Twins’ Literacy Development in a Home Child Care

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Twins’ Literacy Development in a Home Child Care

By

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A thesis submitted to the Department of Education of The College at Brockport, State University of New York, in partial fulfillment of the requirements for the degree of Master of Science in Literacy Education

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Abstract

This research focuses on a set of five year old twin girls in a home child care environment, where play and oral language are essential components to their literacy development. The purpose of this study was to understand how each twin is developing her emergent literacy skills situated in her play and the environmental factors that are impacting her language development. Data were collected for this study over a period of 4 weeks using a parent’s survey, interviews, artifacts, observation notes, and transcribed audio-recordings.
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**Introduction**

It is eight in the morning and a car pulls into the driveway. The parents are dropping the twins off at the child care center. Patricia (all names are pseudonyms), a five year old girl, rushes in the door and flings off her coat and shoes. She then rushes to the doll house sitting in the middle of the floor where she begins to pick up the dolls and play. Her twin sister, Abby, hangs back and slowly takes off her coat and shoes. She says goodbye to her mom then wanders over to the doll house. She sits down, and looks at her sister before she grabs a doll. She is hesitant at first, not making a move until her sister invites her into her game of playing with the dolls. This was not the first time I have observed scenes similar to this unfold when the girls enter the child care center. Patricia rushes in the door, while Abby waits and hesitantly enters the pretend game.

As I sat and watched the girls play with each other, many questions came to mind about how and what they play together. This brought me back to one of my graduate classes where we learned about kidwatching. Owocki and Goodman (2002) explicitly defined kidwatching as “learning about children in terms of their identities, experiences, interests, attitudes, family language and literacy practices, and familial and cultural backgrounds” (p. x). They concluded that by observing children in their environment, people can learn many different things about them as learners. As I observed the girls play, I began to think about seeing beyond them playing and thought about the possible environmental factors that could have a role in the way that they play, imitate, and interact with the child care provider and other children. Pike, Iervolino, Eley, Price, and Plomin (2006) found some possible environmental factors are parental socioeconomic status (SES), minority status, chaos within the home environment, and parental feelings towards their children. This information is important because it impacts each twin’s perception of self
and how they play in the home child care environment. This in turn impacts each twin’s emergent literacy development.

In further thinking about the twins’ emergent literacy development, I began to see trends in the way they spoke to each other, in their play, the games they played together and with the other children in the child care center. As I observed them play, I consistently noticed that one of the twins was the leader in group games and that the other children either imitated her or imitated actions that I assumed they saw others doing in their environment. As children imitate other people and each other, they are acting out skills and using language in social interactions through pretend play to understand and process the meaning of the new skills in a social situation (McEwen, Happé, Bolton, Rijsdijk, Ronald, Dworzynski, & Plomin, 2007). This shows that environmental factors have an importance on pretend play for children to learn and develop new emergent language skills. Therefore, I wanted to observe the twins in the home child care center to understand the role of environmental factors on their emergent literacy skills.

**Topic and Research Problem**

The purpose of this project was to understand the emergent literacy development of five year old twin girls in a home child care environment and the possible factors that may have an impact on their literacy development. Wyman, Rakoczy, and Tomasello (2009) concluded that young children must come to understand social practices and members in their group perform certain actions and behaviors based on their environment. Children practice these skills and social practices in their pretend play as they imitate the actions, behaviors, and language from individuals who are members of their own group. Therefore, children need to engage with members of their group and other people to be able to learn and develop necessary skills to function in different social environments. It is important to observe the children’s interactions
with others in what they are imitating as they play and why they are imitating specific behaviors or language to understand their emergent literacy skill development.

Children need a strong foundation of socializing and imitating others to gain the necessary social and literacy skills to begin school. Knowing the environmental factors that may impact their development of skills is important to note and figure out. There is a link between environmental factors and children’s cognitive and behavioral development; but my focus was to observe the twins play and interact with others to know the environmental factors that are impacting their literacy development.

As children learn and develop their emergent literacy skills, they are trying to make sense of their environment by processing information provided to them. Children process the information based on what they previously know and are aware of, which is part of their self-esteem. According to Berk (2009), “By age 4, preschoolers have several self-judgments for example about learnings things” from family and friends they interact with on a daily basis (p. 456). Children’s understandings of themselves are limited when compared to older children but they can still exhibit shame, embarrassment, shyness, and boldness. They may not be aware of what to call what they are experiencing, but they do exhibit it in their play. Since preschoolers have trouble distinguishing between their desires and their actual competence they may imitate and behave in manners that are not deemed acceptable (Berk, 2009). Yet, as children play they are learning to navigate and express their emotions, ideas, and thoughts through role and dramatic play. Based on the situation and social interactions with adults, children will process and develop their understanding of their experiences differently in trying to recognize themselves and where they fit into their environment.
Rationale

This project is a qualitative study about how a set of twins develop their emergent literacy skills in a home child care setting as they play and interact with each other, other children, and the child care provider. Emergent literacy skills are expressive or oral language, like speaking and listening, alongside reading, and writing. They are essential in understanding the phases in how children develop literacy skills. In the emergent literacy phase, children become aware of print and explore its properties. According to McGee and Richgels (2012), children are “dependent on their parents or others readers and writers for their experiences” (p. 23). As they explore their surroundings they are observing the interactions and behaviors of the people in their environment like parents, caregivers, and each other. Based on their observations they process this information by engaging with the materials that they are using through play to comprehend what they are observing in others.

Children learn by watching, imitating, and acting out through pretend play. It is a child care provider’s job to foster pretend play practices to understand if the children are grasping the concepts of social interactions. Observing, taking field notes, and audio-recording the interactions are essential in analyzing the children’s pretend play to see if they are continually developing literacy skills to be used in social situations. Therefore, by looking more closely at each twins’ pretend play and their interactions with others, I am able to better understand the environmental factors on how they are playing, what type of language they are using, if they have a wide range of vocabulary, and if they are attempting to write and read, while they play or do activities. This study was important to me because I have seen the twins grow from infants to 5 year olds and I was curious to understand how they have developed their emergent literacy skills. After attending college for a teaching profession, I want to apply the skills I learned to
further understand how play can have a huge impact on how each twin develops. I have seen differences in their behaviors and their play practices and I would like to understand the differences in relation to their emergent literacy development. The twin studies that I had researched mostly focused on genes and environment. Therefore, I wanted to study about how twins played in their environment.

