two children told her son to go back to the art table, she was teaching the boy responsibility. From knowing the parents for many years, I have recognized both of them encourage their children to be more responsible, which in turn helps facilitate their children's development of self-confidence and risk-taking (Taneri, 2012).

Both children were being taught how to use creative thinking skills when I had them pick out details of all of various animals from books (Zimmerman, 2009). Both children engaged in private speech while working on their projects. Berk (2001) stated that preschoolers often talk to themselves when problem solving (p. 100). As the girl was trying to figure out her fish eggs and the fish tail, she talked out loud. She was trying to figure out the language of explaining the eggs, fish, and the tail. The boy then let his sister do most of his art project and then turned them into fantasy for amusement; clay basketball, Fluffy the animal, and flying Legos.

Day Three: Projects Five and Six (Appendix D):

Project Five: Recycled Maracas- Closed Ended

When I arrived at the children's home, the children were excited to create more artwork. It was Tuesday, around four o'clock p.m. The mother was working upstairs, and the father was at work. The closed ended project for that day was to make maracas out of recycled material. The first step was to take two empty eight-ounce water bottles and fill them with the beans or other materials that would rattle; close them up with the cap and then listen to the sound. The next step

was to create the handle by taking two toilet paper rolls and making a straight cut from one end to the other, tightening the roll in on itself to about the size of a three-fourth-inch dowel, and then applying electrical tape. The children wrapped the tape around the bottom part of the bottle rattle and then moved down onto the new handle. They wrapped slowly, covering all the cardboard of the toilet paper roll to create a sturdy handle for the new instrument.

When the children sat down at their activity table, I explained to them that for the first project they were going to make were maracas. I told them what maracas were. They each had two empty water bottles and sunflower seeds in front of them. I explained to the children that they were using the water bottles and recycling them into maracas. The girl corrected me and said, “It’s not recycling it is re-using.”

I told them to put a handful of sunflower seeds into the water bottles and to put the cap back on. The boy did not want to put sunflower seeds in his bottle. I told him that was fine and that we could find something else to put in there. We went to look in the pantry, and he decided to use raisins in his water bottle. He asked his mom if it was ok to use the raisins. His mom said, “Yes, but only for the project.” We poured raisins into a bowl for him to put into the water bottles. He instantly ate about half of the raisins. He eventually put some of the raisins into the two water bottles. The girl put the sunflower seeds into hers.

I told the young artists that next, they were going to take cut toilet paper rolls and wrap them around the caps of the bottles for the handles of the maracas. I provided colorful tape that they used to keep the bottle and toilet paper roll secure. The girl saw the colorful tape, picked it up and said, “Is this the tape? There are so many colors!” The boy immediately asked if the tape had to match on both handles. I said, “It did not.”

The girl wanted to tape the handles on by herself. She became frustrated because she could not figure out the coordination of wrapping while pivoting the bottle. I asked her if she wanted my help, and she angrily said, “No.” At that point it seemed like she was focused and determined to do it on her own. She eventually became aware that she needed to ask for my help. She wanted the top of the handles to be one color and the bottom of the handle a different color.

The boy then picked out his tape color and stated, “But I don’t know how to put them on” and asked for my help. I told him I was going to hold the bottle, while he wrapped the tape around. His coordination was much better than his sister’s, which was a surprise. He did it very quickly and accurately. While I was helping the boy with his maracas, his sister was with her mom in the kitchen getting a snack. She was telling her mom how on the bus, her friend littered and put her water bottle on the bus floor. She said she told her friend she shouldn’t do that, and her friend said, “It’s fine” and that she should do it too. So the girl said she put the bottle on the bus floor. Her mom told her that the earth is our home, and we have to make sure we protect our home. She stressed how it is very important not to litter and that next time she should lead by example and not follow her friend. The girl felt guilty about the incident. She then came back to the table because her brother was finished with his maracas.

I asked the girl and boy what their maracas sounded like. They began making music by shaking their maracas and moving their bodies in a dance-like fashion. The boy next proclaimed that maracas were swords and started a pretend sword fight. Then he said “No! They’re light sabers!” and started making the sound of the light saber.

The boy created a flexible prop and was able to recall a memory of *Star Wars*. With the raw materials given to him, he was able to create his own scene. He used his imagination when he was using the maracas as light sabers. The boy, once again, exhibited preschool development

by quickly turning an art project into fantastic roleplay which included swords and *Star Wars* light sabers. The boy seemed more engaged overall in this project compared to others. The boy used problem solving when choosing the raisins for the sound material. He used problem solving when he wanted more raisins to eat, asked to use it for his maracas and then snuck a few to eat. He was not confident in the choice of his colored tape.

The girl demonstrated artistic expression when deciding the different tape colors for the maraca handles. Both children made music and danced with their maracas, which showed the use of play with their new toy.

It should be noted that the girl's mother used an age appropriate developmental strategy when the girl was in the kitchen telling the story about throwing the plastic bottle on the bus floor. The mother resorted to an indirect strategy, encouraging the girl to think and reason, so that the girl could regulate her own behavior in the future (Berk, 2001).

Project Six: Painted Rocks- Open Ended

For project six, I told the children that we were painting rocks. For the steps of this project, the children first chose a rock and determined what they wanted to paint on the rock - a picture, an animal, it was up to the children's imagination. They then painted their rock with the designs and colors of their choice.

I asked them to look at the shape of the rocks and try to picture what they could turn the rocks into. The boy immediately said, "A light saber!" The girl said she was going to paint a flower on hers. I gave them a painting pallet full of tempera colors. The boy asked, "What do red and blue mixed together make?" His sister said, "Purple." The girl started painting her rock then wiped off the color with a paper towel. She wanted to change colors. The boy asked, "How does one make yellow?" His sister replied, "You can't make yellow paint." Then boy asked, "What

does yellow, blue and red mixed together make?” The girl stated that it made brown. The brother immediately said, “Camouflage!” The boy proceeded to paint all sides of the rock. His sister told him he did not need to paint all the sides, and he said that he wanted to paint them anyway. The boy initially used just red and blue and then later decided to add yellow.