**Purpose**

The purpose of this study was to understand how each twin is developing her emergent literacy skills situated in her play and the environmental factors that are impacting her language development. At 2 years of age children start a phase of language acquisition that is essential for their developmental process. Children need to be exposed to a wide variety of vocabulary and be able to begin to experiment using it in social interactions (Van Hulle, Goldsmith, & Lemery, 2004). Therefore, in my case study I focused on their expressive language development as they played in the child care center. I have observed how they used their language when they interact with others to gain a clearer understanding of their emergent literacy development.

**Research Questions**

How might each twin’s perception of self - impact her emergent literacy development?

How might their play in the home child care environment impact the twins’ emergent literacy development?

**Literature Review**

The following literature review summarizes essential points about the literacy development of a set of five year old twin girls in a home child care environment and the possible factors that may have an impact on their literacy development. Children’s play practices
are a huge factor in how they develop their literacy skills. Therefore, the conceptual framework for this case study was informed by twins’ development, oral language development, environmental factors, and how children play.

**Twins’ Development**

When children are born, they begin to observe the world around them and begin to develop literacy skills. Twins, specifically, develop differently than single born children and are perfect for case studies in determining genetic and environmental factors in literacy development. In this case study the twins are fraternal girls, therefore, one would assume that they would learn the same things and develop at the same rate. This is due to the fact that they have the same socioeconomic status, have the same parents, live in the same house, and are taught the same thing (Hayiou-Thomas, Kovas, Harlaar, Plomin, Bishop, & Dale, 2006). This is not necessarily true; twins learn and develop their literacy skills differently. They will use some different vocabulary, while they play and interact with others differently. This could be due to the fact that children do not profit the same way in the same environment or because of how sensitive young children are to pick up on social and implicit clues related to language (Bus & Out, 2009). Therefore, it is important to look at each twin separately to determine both twins’ literacy development during play as independent emergent learners.

As children socialize with others in their environment, their personality development is influenced by their interactions. One may assume that twins will have similar temperaments, yet twins are different from each other in both temperament and behavior. This is seen especially during parent interactions with their children, because parents act differently towards each child. When parents are asked to describe their twins, most of the time parents will emphasize the differences between the twins. Parents will discern different aspects of each twin than observers
caregivers that are consistent with parental beliefs and the child’s developing temperament” (p. 422). For example, if one twin is very shy the parent may be more encouraging to the child when
meeting new people, compared to the other twin who is more sociable. The parents’ different
treatment of each twin may have an impact on the twins’ social functioning skills, since
temperament is related to social behavior. For example, highly active preschoolers usually are
more likely to be more sociable with their peers, while shy, inhibited children will watch their
peers and wait to be invited into the games.

The twins’ gender also played a role in their social behavior development and their play
practices. At an early age the differences in gender have shown to be a factor on children’s
behavior. Girls for instance develop their fine motor skills quicker and take an interest in
watching the facial expressions during interactions with adults. Therefore, they typically prefer
animate-like features like faces and they like to manipulate toys, like having dolls sit or having
stuffed animals move their heads to show emotions (Todd, Barry, & Thommessen, 2016). This
means that girls mostly gravitate towards dolls and other small toys. Since the twins are the same
gender, they are playing with similar toys, because they are choosing to play with toys that are
considered typical girl toys. They then are choosing to select to play together due to the
familiarity in play behaviors and toys (Berk, 2009).

Language Acquisition and Development

Oral Language Development

Receptive Language

Two types of oral language development are receptive language and expressive language.
Receptive language is the ability to understand words within a language. Children gain
information and understanding from routines, visual information, and written information (Receptive language, n.d.). Children process the input of the words being spoken to them to understand what they are expected to do by adults and their peers, which leads to effective communication between the speaker and the listener. Receptive language consists of attention and concentration, pre-language skills, social skills, and play skills (Receptive language, n.d.). As children play they learn to hold their attention and concentration by performing activities without distractions. Another essential factor is that children are learning to communicate and understand others without using words. Children use visual information and cues to assess a situation that include gestures, facial expressions, imitation, and eye contact. Being able to read people’s body language is important during play and social activities because it allows children to engage with others by following norms and expectations, and it self-motivates them to enjoy their play practices.

To understand the twins’ literacy learning and language processing it is important to understand Vygotsky’s social constructivism in terms of how the twins socially play and interact with their peers and the adults in their environment. As children are playing they are constructing their own knowledge by choosing the information they receive to process their understanding of their learning (Pritchard, 2009). After children process the information they receive they are then able to choose an action that they deem proper for the situation. This only occurs when the children have developed in their understanding of how to communicate. Usually, by the time they are preschool age, children are able to process meaning or themes and knowledge of social rules that allows them to participate in a wider variety of games. They are also capable of varying the themes of their games. They are learning that there are multiple ways to use objects in their play and there are various ways to play the same type of game. Through their social
development they are able to choose their friends and playmates, which allows for an increase in awareness of their own membership, and the behavioral traits and qualities of their peers (Vahedi, Farrokhi, & Farajian, 2012). Children are beginning to figure out where they are situated in their different social situations based on the information they receive and understand both the spoken and body language that are deemed acceptable play practices.

**Expressive Language**

As children become aware and explore while they play, they are continually learning and increasing their expressive language. Expressive language refers to the amount of vocabulary children know and use as they speak, and the complexity of their language and vocabulary (Kuhn, Willoughby, Vernon-Feagans, & Blair, 2016). As children use language to interact with others they are learning to socialize and function in their environment. They are learning basic social functions of greetings, questioning, and asking to do things from their interactions with their parents and peers. In addition, Mashburn, Justice, Downer, and Pianta (2009) stated, “Young children’s language growth is accelerated by their exposure to affectively positive verbal input from adults, particularly their parents in the home environment” (p. 686). This assists in showing that family and the children’s environment can impact the language growth of each child.

Another facet of children’s expressive language growth is the amount and complexity of vocabulary that is used by each child. According to Kuhn et al. (2016), “Vocabulary building serves as one of children’s first opportunities to mentally represent objects into meaningful categories and to think symbolically about objects” (p. 22). Therefore, children are making sense of the vocabulary they hear by attempting to sort it into categories of information. As children
are sorting their information they are actively problem-solving their knowledge of language to understand their environment. For children to sort the information they are processing they have to problem solve the unthinkable. For “Constructivism requires the acquisition of new conceptual primitives, or of new combinatorial machinery, resulting in the capacity to think thoughts previously unthinkable (not merely previously unthought)” (Carey, Zaitchik, & Bascandziev, 2015, p. 38). Children are provided with new information or shown new things considered unthinkable. The children do not understand what they see and have to think beyond their knowledge to consider ideas that they might not have thought of before. Therefore, children begin to experiment and explore the item or concept to make sense of it.