The girl asked how many more classes we had left together, and I told her next week was the last one. She said, “Last class?!” and pouted. Then she said, “Look!” and showed us the green and red paint she had put on top of her rock. She stated, “Isn’t this a pretty color?” as she looked at me for reassurance.

The boy then asked his sister what purple and pink make, and she responded, “Brown.” The girl became frustrated because her rock did not look like a flower. She got upset and her mom cautioned, “Be disrespectful!” and the daughter corrected her and said, “You mean respectful, Mom” and her mom replied, “At least you are listening!”

The boy asked me if it was okay to flip over his rock. He did and continued to paint the other side of his rock. The boy exclaimed, “This is a lot of colors! You can’t even see the rock!” Then he asked, “Is the paint the rock?” The girl became agitated with her brother and how he painted his rock. She showed her brother all the flaws on his rock. He did not seem to care, continued painting his rock and decided to be done when the entire rock was covered with paint.

The girl said she was painting her rock red velvet. I asked her why she chose that color, and she responded, “It symbolizes death.” She incorporated pink into the rock and said that it symbolized sunlight. Finally, she stated that the entire painting on the rock symbolized the *Lorax* tree (Seuss, 1971).

The girl finished her rock and said that she wanted to paint another. She told me she had a great idea. The girl then painted a second rock. She said she was painting a flower for spring.

The girl painted her flower red velvet first and then put yellow in the center of the flower while the red velvet paint was still wet. She was fascinated with how the yellow turned orange.

When the girl finished painting her second rock, she cleaned her paintbrush in the water bucket. She went to dry off her paintbrush and noticed that the rock was sitting on a paper towel. She quickly decided to dry her paintbrush on the newspaper. The girl was fascinated by the color of the rinse water in the bucket and told her brother to come and see. She told him it was purple now and not black anymore. He became excited and ran over to see the color of the water.

The girl showed problem solving when wiping off the paint from her rock because she did not like the color. She showed problem solving when using the newspaper to dry off her paintbrush. The girl had been taught how to properly clean and dry her paintbrushes. She seemed very imaginative when she explained that the color of her rock symbolized death. She showed artistic expression when she explored with the mixing paint colors, and used them as symbols and representation. When she mixed different colors in the rinse water bucket she began to play.

The boy showed imagination when he decided to paint the rock as a light saber and recognized certain colors as camouflage. He used art making as a learning experience. The boy later showed artistic expression by exploring different paint colors and wanting to paint the entire rock because he liked the act of painting.

During the painted rock activity I noticed the girl's higher language development when she corrected her mother's "be disrespectful" comment. In this situation the girl, from past experience and memory, was able to determine that the word was not right and felt comfortable enough to correct her mother. Berk (2001) stated, "As children engage in play talk, they not only build their vocabularies but correct one another's errors" (p. 79). This also applies to my remark

that we were recycling in the Recycled Maracas lesson, and the girl stated that we were reusing the plastic bottles and not actually recycling.

Day Four: Projects Seven and Eight (Appendix E):

Project Seven: Puzzle Piece Picture Frame - Closed Ended

The instructions for this project was the following:

1. Give each child a picture frame.
2. Give each child a handful of puzzle pieces (One 500 -1000 piece puzzle is plenty).
3. Have them glue their puzzle pieces on the picture frame, overlapping as they go until the picture frame is covered.

This final meeting time with the children was on a Tuesday around four o'clock p.m., and the children just arrived at their house from their summer camp. The mom was working at the kitchen table, and the father was at work. I began the activity by telling the children to put on their shoes, because we needed to go find objects to stamp. I asked the boy if he knew what stamping was, and he said, "Yes." We took a walk around the outside of the house, and picked up various leaves, sticks and seeds from trees. I expected to have a difficult time bringing the children back into the house, because they began playing on their backyard playground. When I said, "Ok, let's go inside for our art projects!" they both immediately ran inside, which showed investment in their process of art making.

Before the children sat down I laid out a picture frame and numerous pictures from which they could choose. I also laid out the glue and puzzle pieces. The children came in, and I told them to pick out the picture that they wanted to use for their project. The pictures were of them (ones I had on my phone and had printed). Some pictures showed them with family members,

some were of the two of them together, and some were of them individually. They enjoyed looking at all of the pictures before we started. The boy chose one of his sister and himself together at the Bass Pro Shop. The girl was undecided between two pictures. One picture of the girl and me was taken at a summer camp that she attended and where I taught. The other picture was of her in her Halloween costume. I told her we could trim the pictures and use both of them in the frame, but she did not like the idea of cutting the pictures. She ended up choosing the picture of her and me and politely asked to keep the Halloween costume picture. I asked the girl why she chose that picture, and she stated that it was because it had both of us in it. Then I asked the boy why he chose his picture and he said, "Because it had his sister in it."

I next instructed them to put their picture into their frame. I helped the boy open his frame, and his sister watched how we did it. I asked her if she needed help, and she said, "No." As the girl figured out what to do, she noticed her picture was crooked, so she decided to re-do it.

Next, I told them to glue the puzzle pieces around the frame to decorate it. The boy forgot the glue and just laid the pictures on the frame. I asked him if he glued the puzzle pieces and he said, "Yes." Then he looked at it and said, "Oh no. I didn't" and then proceeded to glue down his puzzle pieces. He left a space in his frame, and I asked him if he wanted to cover the space up and he said, "No." He liked his frame as it was. The girl took her time laying down her pieces and gently gluing them down. I pointed out to her that her puzzle pieces were slightly covering up her picture and she replied, "No don't move it, that's exactly how I want it."

The girl showed artistic expression by wanting to place the puzzle pieces purposefully over the picture. The boy showed problem solving by figuring out that he never glued the puzzle pieces down and took them off to glue them on. He also showed artistic expression by

purposefully creating space in between puzzle pieces. He had a goal of what he wanted his frame to look like and pursued that specific design.

This was the last of the close-ended projects in which the children were given pretty specific instructions. The parents have stated in their questionnaire that both children had earlier experience in artwork that involved gluing. It was evident that both children had the developmental mental strategies of rehearsal and organization when it came to gluing the puzzle pieces on the frame (Berk, 2013). This project did not take much skill or problem solving; they were able to quickly finish the project and move on to the last open-ended project.

Project Eight: Textured Prints - Open Ended

For this project I laid out twelve by eighteen inch white drawing paper and various materials to use as stamping tools. I provided marshmallows, the end of a celery stalk, a lime cut in half, and sponges I had cut into squares and circles. The children had gone outside with me and found leaves and sticks beforehand. I told them that our goal was to make a pattern with the miscellaneous found objects. I asked them if they knew what a pattern, was and the girl said, “Yes.” She proceeded to explain what it was. I then took a piece of paper and pen and demonstrated a pattern to the boy. I drew a star then a square, then a star again and asked him what would go next. He took a moment to think about it then said, “Square!” I repeated this with different shapes several times so he understood the pattern concept.

Using a marshmallow, I demonstrated how to paint the end of an object and stamp it. I gave them a pallet of paint, and a paintbrush and told them to begin making their pattern. Both the boy and the girl first picked up the marshmallow. I was confident that they picked up the marshmallow first because I had demonstrated with it. The girl painted the end of her

marshmallow blue and the boy painted his entire marshmallow all different colors. The girl saw her brother painting the entire marshmallow and told him he only needed to paint one side.

The girl stamped her blue marshmallow two times horizontally. She kept saying to me, “I bet you think you know what pattern I’m going to make, but you don’t. You don’t know.” On the other hand, the boy just stamped all around and did not make a pattern. The boy’s marshmallow stuck to his hand while stamping, and he started laughing at himself and said, “Hey look!”

The girl repeated her pattern of twos horizontally below each object, using green paint with a lime-yellow paint with the square sponge, blue paint with the leaf, and magenta with the celery stalk. She noticed she got too much paint on the celery, so she continued the celery stamping without adding more paint. She observed what the true pattern would look like with more stampings as she dispersed the paint on the paper. During the stamping project, the boy asked again what yellow, red, blue and green colors made together. The girl said, “Brown.”

The girl then picked up the circle sponge and stamped that twice horizontally below the other two marshmallow pictures. The boy saw his sister pick up the sponge circle, so he did as well. The girl started purposely painting her fingers while she was painting her stamps. The girl stated, “My fingers are bleeding!” showing us the red paint on her finger. The boy noticed and started to do the same. They were starting to get messy, which made me very nervous, but I was reluctant to stop them from their creativity. For a while, the boy decided to use his painted fingers as stamps. Finally, he painted a cut pepper, stamped it onto his paper and stated he was finished. As the boy observed paint all over his hand, he started panicking. He wanted to wash it off immediately. I reassured him it would come off and encouraged him to be patient. Quickly, he washed the paint off in the bathroom sink and was happy.

Once I was done helping the boy clean his hands, I came back to notice green paint splatters everywhere (including the nice white window blinds). I asked the girl how the window blinds got green all over them, and she said she did not know. I then realized that I had forgotten to give them paper towels to dry off their paintbrushes. After cleaning her brush, the girl flicked it in the air so it would dry. Luckily the washable paint cleaned right up.

The girl used problem solving by flicking her paintbrush to dry it when she did not have a paper towel. She also used problem solving when she tried to see what the celery would look like over time with multiple stamps. She showed artistic expression by planning out her pattern. She showed imagination and artistic experimentation when she pretended like her finger was bleeding and play when she was purposefully painted her fingers.

The boy showed problem solving when he figured out the pattern when I first showed him. Like he did previously with the painted rock project, the boy played with painting the marshmallows all different colors, illustrating that he enjoyed the experience of painting.

The girl found the pattern project stress-free. Berk (2013) states that by ages six and seven, children find such tasks easy. “They can resist the ‘pull’ of their attention toward a dominant stimulus - a skill that predicts social maturity as well as subsequent reading and math achievement” (Berk, 2013). The girl was able to focus on the pattern project and achieve successful completion because of her older age and the memory strategies that came with it.

CHAPTER V: DISCUSSION AND RECOMMENDATIONS

The following pages summarize the research findings by answering the research questions that were formulated in chapter one. The research questions formulated were:

1. In what ways, if any, do children engage in creative acts when making artwork at home?
2. How do children use their imagination to problem solve outside of the school environment when presented with activities in the arts?
3. In what ways, if any, does the home environment affect children's creative actions?

I made conclusions regarding the children's creative thinking using Taneri's (2012) four categories: using imagination, play, artistic expression and problem solving. I will discuss the first two questions under the category of Creative Activities. I then discuss how the home environment affected the outcome of art lessons taught to these two siblings.

Creative Activities

The following discussion analyzes the ways in which the children engaged in a range of creative activities while being in their home. Imagination, play, artistic expression, and problem solving will all be deeply analyzed and I will describe how each child showed these different features, which make a creative child. While discussing the different aspects that make up a creative child, the literature will also answer the three research questions. Those questions ask how the children are creative, how they are imaginative outside of school and how the home environment affects the child's creativity.