**Emergent Literacy Skills**

The first 5 years are the most crucial time for children to develop their language and problem solving skills. Spoken language allows for children to communicate thoughts, ideas, and questions to others. Children learn their language from the individuals who are in their environment, like parents, family, care givers, and other children. According to Zauche, Thul, Mahoney, and Stapel-Wax (2016), for children to learn a language, they must be able to discern the intentions of speakers and find patterns in the language. Children listen to the spoken language and then attempt to say the language they are hearing and learning. By the time children are around 3 years old, they have reached the phase of emergent literacy skills. McGee & Richgels (2012) calls this phase of literacy learning awareness and exploration. In this stage, children become aware of the language or vocabulary that is being used around them by adults and other children. They also begin to notice print such as store signs, street signs, logos, and text in books (Owocki & Goodman, 2002). Children at this phase are also beginning to understand that pictures or images are used to represent thoughts and ideas. Therefore, since
learning is socially constructed through social interactions, children use their literacy skills to communicate with others and to make sense of their environments (Zauche et al., 2016). As emergent learners, children are learning how to communicate with others to express their ideas and thoughts to adults and other children they play with to create games and play together.

In early childhood, it is a critical stage of learning where children are being encompassed in the language of their parents and other adults and peers in their environment. To explain this phenomenon, Vygotsky coined the term social cultural theory, where children are constructing knowledge and skills (Larson & Marsh, 2015). For an emergent learner, their literacy knowledge is still largely based on what their parents or caregivers are letting them participate in at their level of development. Children’s level of development is directly related to Vygotsky’s zone of proximal development, “which is an opportune area for growth but one in which children are dependent on help from others” (McGee & Richgels, 2012, p. 4). Children are able to complete part of a task, while adults perform the parts of the task that the child cannot yet do alone. Since learning is socially constructed, children are using their literacy skills to communicate with others and to make sense of their environments.

**Environmental Factors**

Children’s environment is involved in every aspect of their development. Many factors can have an impact on their development from stress of the environment, parent or caregiver involvement, and parent or caregiver interactions with each child. Based on the wide variety of environmental factors, each child will differ dramatically in how he or she responds to his or her social and physical environments. It is imperative to understand that the parents or caregivers of the children can have a positive or negative impact on their development. One study found that for preschool-aged children, there was a need for high degrees of warmth, along with high
maturity demands, to foster children’s best behaviors. Harsh parental discipline factors led to lack of social abilities or externalizing behavior problems in the children (Pike, Iervolino, Eley, Price, & Plomin, 2006). It is necessary to understand and study the environment that the children are immersed in to fully understand each child’s development.

Another aspect that is important to the twins’ literacy development is the individuals they interact with in their environment. The twins attend a home child care where they are consistently surrounded by other children that also attend the home child care. The range of the children’s ages may have an impact on the twins’ play practices and literacy development. According to Vygotsky,

Children in mixed-aged groups gain social skills during the process of “scaffolding,” in which a more competent individual supports the learning process of a less competent one, through social interactions and modeling. Through scaffolding, older children have the opportunity to develop confidence and leadership skills, while younger children learn social and language skills from more competent peers. (Plotka, 2016, p. 22)

Children need to interact with both younger and older children to learn and grow. The twins play the role of both younger and older children in their child care, because there are a couple children younger than them and one child who was older than them. Based on Vygotsky’s belief the twins should be showing signs of confidence and leadership skills, alongside with learning social and language skills as a result of their play with the younger children. The twins should also display more complex language from their interactions and they may display more complex social and dramatic play skills as a result of their interactions with the older child (Plotka, 2016). As they interact with others they are participating in a wide variety of activities and play practices where
they are jointly constructing meaning and are becoming contributing members of their group (Berk, 2009).

Another aspect that is important to the twins’ literacy development is the gender of the individuals they interact with in their environment. At home it is just them, two female girls who are surrounded by female related toys. Parents make the choice of items and toys that they want their child to play with at birth, and award gender typed behaviors that fit their perspective about what girls should play or do. According to Todd, Barry, and Thommessen (2016), “parents’ differential socialization of boys and girls found evidence of parental encouragement of children’s sex-typed activities” (p. 3). If the child is a girl they were encouraged to play with dolls and focus on more feminine pursuits. Therefore, girls will be expected to play and do things that are expected from them and boyish behaviors will be frowned upon. This same idea will be transferred over into the childcare setting. In the child care environment the twins have a female caregiver and they play with a younger girl and three boys. In addition, “Peer presence has been shown to affect the sex-typed play of older children; for example, 3- and 4-year-old children played more with own-gender-typed toys in the presence of a peer than alone” (As cited in Todd, Barry, Thommessen, 2016, p. 3). For example, if the boys are playing with transformers, the twins may join in on the game by playing with their dolls. Even though their childcare environment is gender mixed they will most likely continue to mostly play with toys that are considered typical girl toys and act in a manner that is deemed acceptable girl behavior.

**Funds of Knowledge**

As children explore and experiment with what they are seeing and learning around them, they are learning the skills, tools, and the information that they have observed and learned from their culture and life experiences. This is referred to as funds of knowledge and it develops from
children’s home experiences they are enmeshed in. The knowledge that children obtain is valuable and full of practical exchanges that can impact their literacy learning. Researchers Gonzales, Moll, and Amanti (2005), state that children are not passive bystanders but are active participants in a broad range of activities that are founded on the social interactions of their family members and the family member’s beliefs in their culture. The activities that children are engaged in are based on their families’ environment and they are constantly providing a context where their family is fostering their learning or funds of knowledge.

Additionally, children’s funds of knowledge culturally and socially define their literacy learning. Children are taught and raised with the skills and knowledge that is essential for their family or household. Each of these skills and knowledge are based on the emphasis that the family puts on the skills and the resources that are provided to them. Thus, children’s literacy development centers on their exploration and interests from their social situation. Researchers Owocki and Goodman (2002) stated that, “because family language and literacy practices vary greatly, each child’s language and literacy enculturation is unique” (p. 16). Therefore, children’s daily language and literacy practices are based on their knowledge. Being able to read could mean being able to understand a logo, read a name, or interpret a thermometer. A child’s funds of knowledge are paramount to how he or she learns and engages in literacy practices.

**Pretend Play**

In this case study I observed how a set of 5 year old twins developed their literacy skills based on their play interactions with others. To fully understand their development, it was important to understand how 5 year olds develop, learn, and play. Jean Piaget created the developmental stage theory to explain how children develop in their childhood. Since the twin girls are 5 years old, they are considered to be in the pre-operational phase, where their
Imagination is an important process for children to learn and develop. Adults see imagination as going beyond reality and an act that children do as they engage in play activities. Yet, imagination holds much more than going beyond reality; for children it is a way to cognitively think about their world. Imagination holds two central purposes for preschool age children: (1) the creation of an idea about a tool, concept, or idea; and (2) creating a plan to sort out and problem solve their understanding of the idea (Diachenko, 2011). As children use their imagination, they are creating ideas based off of their experiences to determine how the idea should be used in its context. By trying to fit an idea into a context, it is called symbolic function, where the children make an object represent the creation of their idea (Diachencko, 2011). For example, if a child uses a lid to represent a hat then he or she is trying to understand the function of the lid and its purpose. The child is attempting to make sense of the new information and where it fits into his or her understanding of the surrounding environment.

To further understand how children play and the roles they act out, Vygotsky coined the term symbolic play. Symbolic play “is the assimilative process, which enables children to practice at symbolically representing objects and events” (as cited in Stone & Stone, n.d., p. 1). This is an important stage of children’s development because the child is now able to have objects represent something else. There are three types of symbolic transformations that children engage in as they play. The first is called object transformation or substitution, where children are able to give identities to objects. For example, a block becomes a phone or a blanket becomes
a cave. The second type of symbolic transformation is roles, where a child assigns another child a character and that child plays that character. The third type of “symbolic transformation is ideational, where the child uses language, gestures or mental images (independent of objects) to create” their make-believe scenes (Stone & Stone, n.d., pp. 1-2). Through symbolic play children are making sense of their experiences and are trying to make sense of the purpose of objects in their environment. Overall, “Vygotsky theorizes that symbolic play enables children to develop a variety of represented meanings that serve as a basis for successful literacy development” (Stone & Stone, n.d., p.1).

Imagination works alongside of imitating in children’s play practices and is seen when children imitate or copy movements, actions, behaviors, and emotions that they have seen adults or their peers perform. Imitation is considered an early-appearing skill that may also nurture children’s development of language and vocabulary, alongside insightful social behavior skills (McEwen, Happé, Bolton, Rijsdijk, Ronald, Dworzynski, & Plomin, 2007). Just like with imagination, imitation is different for each child. Each child will imitate different behaviors, even if more than one child lives in the same household. This means that each twin will exhibit and imitate different behaviors as they play and interact with their peers and with adults. Imitation is also necessary for children to learn, because they learn how to act and behave in social situations. In addition, Meltzoff argues that “imitation is most likely to contribute to the understanding of desires and basic emotions” (McEwen et al., 2007, p. 487). Children also imitate behaviors to understand how they are feeling. If they see their parents yell and stomp their feet when they are mad, then children may imitate the exact movement when they are mad. They are attempting to figure out how to act in different situations and children are seen imitating as they play to understand concepts that are foreign to them.
Both imitation and imagination are seen in pretend play and dramatic play, where children interact with the materials, language, and peers around them. During pretend play and dramatic play, children are actively exploring their environment by handling, dismantling, and transforming their surroundings through the use of toys, games, and playing with their peers. Pretend and dramatic play is essential to children’s development because it allows time for children to internalize the actions, behaviors, or emotions (Phillips & Soltis, 2009). When children imitate and imagine during dramatic play, they are practicing the vocabulary they have heard by trying to recreate the same context. They are performing the same manners for the actions they have seen others perform by recreating the scene through pretend play. In pretend play children are acting out different behaviors and actions by pretending either they are someone or something else, like a dog, or they are creating a game of make-believe to interact with their surroundings. Pretend and dramatic play activities construct a “context wherein language development is likely to occur, because children must use language to convey ideas and interpret responses” (Mashburn, 2009, p. 688).

As children interact and play with their peers, they are learning essential social skills of sharing and listening to ideas that are being presented in the make-believe game. They are learning that they need to convey their thoughts and ideas, where either their peers will go along with the game or they will not follow the set “rules”. During pretend play children understand that within the group or game that they play, activities and behaviors are performed in a certain way. Even at a young age children understand reality versus pretend when they are playing. According to a study performed by Wyman, Rakoczy, and Tomasello (2009) they found that during pretend play if a child entered a previous game of pretending an object was something else and they went along with it, then they were considered to be following the unspoken rules.
But if the child entered the pretend game of play and did not use the object as it was supposed to be in the game, then the other children would point out the violation. Piaget named this conventional rule playing (Wyman, 2009). Therefore, children understand pretend games are not real but each pretend game must follow conventional rule playing.

Overall, this case study is founded on a variety of theories and beliefs that unite together to form a foundation for the study. It is necessary to understand that twins develop their literacy skills differently despite living in the same environment and playing together. As the twins interact within their environment they are developing different temperaments that lead to different play practices. As children play they are learning and internalizing actions, behaviors, and emotions that they have seen adults and peers perform. Therefore, they imitate, play, and role play through symbolic transformations. Through social interactions and play practices children are trying to understand what they see and hear as they learn to function in society. Thus, implying that they are trying to make meaning from their experiences to understand the world around them.

**Methodology**

This study focuses on understanding the literacy development of a set of five year old fraternal twin girls in a home child care environment and the possible factors that may have an impact on their literacy development. Data were collected over a 4 week period that contained different data collection methods. Data were collected through field notes of observations of all of the children’s interactions and play time together, transcribed audio-recordings, interviews with the twins, surveys from the twins’ parents and the child care provider, and collected artifacts created by each twin.
Participants

The participants in this study were selected because I was easily able to observe the children and survey the adults who either work at the child care center or are parents of the children at the child care. There were 6 child participants in this study where the main focus was on the set of 5 year old twins. The children are ages 1 ½ to 5 years old and are from a home child care environment. There are 3 boys and 3 girls in the child care center. The twins come from a white family and only speak English. All of the children come from middle class families, where they are driven to and from the child care center 5 days a week by their parents.