Imagination

The boy played with his Legos numerous times throughout all of the projects. While engaging in imaginative play with his Legos, he often presented his creations to his sister and me, rather than perform the assigned task given. He was more absorbed in working with the Legos on his own than with the artwork. The boy also engaged in sword play with his handmade recycled maracas. He played with paint while painting the rock instead of focusing on what the rock could be transformed into. According to Berk (2001), when preschool children are permitted to select freely among diverse activities they prefer fantasy play which sustains their attention for longer periods of time (p. 120).

The boy did not engage in the Craft Stick Tree project on his own at home due to his inexperience in using scissors. “Handedness” according to Berk (2013) “involves practice.” The boy also let his sister do his work for him. In the Under the Sea Project, the boy drew at first, then watched his sister, then asked his sister for help. According to Lowenfeld (1947) the boy’s drawing level was just at the beginning stage of self-expression. Sometimes he made no attempts at creating a schema due to difficulty in formulating it.

The boy did not like touching paint to crayon in the Under the Sea project, but once he started painting he used all of the color in his paint palette. How much assistance a child needs depends not just on cognitive maturity but also on other characteristics. The girl had a higher level of painting skill, as she was not distractible. She had more confidence in her painting skills, which involved blending colors, shading and experimenting with different sizes of brushes to use her imagination while conceiving of the flower she wanted to paint. Martin, Craft and Tillema (2002) stated that creative thinking is shown when using imagination to comprehend ideas in constructive ways.

The girl started making music with her cups and wanted everyone to listen before we started the Cup and Nylon Snake project. She had used her imagination to connect the cups and their sounds to what she had heard before. The girl used a “grandma oak tree” idea from summer camp memory in a home project. When the girl stated she was going to create the tree based on a tree she had previously seen at summer camp, she was illustrating the cognitive development stage of working memory (Berk, 2001) and also using imagination. Imagination brings together and integrates experiences and perceptions (Duffy, 2013). She demonstrated the stage in cognitive development where older children can recall more complex stories, especially ones that they like and are able to relate them to a current situation (Berk, 2001). The girl had more background experience giving her an advantage to be more creative in her art making, whereas the boy did not.

The girl used her imagination, along with artistic expression, in the Under the Sea project when coloring her shark by mixing different paint colors to represent the sea. The girl’s Out of the Zoo project highlighted her imagination when she placed the eggs on the end of the fish’s tail and then told the story of the eggs. She also used a color, which she imagined was the color of death and explained why. During the last project, Textured Prints, the girl painted her fingers red and pretended she was bleeding, showing imagination and a sense of humor.

During the Under the Sea project, the boy explained each part of his shark and the color of his jellyfish. He used his imagination to turn his Recycled Maracas project into a light saber. During the Painted Rock project he painted his rock all different colors and called it “Camouflage.” The boy used both imagination and problem solving in the home when he showed me his ship he made out of Legos. The boy continued using imagination and play during the Out of the Zoo project when he picked up a clay ball and pretended to be a basketball player.

The boy used his imagination to consistently turn his art projects into something other than what they were. Calvert and Wilson (2010) suggest that early imagination is the building block of creativity, and childhood experiences help to determine creativity and problem solving skills for adulthood. This early imaginative play could turn into more directed skills in the future.

Play

Not every moment of this artistic research ended up in creating projects. Often times, the act of creating turned into play. The girl engaged in play when she created music with the cups, and wanted to turn the project into a race. She demonstrated problem solving when she figured out an easier way to get the nylons through the cups and eventually figured out that she needed my help. Perlmutter and Kaufman (1991) state that persistence is part of developing creativity. The fact that the girl did not give up on stringing the nylons through the cups showed that she was able to gain knowledge through practice, increase her motor skills, and become more creative. According to Berk (2001), around ages seven to eight children become more curious about the rules of play and become interested in competition (p. 141). The girl showed her mental development when she turned the project into a competition. The boy was not at this developmental level and chose to leave the project to play with his Legos, something he was very knowledgeable in due to much practice. Berk (2001) stated, “Try playing a rule-based game with a three or four year old and you are likely to find the child is easily side-tracked.” (p. 118).

The boy demonstrated play when he played with his nylon and cup snake and then built his Legos. The boy playfully stated, “E.T. foam home” when I explained to the girl what foam was for the Craft Stick Tree project. He showed imagination and play when he called everyone “pickle pants” and used imagination when he showed me his Lego structure that represented a ship to him. As stated in the previous chapter, the boy’s father plays often with Legos

construction. Bresler, Thompson, Chapman, & Ayers (2004) stated that children can gain creative thinking skills through the guidance of parents. The boy had less control over his fine motor skills when using scissors and would go seek his Legos, which was an activity he had far more experience and control over.

During the Out of the Zoo project the boy was involved in play by demonstrating to his sister and me how Fluffy, his animal, could fly and by turning clay into a basketball, pretending to dribble and shoot. Both the boy and the girl played with their repurposed water bottle maracas by dancing to the music they made, and then the boy turned his into a “light saber.” Berk (2001) states that “the mid-to late preschool years are a time of burgeoning capacity of sociodramatic play, especially group pretend” (p.140). Bloch and Choi (1990) and Sutton-Smith (1997) agreed that adults have a great deal of power and influence over the child’s act of play. This family household appears to have organized the children’s play behavior.

Taneri (2012) and Zimmerman (2009) both stated that most parents are not aware of the meaning of creative thinking skills, therefore, it is necessary to increase the awareness of these skills to parents and teachers. Parents and guardians would benefit in knowing how to use this awareness to encourage their children’s problem solving and creative thinking.

As stated previously, Bloch and Choi (1990) and Sutton-Smith (1997) agreed that adults have a great deal of power and influence over the child’s act of play. This family household appears to have a significant hold on a child’s play behavior. Play is a reflection of the family’s unfolding narrative and is important for future social aspects of life. Bresler and Thompson (2002) believe that through interactions and dialogues with parents, teachers and their peers, children can learn a vast amount of cognitive and physical skills.