One of the twins Patricia, a pseudonym, is an enthusiastic girl who was born second. Patricia is seen as a stereotypical girl, who loves dresses, wears pink and purple outfits, and plays with toys that are deemed acceptable for girls. She is always wearing new clothes and shoes, where it is rare to see the same outfit twice. Toys and make-up are essential to Patricia’s life and she spends a great deal of time exploring and playing with as many toys and accessories as she can. She has a huge toy room full to the brim with toys, but her favorite toy is the huge doll house that is situated within her room. She also enjoys spending time playing with her dolls. Another activity Patricia likes to do is to use her make-up table to put on make-up to look like a princess. Patricia’s favorite princess is Belle, and she enjoys reading stories related to Belle and Cinderella. She also enjoys watching the new Trolls movie and the movie Frozen. Patricia also enjoys helping her mom wash the dishes and fold the laundry.

Abby, a pseudonym, is the oldest twin by thirty minutes, and is shy and reserved around strangers. Abby likes to dress up, wearing green and purple outfits, and plays with toys that are deemed acceptable for girls. Abby is the twin most likely to find critters to bring home, is accident prone, and loves to go camping. Yet, she also embraces her feminine side and loves to
dress up and use make-up. Her favorite things to play with are lip stick and eye shadows, by decorating her face with her own make-up. She shares a huge toy room with her sister and enjoys playing with her sister’s doll house. Along with playing with dolls, she likes to play with her Shopkins, and enjoys playing with her dog. Abby also likes to watch the movies Trolls, Secret Life of Pets, and Frozen. Her favorite type of books are Disney, Bernstein Bears, and Snoopy, where she prefers books that make her laugh and ones that contain funny scenes or pictures. Abby also likes to draw pictures of Barbie dolls and of her family.

The adult participants in this study were the twins’ parents and their child care provider. Each of the adult participants are middle class workers, who strive to make a living in an ever changing world. The parents of the twins only speak English and have support from their family to help raise the twin girls. The child care provider chose her profession, 21 years ago, because she enjoys working with children. She is family oriented and will do anything for her family or the children she watches. She speaks only English and has been married for 33 years.

Setting

The setting for this case study was a home child care center in Western New York. The child care provider takes care of 6 children ranging in ages 1 ½ to 5 years. The play room is a fair size with plenty of space for the children to play and be engaged. There is a couch and a child’s table where they are allowed to sit and do arts and crafts or other activities. The child’s table is centered near the middle of the room with play space around it. There is a rocking chair for the child care provider to sit and read books to the children. There are also book shelves, spaces for books, and there is a toy space where all the toys are located at their level for the children to play with. Also, the room has a television where the children, during movie time, are engaged in watching educational programs or shows. The physical arrangement of the materials
and the displays in the room are important and increase the quality of the interactions between the children and the care giver (McGee & Richgels, 2012). This setting was arranged to fit the needs of 1 ½ to 5 years old to engage in a safe area of playing and learning.

The community of the child care center is located near a small town, with large open spaces. The town consists of quaint buildings and small family owned businesses. There is a library, dance studio, karate dojo, diners, and an elementary school within the town. The town atmosphere is very friendly and family oriented. Just outside of the town is where the child care center is located. It resides on a quiet street, with open space for the children to play in the backyard. It is a child friendly atmosphere that allows children to relax and have fun. The community social networks are important to note because it may influence the relationships between the parent and the child, and the child care provider and the child (Berk, 2009).

**Positionality**

It was important for me to create an understanding of the circumstances that have made me who I am as a researcher and observer. Many factors impact the way that I view myself and what I learn as an adult learner. For this paper I have positioned myself based on my gender, race, class, language, education, and my personal beliefs to create a foundation on my analysis of the research. I am a single white woman in my 20’s who lives in a large extended family. I grew up in a middle class family, where both of my parents received their Associates degree and speaks only English. My father has worked for Wegmans in their accounting office for the last 12 years, while my mother has operated a child care center from her home for the last 19 years.

I graduated from The College at Brockport with a Bachelor’s Degree in English Literature and received certification in both Early and Childhood Education ranging from
kindergarten through sixth grade. I also received my Special Education Certification for grades 1-6. My education has taught me that it is important to be open to different perspectives and beliefs when it comes to working with children. It is important that all children are treated with respect, equality, and be allowed to express themselves while they play and interact with other children.

**Methods of Data Collection**

The first type of data collection was a paper survey done by the parents of the twins and the childcare provider. I created the survey from my experiences with working with children, my review of the literature, and the questions I wanted to know about the children. The survey focused on the parents’ perspectives about the children’s home environment, like play areas, how the children interact with others as they play, and literacy components like reading and writing (see Appendix). The survey was completed at the parents’ and childcare provider’s convenience.

The second type of data collection was field notes in a double journal entry form, as I observed the twins playing and interacting with other children and with the childcare provider (see Appendix). Through the observations and the collection of data, researchers and teachers can gain valuable information about children and their learning in literacy. This is referred to as Kidwatching because it is the process of observing and analyzing children’s behaviors, feelings, their language, and the literacy methods they use. Kidwatching is meant to support and to gain insights into children’s learning through the collection of relevant literacy data. The overall information that can be gained is through social interactions where the observer evaluates each child’s understanding and his or her values to make sense of the language and literacy skills (Owocki & Goodman, 2002). Yet, this information needs to be shrouded in understanding of the feelings, beliefs, and values of each child’s environment that he or she has been immersed in.
Since learning occurs through the participation in social, cultural, and historical contexts, it is vital to understand the factors that have influenced their emergent literacy skills (Larson & Marsh, 2015). As I observed the twins’ play, I was on the lookout to see if they could be imitating language, actions and behaviors, the type of language they are using, if they noticed print, how they read, and how they interacted with the materials in their environment. Some of the possible materials are toys, books, paper, play-doh, and LEGO. While I observed the twins, the other children continued to play in the same environment as the twins and interacted with them through play.

Another type of data collection was semi-structured interview with each twin (see Appendix). The interviews are from the book *Kidwatching*, on how to observe children as they play and will focus on getting to know their play practice, their thoughts about reading and writing, and the language they use (Owocki & Goodman, 2002). I conducted the interviews that took place in a quiet room separate from the child’s play area in the home childcare. The other children at the time continued to play in the play area. I also audio-recorded the interviews with each child, through the use of my smartphone.

The last type of data collection was artifacts created by each twin. Artifacts are important because they are examples of each child’s work and where they are in their emergent literacy abilities (Owocki & Goodman, 2002). I collected or took pictures of their drawings, writings, letter formations, and art projects. All of their work was part of their regular schedule and their names are replaced with pseudonyms. The other children continued to play in the play area and followed their usual routine.
I collected multiple forms of data to determine my findings and have used data triangulation to establish trustworthiness of this study (Shagoury & Power, 2012). In addition, my written work and data were examined by my peers and advisor to ensure that any of my preconceived notions about the participants did not impact my findings.