When it comes to children exploring their creative thinking skills, it is important and beneficial to have a safe and supportive home environment, such as the one that the parents say that they have created. According Taneri (2012), by giving children more responsibility, parents will facilitate their children's development of self-confidence and risk-taking. Play is a reflection of the family's unfolding narrative and is important for future social aspects of life.

Artistic Expression

I observed the children being engaged in artistic expression throughout the four hours of creative research as the children made color and composition choices and experimented with materials. In the Craft Stick Tree project the girl cut out her leaves in various sizes and shapes, ending with a snowflake pattern. The boy painted both sides of his Popsicle stick brown and placed his branches all over the tree, including the bottom trunk. In the Under the Sea project the girl showed artistic expression when she created her shark by blending colors, shading and explaining to me how she created her own colors. The boy expressed his artistry for the first time by ferociously drawing his shark. Using clay in the Out of the Zoo project the girl created matching wings on her animal, but not matching fin colors. The boy chose different colors for his wings. The girl explained the rationale behind the specific red color of Hurricane's eyes. In her Recycled Maracas project the girl used different tape colors on the handles and then began dancing with them. When using paints for the Painted Rock project the girl expressed her artistic ability by mixing different colors and using them as symbols. She explained that the color of her rock symbolized death. According to Pitri (2013), art making allows children who are curious to hypothesize about their broad interests and act through experiments and tests with both ideas and materials. The girl and the boy were able to experiment with color theory and mix colors to see what they became. The girl displayed confidence in telling her brother how colors are mixed

even when she was wrong. The girl's reasoning about the rock colors was consistent with Vygotsky's (as cited in Berk, 2001) that "reasoning about the non-real is essential for abstract thinking and for many creative endeavors." She illustrated artistic experimentation through thoughtfully engaging in the artistic process.

The boy, who at first did not like getting paint on himself, showed artistic expression by exploring with different colors as he painted the entire rock. During the Puzzle Piece Picture Frame project both the boy and the girl expressed their aesthetic preferences by placing their puzzle pieces in very different places. The girl wanted her pieces to cover over the picture, which, according to Lowenfeld (1947), showed a higher level of spatial awareness in drawing. The boy left gaps between his puzzle pieces, which demonstrated Lowenfeld's space representation of the preschematic stage for four to seven year olds.

Problem Solving

Arnheim (1969) said that the arts were a home ground for visual thinking. The children demonstrated problem solving throughout the research. The boy had to figure out which hand to use to with the scissors. It was difficult for him to carry out this skill. While the girl had no problem using scissors, she decided to turn her leaves into snowflakes and began cutting from the middle of the foam versus starting on the outside. Kaufman and Sternberg (2007) stated that problem solving helps children be aware of changes, feel in control, and cope with challenges. At one point both children were humming as they worked on their project. Vygotsky theorized that private speech, in this case humming to themselves, is a crucial development for overcoming impulsive action (Berk, 2001). At the time they were humming they did not need further instructions from the researcher, they were completely focused on their task. Both of the children seemed to have been previously exposed to a paintbrush, which helped the children find their

strengths, through problem solving (Perlmutter & Kaufman, 1991) and easily cover the sticks with paint. Pitri (2013) stated that planning is one of the processes of creative problem solving. In the paint project the girl kept mixing paint until she achieved the color she wanted. The boy did not like it when the watercolor was over the crayon and had to figure out how to remove the paint. There were times when the boy did not like having paint on him. At other times he could enjoy the project and the mess without getting upset. Gardner (as cited in Perimutter & Kaufman, 1991) believed that exposing children to different materials at home will create problem solving skills.

During the Cup and Nylon Snake project the girl problem solved by figuring out an easier way to string the nylon through the cups and then turned it into a contest. The girl used prior knowledge from her formal school setting when defining what sketching was to her brother in the Under the Sea project. Here she showed that through previous dialogue and practice at school, she was able to think artistically (Bresler & Thompson, 2002). While working with the clay she also, had to figure out how to use several utensils to cut the clay into Hurricane's wings. She was very determined and persistent in her endeavor. The girl used imagination when she placed eggs on the end of the fish's tail. She had an entire story that went along with why the eggs were there. The girl demonstrated imagination and problem solving when turning the four wings into two. She expanded the open-ended activity by testing ideas, which encouraged problem solving (Carroll & Tucker, 2007).

As the girl worked on her "Hurricane" and the boy's "Fluffy" she demonstrated a concrete operational thought process (Berk, 2001). She was thoughtful, well organized and coordinated her steps two or three at a time. She systematically made the body parts of her fish first before putting the whole together. According to Ellermeyer (1993), a creative child is one who would

come up with many different, unusual, original, or detailed solutions to problems. This was unlike the boy who was still in a preoperational phase using his sister to complete his work and then turning it into fantasy play. However, according to Berk (2013) the benefits of make-believe play help preschoolers have longer interactions and become more cooperative.

The boy demonstrated problem solving when he played with Legos and realized that he had the wrong Lego part for the Batman head. The boy also problem solved when he was hungry and wanted raisins to eat. He asked to use them instead of sunflowers when making the maracas.

The girl demonstrated problem solving when she had a conversation about recycling with her mom. She linked the Recycling Maracas project she made at home with a life situation that happened at school with a friend. She also showed problem solving when she flicked the paintbrush to dry it when she did not have a paper towel. The boy and the girl problem solved when they used paintbrushes to get the glue out of the bottle, rather than squeezing the bottle. The girl demonstrated problem solving, maturity in skill and use of memory when she used her paints in a test area before painting over her sea creatures. The girl tried to achieve a certain look and later decided to use a bigger brush because the small brush took too long. According to Kaufman and Sternberg (2007), creative people solve problems in an appropriate, advanced, and high quality manner.

Affects of Home Environment

The third research question asked: In what ways, if any, did the home environment affect the children's creative action? Parents are gatekeepers for their children. Berk (2001) states:

Depending on the experiences they offer, they open up or close off a great many avenues for learning. This includes toys, books, television, computers, weekend outings, special

lessons, time with grandparents and other extended family members, as well as the quality of childcare, and schooling. (p. 28)

The boy's father often played Legos with the boy, so the boy was confident in his Lego construction ability. He had many Legos, and they were placed in numerous locations around the house. The boy seemed to be often distracted by his Legos. The home environment offered him the ability to have agency over his actions and choose his desired method of creative engagement. This may not have been possible in a more structured school environment. He could, thus, develop his expertise with the Legos and ignore activities that proved to be more challenging for him. He may also be using Legos to relieve the stress of coping with something new and more challenging because he felt more confident in the Legos.

The girl drew on resources that were available in the home as aids in completing the projects. The girl used her books as a resource for animal pictures and memories for the Under the Sea and Out of the Zoo project. The girl found other cutting utensils around the kitchen to use for her clay project. Both the girl and the boy had scissors, a craft table, and crayons all available to them at their home, which may have helped them to develop their enthusiasm for engaging in the art activities. Children are deeply influenced by their parents, and, by giving their children additional opportunities, they support their child's development and convey the message that they care about them (Berk 2001).

The younger brother allowed his sister to do the work for him, as he was resistant to learn how to solve problems for himself. Therefore, when the brother let her do the work, he was unconsciously allowing her to control him. The boy was easily distracted once his sister started drawing for him for the Under the Sea project. He left to play with his Legos. He was more engaged in his Legos than his artwork. I found overall the boy to be more involved with

imaginative endeavors and play, as was fitting his age, when involved with the art projects, whereas the girl was more into problem solving, which also coincided with her developmental level.

Both children knew, from clear parent responses, to clean up the mess after each project. Berk (2001) stated “The parental warmth combined with firm consistent, rational and appropriate expectations for mature behavior promotes child development” (p. 246).

Reflection and Recommendations

Taneri (2012) and Zimmerman (2009) both stated that most parents are not aware of the meaning of creative thinking skills, therefore, it is necessary to increase the awareness of these skills to parents and teachers. Parents and guardians would benefit in knowing how to use this awareness to encourage their children’s problem solving and creative thinking. Parents should be asking their children questions while they are creating or solving problems. This helps children to reflect on their thinking process and helps them perceive the organizational structures they are using to process data as well as to help establish an internal focus of control which is necessary for success in life. It also improves memory by discussing their creation and its’ meaning. Bresler and Thompson (2002) believed that through interactions and dialogues with parents, teachers and their peers, children can learn a vast amount of cognitive and physical skills.

The study would have been different if I had been more involved in the production of the projects and more actively directed the two children. It was more challenging to sit back and not direct them as a teacher would. The study data would have been skewed if I had directed them more in their projects. I found that the questions being asked to the children that were approved by the Institutional Review Board were very staged and unnatural. In the first two lessons, I went through the lists of questions I was supposed to ask. The children were very confused and

wondered why I was asking those questions, which were very open ended and did not always make clear sense to them. I ended up not asking those questions consistently which is why they are not seen being answered every time in the previous chapter.

When it comes to children exploring their creative thinking skills, it is important and beneficial to have a safe and supportive home environment, such as the one that the parents say that they have created. Gardner (as cited in Perlmutter & Kaufman, 1991) believed that exposing children to different materials at home will create problem solving skills and, therefore, will help children find their strengths, passions and interests. According to Taneri (2012), by giving children more responsibility, parents will facilitate their children's development of self-confidence and risk-taking. The environment should be open and comfortable so as to stimulate learning in children and help encourage their problem-solving skills, rather than being one of formal and direct instructions (Carol & Tucker, 2007). Both children seemed to be more engaged in the open-ended instruction, whereas their goal for the closed-ended project was to complete the project. As a trained art instructor, I gave them step by step instructions in the closed-ended project. Therefore, the projects were easier for them to prevail and was not necessary for the children to use their imagination. The closed-ended project instructions were very detailed and specific, leaving little time for additional artistic expression. This concluded that the closed-ended projects were completed quicker than the open-ended projects. The boy was better at completing his closed ended projects, but his imagination was not as strong as the open-ended projects. The children appeared to make associations with both the open-ended and closed-ended projects. Homes and schools should not have such "serious" formal directed play, but rather be flexible and open to creative play. The children should not be over stimulated, which causes them to withdraw as they try to shield themselves from a stimulus deluge (Berk, 2001). At times,

the children became overstimulated. I did not feel that our cousin relationship had anything to do with their excessive excitement. The boy showed overstimulation when drawing, because he was comparing himself to his sister. The girl showed overstimulation when constructing her Recycled Maracas. Her coordination was challenged and she became frustrated when it became difficult.

When comparing the children's enthusiasm for each of these projects, I noticed that they were more excited and more willing to talk about the open ended Under the Sea project. They had more side conversations while working on their open ended art projects. They even began to hum which is a sign of deeper interest and concentration. By the time we reached the final Puzzle Piece Picture Frame project they did not have much interest in any more close ended projects. They were more creative, artistic, and imaginative with the open ended projects. Therefore, I would recommend that parents use more open ended questioning and encouragement when it comes to projects in the home.

According to Taneri (2012) by giving children more responsibility, parents will facilitate their children's development of self-confidence and risk-taking. It is recommended that the boy's parents, teachers, and I work more with him on drawing as well as independently working on his own projects and discourage him from relying on his sister. It is also recommended that the older sister refrain from doing the brother's projects and be encouraged to guide him. This will help the sister with social skills so she will not regulate her brother.