Procedures

After my proposal was approved and consent forms signed, I began my data collection by having the adult participants fill out the survey that I provided for them. I then sat down to a face to face semi-structured interview with each child individually to gain some insight into each child’s perspective about her play and any literacy skills she works on like, reading, writing, and drawing. After I gained the necessary background information about the twins’ perspectives and their environment, I began to observe the twin participants in the child care center, by taking field notes and audio-recording their interactions with each other and the other children. Once I began observing, I observed the twins’ interactions as they played for 4 weeks, 4-5 times a week. Lastly, during the 4 weeks I collected artifacts created by each twin. I collected artifacts at least twice a week from each child to gain a clearer understanding of their literacy practices in a home child care center (Owocki & Goodman, 2002). The other children in the child care center continued to play in the play area and followed their usual routine, during the 4 weeks.

Analysis

To analyze and interpret my data, I used a coding process that fit best with my data. Data were collected on a set of five year old twins in a home child care environment. I began to analyze my notes, surveys, and observations through constant comparison and through numerous methods used by Shagoury and Power (2012). Step one in analyzing my data was to transcribe
audio-recordings of the interviews I had with each twin. During the interviews I took notes or memos of their behaviors (i.e. moving around or long pauses) and I noted my own thoughts on the twins’ responses. Step two was to analyze both the interviews with the twins and the surveys done by the parents. I began looking for patterns and anomalies, and coding each pattern with a different color. Any anomalies in the data were coded with a star to highlight the importance of the information.

The third step was to analyze the observations of the twins’ play practices. I began by making memos of each observation and began an initial search for patterns, questions, and themes across all of the observation data, through constant comparison (Shagoury & Power, 2012). My next step was to make multiple copies of the data to code and recode the data; I assigned different colors to note specific patterns, abnormalities, and theories to show the changes in my thought process. Once I began to note specific findings, I assigned a different color for each of my findings and coded my data. I found that throughout this process my findings were forged from my literature review thus impacting my method of coding the data.

The purpose of this study was to collect data that answered the essential research questions, how might each twin’s perception of self impact her emergent literacy development and how might their play in the home child care environment impact the twins’ emergent literacy development? Essentially my goal was to discover how the twins used language as they play and interacted with themselves and other children in the home child care environment. I also sought to discover how their environment may impact their perspectives in their play practices.

Through the analysis of the data, I found themes related to the language each twin used while they played in a variety of different situations. My findings focused on how the twins viewed their play practices individually and how their play has shaped their language use.
Including how each twin’s language use depended on the role they played in their play situations, whether they were playing by themselves or with other children. Another finding was how their imagination and pretend play had an impact on their literacy development. These findings were (a) the twins used their oral language skills of speaking, asking questions, and singing to mediate their play; (b) the twins exhibited play behaviors that enforced societal gender roles in their play, by playing with specific toys; (c) as the twins played they performed a variety of different roles, based on the individuals in their environment that impacted their play behaviors; and (d) the twins appeared to have an awareness of specific rules of play and they used symbolic function in their creative process during their play.

**Finding 1: The twins used their oral language skills of speaking, asking questions, and singing to mediate their play.**

For children at the emergent language stage of development, it is important to look at how each child is speaking and how they respond to other children’s questions and responses. Children learn from each other, so if one child has better expressive language skills than another they are a valuable source of language stimulation for the child who exhibits relatively poor language skills (Mashburn, 2009). Through conversations the twins process the input of words that are being spoken during play, by performing the correct acceptable play practices for that situation. They are also learning how to mediate their play by using language that they can understand and are in agreement of because they can follow each other’s play scenarios. Being 5 year old twins they have an extensive vocabulary and are able to understand many of the conversational meanings and social rules as they play. According to Piaget, this is due to them being the same age, where they are more likely to have similar problem-solving skills and are constructing knowledge in similar ways (Plotka, 2016). Therefore, they are more easily able to
communicate their ideas and thoughts without any misunderstandings to create agreement as they play.

**Oral Language Use**

Through my observations I found that both twins were able to speak complete sentences and used specific vocabulary to fit with the scenario of their play. If they were unfamiliar with the correct vocabulary term for an object they were playing with, they created their own term that was closely related to the object which, made sense to them. They were able to mediate their language by trying to convey what they were thinking. Even though the words were incorrect, they chose to say a different word to convey their ideas for their play to prevent any misunderstandings. The first example of them using language to mediate their play was on February 22, 2017 while they were playing with the fake food, Patricia called the pretend freezer an “icer”. She was aware that a freezer is a box that keeps food cold. She seemed to be aware of this concept because she was only placing food that people would normally find in a fridge or freezer in the pretend freezer (i.e. milk, fruit, and vegetables) while leaving out the cookies and the canned goods. Another example of word choice was on March 15, 2017 when Abby called a bag a pocket. Abby was happily coloring at the table, until her sister Patricia called her into the play room. Patricia had previously put her drawing in their bag by the front door, and wanted to play dolls in the other room. When Patricia called Abby to play, Abby looked to be indecisive because she kept looking between her coloring page and her sister, who was playing in the other room. Abby finally called out to her sister, “I just have to put my drawing in my pocket”. Abby then proceeded to jump out of the chair and ran to put her drawing in their bag, by the door. The word bag may have escaped her mind at the moment, so she substituted pocket for bag.
Technically both words made sense, because both words describe something that you can, in this case place a coloring page to bring home.

My last example of the twins meditating their language occurred on March 13, 2017 when both girls called a candle a fire. They were sitting in the play room busy playing with a box that contained LEGO cupcakes. The LEGO pieces were designed to be more curved than normal LEGO pieces and the pieces had designs of sprinkles and different colors of frosting. Along with the LEGO cupcakes were two LEGO candles that could be placed on top of the cupcake. Throughout their play time they made various different cupcakes and attempted to place a candle on top of them, so they could pretend to blow out the candle. They pretended it was one of their birthdays and one twin asked the other twin if she could have the fire. At one point the twins fought over the fire and kept claiming that it was their turn to blow out the fire. The girls repeatedly used the word fire for candle and did not once say the correct term. Therefore, it appeared that they did not know the correct term was candle. By substituting fire for candle it made sense because the candle flame looks like fire, which they do know of. This demonstrates that the twins were mediating their language because they were in agreement with each other on what to call the candle and they were able to understand each other to effectively play.