By encouraging the boy to be more independent with his projects, it is hopeful that he will improve his problem solving skills as well as fine motor skills. By not having his sister do all of his difficult projects, he will be able to build confidence socially and emotionally. Berk (2001) stated that parents can foster positive sibling ties through expressing warmth and affection, stressing each child's positive qualities and achievements, and refraining from making

comparisons (p. 235). When sibling interactions are sincere and friendly, there will be benefits such as emotional support, companionship, and assistance with everyday tasks (Berk, 2001). It is important for the boy to understand that even though his sister is helping him do his work, he will not be able to get the same help in school.

How much assistance a child needs depends not just on cognitive maturity, but also on other characteristics. Parents are to encourage their children to problem solve as well as contribute to dialogue as the child is figuring out answers. If the parent intervenes only when the child is truly stuck, they give the child ample opportunity to accomplish his or her own task. The adult should refrain from giving the child immediate answers when the child finds difficulty (Berk, 2001). The boy may complain about needing help or not knowing how to do a piece of the project because of fear. If the parents sit with him, show him and let him do his projects on his own, over time he will gain confidence in himself. If his sister constantly does the projects for him, he may never become confident. He needs to understand how to make mistakes and problem solve to become successful.

According to Berk (2012), children between ages three and four perform considerably better in situations in which they must follow commands, but often make many errors in open ended activities. The boy demonstrated this theory when stamping on his own. When he was being shown how a pattern worked and was asked what came next, he was able to answer it correctly. Then, when the boy was able to create his own pattern, he went off on his own and did not make a repeated design. Berk (2013) also stated, "Children who are in preschool show improvement in recall as they get older, but it is strongly associated with language development" (p. 295). Recall is poorer in younger children because it is a task that requires retention of pieces

of information. “Language is our primary avenue of communication with others and means through which we represent our experiences” (Berk, 2001).

According to Berk (2001), brain development and temperament are intertwined. When the boy showed stress, it was in an arousal of the inner brain called the amygdala, which led the child to new negative experiences. It is in the best interest for the parents and the child to not shield their child from these stressful situations, but to warmly, consistently, and assertively guide and support their child through new experiences. Berk (2001) stated that as children talk their way through challenges, first with the assistance of more expert partners and then on their own, they acquire new strategies for handling difficulties (p.79). The more they engage their memory over time, children become able to transfer those memories to long-term. Berk (2013) stated that as children get older, their attention improves and they are able to retain information more easily (p. 292). Thus, the boy may grow out of his resistance to trying new art materials and ideas.

Sutton-Smith (1997) identified different forms of children’s play permitted by adults. He listed them as Play as Progress, Fate, Power, Imaginary, Self, Identity, and Frivolity. The most popular was *Play as Self* and *Imaginary*, or giving children the freedom to express themselves and use their imagination. I did not see the other forms of play as having been as great of an influence on the children. The boy in my study creatively linked play and imagination together.

The girl showed a great deal of interest and confidence when making the art projects, which made her more willing to experiment more with her artwork. She was a creative child who could come up with many different, unusual, original, or detailed solutions to problems (Ellermeyer, 1993). She should be encouraged to continue her exploration of the arts and creative play.

As the researcher, I have always been involved in both the girl's and the boy's life because I am living in the same town and am related to them. The daughter has a keen interest in art because of time spent with me in my art room making art. She is curious and admires the fact that I teach and create art. She always wants to create art with me in her home or at my school. In the past, the girl has experimented on the potter's wheel at my school. She enjoys being with me and, especially, creating art. The girl has confidence in her artwork because of more schooling, summer camps that involve the production of art as well as spending time creating art with me. In reflecting on the above statements, I feel I should begin to spend more one-on-one time with the boy, creating art as I did when the girl was his age.

It is extremely important for children to have support in order to become creative children. The support should come from not only parents, but other family members, such as siblings, grandparents, cousins, as well as teachers and babysitters. Adults need to be engaged with children in play. Bloch and Choi (1990) and Sutton-Smith (1997) agreed that adults have a great deal of power and influence over the child's act of play. In conclusion, studying these two children in their own home environment I asked these questions:

1. In what ways, if any, do children engage in creative acts when making artwork at home?
2. How do children use their imagination to problem solve outside of the school environment when presented with activities in the arts?
3. In what ways, if any, does the home environment affect children's creative actions?

I found both children were very creative when making artwork at home. The more the children were engaged in the artwork, the more involved they were in the act of creativity. I

found that the girl demonstrated more problem solving skills, whereas the boy, due to his younger age, showed more imagination and play. While the children were working on their art projects, they showed imagination and problem solving through the association of their outside experiences. I found the home environment proved to affect the children's creativity in many positive ways. Having the parents present helped the children with problem solving. If the children were stuck, the mother was able to help them through conversation. The children also had access to an abundance of resources, such as books, Legos and the pantry along with the activity table. This enabled children to show all of the aspects of creativity, including problem solving, imagination, artistic expression, and especially play. With support from every person that is involved with these two children's lives, they can grow up to be creative and well-rounded human beings.

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APPENDIX A: QUESTIONS FOR PARENTS

1. What activities do you generally do with your kids at home?
2. What is your definition of visual arts?
3. How long have your children been in school/daycare?
4. What do they do in the school/daycare?
5. What do you think your child's favorite activity is?
6. What is your routine with your children during the week?

APENDIX B: LESSON ONE

Craft Stick Trees

Project 1. Close-Ended

Materials:

- 1 Jumbo Craft Stick
- 7 mini craft stick
- Foam or felt in red, green, and orange
- Scissors
- Craft glue
- Brown acrylic paint

Steps:

1. Paint one side of all the craft sticks brown and let dry. Repeat on other side.
2. Glue mini craft sticks onto the jumbo craft stick as branches.
3. Cut out leaves from foam or felt, simple ovals and diamond shapes are fine.
4. Glue leaves to the ends of the branches.
5. Let dry completely.

APPENDIX B CONTINUED

Under the Sea-Crayon Resist

Project 2. Open-Ended

Materials:

- Crayons or Oil Pastels
- Paper
- Watercolor
- Paint brush

Steps:

1. Show the children pictures of creatures in the ocean. Give them books about the ocean with pictures in them and have them explore the books for a few minutes.
2. Give the children a piece of paper and tell them to draw what they think is in the ocean right now. Give them crayons to draw their ocean scenes
3. When they are finished drawing, have them use watercolors to paint over their drawings to make it look under the sea.

The areas of crayon (or oil pastel) will resist or repel the paint.

APPENDIX C: LESSON TWO

Cup and Nylon Snakes

Project 3. Close-Ended

Materials:

- Colorful plastic cups (10 or so per student ... if you have less, that's ok, the snake will just be smaller).
- Pantyhose leg (make sure no one needs it anymore).
- Newspaper.
- A sharp pencil, pen, awl or other sharp instrument for poking holes.
- Construction paper
- Markers
- A pair of scissors

Steps:

1. Using the pen (or an awl - with an adult's help) punch a hole in the base of each cup.
2. Thread the cups onto the pantyhose leg, through the holes you have punched. To space the cups, put a piece of balled up newspaper into each cup after it is threaded.
3. At the front of your line of cups, cut and paste a construction paper tongue. And draw a set of eyes onto the first cup, to create a face for the snake.
4. Cut a triangular piece for a tail, punch a hole in it and fasten it to the end of the snake's body.

APPENDIX C CONTINUED

Out of the Zoo

Project 4. Open-Ended

Materials:

- Books of animals (with pictures)
- Air Dry Clay (all colors)
- Paper
- pen

Steps:

1. Show children pictures of different animals. Have the students identify what is special about each animal. Have them point out if they have tails, big teeth, big ears, etc.
2. Next, ask the children that if they could make an animal they've never seen before, what would it look like?
3. Have the children sketch out their new animal
4. Next, demonstrate to the children how they can use air dry clay and how they can make creatures out of it.
5. Have the children create their new animal out of the air dry clay. The children can mix any colors of clay they want!

Ask the children questions along the way, such as “what are you making?” “What is the next Step to your artwork?” “What is your animal’s name?”

APPENDIX D: LESSON THREE

Recycled Maracas

Project 5. Close-Ended

Materials:

6. 2 8 oz (236 mL) water bottles
7. 2 toilet paper rolls
8. Electrical tape (colorful, if possible)
9. Beans: Filling For your maracas

Steps:

1. Take your clean and dried 8 oz water bottles and fill with the beans. Close it up with the cap and then listen to the sound.
2. The next step is to create the handle. Take your two toilet paper rolls and make a straight cut from one end to the other. Tighten the roll in on itself to about the size of a 3/4 inch dowel and then apply your electrical tape.
3. Start wrapping the tape around the bottom part of the rattle on the bottle and move down onto the new handle. Wrap slowly, covering all the cardboard of the toilet paper roll and you will have created a rather sturdy handle for your new instrument.
4. Now you are ready to play.

APPENDIX D CONTINUED

Painted Rocks

Project 6. Open-Ended

Materials:

- some small rocks
- thick water-based paint (acrylic)
- paintbrushes or sponges
- water, old margarine containers
- some magic markers
- a container of white glue
- some newspapers to keep your work area clean

Steps:

1. Clean all the dirt off of your rocks and let them dry.
2. Have the child decide what they are going to create - a picture, an animal, a funky paper weight, etc.
3. Begin painting your rock with the designs and colors of their choice. If they wish, they can draw some lovely pictures using magic markers instead of paint.
4. When they are all finished decorating and the paint is completely dry, it's time to seal the rock. Do this by mixing some white glue with a little bit of water.
5. Brush some of the water/glue mixture onto your rock to seal in the beauty.

APPENDIX E: LESSON FOUR

Puzzle Piece Picture Frames

Project 7. Close-Ended

Materials:

- poster paper
- puzzle pieces
- glue
- magnetic strips

Steps:

1. Give each child a picture frame.
2. Give each child a handful of puzzle pieces (One 500 -1000 piece puzzle is plenty).
3. Have them glue their puzzle pieces on the picture frame, overlapping as they go until the picture frame is covered.
4. glue a magnetic strip on back

APPENDIX E CONTINUED

Textured Prints

Project 8. Open-Ended

Materials:

- Paint (all colors)
- paper
- Textured items for stamping. Ex: sponges, fruit, vegetables, leaves, marbles, etc.
- Paint brush
- Water
- Paper towels

Steps:

1. Show the students what is on the table. For example, fruit, sponges, marbles, etc.
2. Tell the children they are going to be using these as stamps to create a piece of artwork with pattern.
3. Demonstrate to the children how they are going to take the everyday items and use them as stamps to make patterns of shapes and colors.
4. Next, take the children outside (if weather permits) to find more items they can use as stamps.
5. After the children find items to stamp with, have them decorate their piece of paper to create their own artwork with patterns of shapes and colors.

APPENDIX F: PICTURES

Craft Stick Trees

Craft Stick Trees

Craft Stick Trees

Under the Sea

Under the Sea

Under the Sea

Under the Sea

Cup and Nylon Snakes

Out of the Zoo

Out of the Zoo

Out of the Zoo

Out of the Zoo

Recycled Maracas

Painted Rock

Puzzle Picture Piece Picture Frame

Puzzle Piece Picture Frame

Textured Prints

Textured Prints

Textured Prints

Playing with Legos