**Singing in Play**

During my observations of the twins’ play I noted something I found to be very interesting and surprising. I began to notice that both twins would randomly start singing as they were playing, even if the situation or scenario did not require singing. After witnessing this a second time, I wanted to see if singing would be a common occurrence and I began to pay closer attention to the songs the girls would sing and whether they related to their play activities. This
phenomenon is called spontaneous vocalizations where children use unprompted, natural, and expressive vocal soundings beyond spoken language. This might include rhythmic speech, non-verbal vocalizing and singing with or without language meaning (Countryman, Gabriel, & Thompson, 2016). The following chart outlines the date of the observations when singing occurred in their play and if the singing was related to their play.

<table>
<thead>
<tr>
<th>Date</th>
<th>Song</th>
<th>Relation to their play?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/22/17</td>
<td>Everybody clap your hands</td>
<td>Patricia and Abby were playing with the food and randomly decided to start singing. No relation.</td>
</tr>
<tr>
<td>2/28/17</td>
<td>Chanting- Follow the leader</td>
<td>Patricia suggested following the leader and the rest of the children began following along. Relation.</td>
</tr>
<tr>
<td>3/3/17</td>
<td>Abby sings to herself quietly</td>
<td>Abby was building LEGO by herself. Could be a relation that she likes singing while she works.</td>
</tr>
<tr>
<td>3/6/17</td>
<td>Abby: “I am a princess, ta don, ta, ton da ton.”</td>
<td>Abby was playing with the Mr. Potato Heads and creating a princess. Relation.</td>
</tr>
<tr>
<td>3/7/17</td>
<td>Abby, Patricia, and other children start singing “Can’t stop this Feeling” and “That’s what the fox says”</td>
<td>Patricia started a dance party, with everyone singing and dancing. Relation.</td>
</tr>
<tr>
<td>3/13/17</td>
<td>Abby &amp; Patricia sing “ Can’t stop this Feeling”</td>
<td>Abby and Patricia playing with the LEGO cupcakes and candles. No relation.</td>
</tr>
<tr>
<td>3/16/17</td>
<td>Abby and Patricia singing the Doc Mcstuffins theme song</td>
<td>Twins are coloring a Trolls page together and talking. No relation.</td>
</tr>
</tbody>
</table>

Figure 1. Recorded singing during play sessions. Does their singing make sense with their play activities?

Based on the chart, out of the thirteen play sessions that I observed, the twins sang in eight of those sessions. This indicates that singing is an essential component of their play practices. A fair
amount of time a connection or relation can be drawn to what the girls are doing, to what they are singing. During these times singing appeared to enhance their play, like when they needed to sing for their dance party. On March 7, 2017 the twins and two younger children were playing with dolls. Patricia suddenly shouted, “Let’s do a dance party!” There were a chorus of “yeahs” from the other children, where they all stood up and began dancing and stomping around. Patricia and Abby began to sing, “Can’t Stop this Feeling” while they danced and the other children danced. Throughout this dance party, the twins randomly sang other songs and monitored each other with phrases, “I want to sing this song” or “No that’s not how you sing it”. Through song they were showing that they were mediating their language either by singing the same song together or pointing out that the lyrics of the song were incorrectly sung. Once the incorrect lyrics were pointed out the twins worked together to come to an agreement of what the correct lyrics were supposed to be, singing the correct lyrics together.

Another example of them enhancing their play through song was observed on March 6, 2017 when Abby sang as she played with the Mr. Potato Heads. She was sitting on the floor digging through the pieces of Mr. Potato Head that surrounded her, looking for specific pieces. She was looking for pieces to create a princess, by finding pink high heels, a princess hat, eyes with eyeshadow, and a purse. As she was finding her pieces and creating her princess she began to sing that she was a princess. Her song went “I am a princess, ta don, ta, ton da ton”, and she kept repeating the same or similar phrase until her creation was complete. According to DeNora, “When children vocally improvise on their own they are trying to generate or interact with an emotional experience” (Countryman, Gabriel, & Thompson, 2016, p. 4).

There were also times when the twins’ singing appeared to be very random and not related to their play. An example of this was in the observation on March 16, 2017 when they
were coloring at the table. They had their crayons is a neat pile between them as they sat on the same side of the table, elbow to elbow. They had chosen to color pages depicting Trolls, however while they were coloring they began to sing the Doc McStuffins theme song. I assumed they would have sung songs from the Trolls movie because they love the movie and were coloring pages about Trolls. It is important to note that they both were in agreement with their song choice, because both girls sang the same song together without any arguing or confusions about why they were singing that particular song.

**Asking Questions**

Another aspect I noticed about the twins’ language use was that they constantly were either asking questions to each other or seeking the other twin’s opinion about their play. Questions are essential to their play practices because they are mediating their interaction by communicating with each other, being able to understand how each other would like to play, through the use of their words. By asking each other questions they are showing a willingness to experiment and play with new ideas as they play (Smith, 2011). For example on February 23, 2017 during an observation of their play with the Mr. Potato Heads, they had all of the pieces spread out around them. They would either need to crawl around each other to get far away pieces or ask each other for the piece that they wanted. During this observation, I heard the following questions, “Are you looking for another one?” or “Want me to help?” They sought to help each other out by finding pieces that would fit with each other’s creation. These questions were essential in mediating their conversations because they were attempting to understand each other’s creations. They were also aware that they needed to ask permission to join the other twin’s play and they were following typical social cues. They were mediating their play by
showing that they were able to express their ideas and thoughts to each other in their play, through their understanding of social cues.

According to McDonald, Proctor, Heaven, Marr, and Young (2015) children use comments or questions to talk about their feelings, to project their thoughts in pretend play, or to talk about the past and future. For example in the observation on March 15, 2017 Abby and Patricia were given new play-doh. Before they began playing with it they began to explore their new play-doh. Patricia stated, “Is it going to be cold?” She was trying to figure out if the play-doh would be cold and she was expressing her idea that if the play-doh was new, it might be cold. To further explore the new play-doh, she watched her sister play with her new play-doh and claimed, “I can smell yours, it smells like grape”. She may have made this connection because the play-doh was purple. In the meantime, Abby was busy squeezing her play-doh and she placed it under her nose and claimed, “It smells like pineapple”. Both girls were able to express their ideas by communicating to each other their thoughts about the new play-doh.

In addition, as they began to play with the play-doh they worked independently, but they continued to assist each other in playing with the play-doh. Both girls spent time rolling out the play-doh and using the play-doh shaped cutters to cut out designs. They used phrases such as, “You made a soccer” or “I am going to make this smaller” or “Are you done with that?” The twins used these phrases to foster communication with each other and to process their thoughts about their play. By saying, “You made a soccer”, Patricia appeared to be showing an interest in her sister’s creation. By asking, “Are you done with that?” they were working to establish an agreement between the two of them, making sure that there were no confusions of whether the cutter was being used or not. They were promoting rich and qualitative language skills by simply talking and interacting with each other (Zauche et al., 2016).
Finding 2: The twins exhibited play behaviors that enforced societal gender roles in their play, by playing with specific toys.

Interviews are integral in understanding how people view themselves, and children are especially interesting to interview based on their responses. Interviews are an important tool for researchers: asking questions brings out the information we could not learn without getting inside children’s minds (Shagoury & Power, 2012). Before I could begin to observe the twins playing in their environment, it was important for me to gain background knowledge about each twin. Therefore, prior to starting my observations on February 15, 2017, I sat down with each twin separately and asked them questions related to their play practices, before I began observing them on February 15, 2017. In these interviews I wanted to understand what they thought were acceptable play practices and what made those play practices acceptable to them. I found that their gender appeared to play a huge role on their perspectives about their play.

**What is Play?**

Before beginning the interviews with each twin, I wanted to see if they understood what play meant to them. By asking each twin what they thought play was, I was able to gauge a foundation of what they deemed play to be and if they were able to comprehend and understand when and how they played. The responses of the twins were different and I found their responses interesting. Each twin needed further prompting to respond to the question. Below is a chart that outlines the twins’ answer to the question.
The twins had unique responses, yet they seemed to understand and comprehend what play meant to them. Patricia’s initial response, “Let’s play” could be a phrase she had heard previously from other people or from other sources, such as television. By saying the word let’s, she implied that play is an action, something that children can do. She paused after this phrase and did not provide me with more information; causing me to prompt her to tell me more. To her play is specifically playing with dolls and slimy stuff. Based on her response I interpreted that Patricia’s definition of play is related to being able to play with toys or objects. Her concept and understanding of play appears to be focused on one aspect of play, having something physical to touch and manipulate. It does not appear to be gender specific because she mentions dolls that are typically considered acceptable toys for girls and slimy stuff that is typically associated with
boys. It is interesting to note that Patricia, first spoke about playing with dolls in her interview. Since dolls are seen as a typical girl toy, this suggests that Patricia is impacted by gender norms and gender socialization. Socialization is the process, “which individuals internalize elements of the social structure, making those elements part of their own personality”; which occurs through the process of interactions with the people in an environment (Cohen, 2015, p. 167). By being a girl society may have taught Patricia that dolls are acceptable for girls. Therefore, when Patricia spoke about playing with dolls it may suggest that she identifies herself with toys she is expected to play with in her environment.

Abby’s response was quite different because it expressed her understanding of what play symbolizes and means to her at this stage of her life. She initially stated that play was being able to play with toys, that it was physical, something that you can hold and manipulate. Prompting her to think further, Abby expressed a deeper and more complicated expression of play. That it could be an action, such as playing with an object or something that is performed that involves people communicating with each other. She further expressed her understanding of play by listing some activities that can be considered play (i.e. coloring, stuffed animals, and show and tell), that play is not just with toys, but play can relate to things that she is doing or that she is having fun. This suggests that her understanding of play does not appear to be gender specific because she mentioned stuffed animals and coloring, which are typically considered gender neutral toys and activities.

Therefore, unlike her twin, this suggests that her perspectives on play may not be impacted by her gender. Since, Abby has a deeper understanding about play, it is interesting to note that her toy and activity choices followed gender norms and socialization. Girls tend to prefer activities that are less active and are quiet, sit down activities like coloring. Boys tend to
prefer more active activities, involving movement, like playing with toy balls. Abby specifically mentioned coloring and playing with stuffed animals as activities she performs. Stuffed animals tend to be soft and cuddly and children can play using emotions of caring for their stuffed animals. Cohen (2015) suggests this may be due to the fact that girls tend to play with toys that represent caring for others and toys that can express an emotional response. Overall, Abby may appear to be playing with gender neutral toys and activities, but she may actually be following expected gender norms.

**Toy and Activity Choices**

The twins’ perspectives on play are different than their actual play behaviors and gender norms appeared to impact their play behaviors. Through the interview the twins provided examples of toys and some of the activities that they do in the home child care environment and at home. I also noted that each twin mentioned some toys and activities that were similar and different. By mentioning the same toys and activities, it expresses the idea that they are exposed to or play with the same toys. This also suggests that gender norms could have an impact on their toy and activity choices. Below is a chart that represents the toys and activities that each twin plays with at the home child care environment or at home.
<table>
<thead>
<tr>
<th>Patricia</th>
<th>Abby</th>
</tr>
</thead>
<tbody>
<tr>
<td>At home</td>
<td>At home</td>
</tr>
<tr>
<td>-dollhouse*</td>
<td>-picture of family and Barbies</td>
</tr>
<tr>
<td>-help mom wash the dishes</td>
<td>-dollhouse*</td>
</tr>
<tr>
<td>-help mom fold the laundry</td>
<td>-Shopkins</td>
</tr>
<tr>
<td>-dress up (Belle)</td>
<td>-tsum tsurns (Japanese stuffed animals)</td>
</tr>
<tr>
<td></td>
<td>-play with her puppy</td>
</tr>
<tr>
<td>At the child care environment</td>
<td>At the child care environment</td>
</tr>
<tr>
<td>-color*</td>
<td>-color*</td>
</tr>
<tr>
<td>-play-doh</td>
<td>-LEGO</td>
</tr>
<tr>
<td>-tea party</td>
<td></td>
</tr>
</tbody>
</table>

*are the similarities between each twin’s responses.

Figure 3. Summarized list of the toys and activities the twins do at the home child care environment and at home.

Based on the chart above, the toys and activities mentioned by the twins are deemed socially acceptable for girls. This could be because “Children’s toy preferences are likely to be influenced by gender-specific socialization and be augmented as knowledge of gender-typed behaviour, derived from observation of others” (As cited in Todd, Barry, & Thommessen, 2016, p. 3). This caused me to ponder and question how the environment could have an impact on the type of toys and activities that the twins chose to play with.

Since the children attend a home child care environment with both genders, there are an ample amount of toys that are considered gender specific or gender neutral. Upon, observing them during their play time, I began to notice the type of toys that the twins gravitated towards and how they would play with these types of toys. Being twin girls, they tended to prefer more socially acceptable girl toys, rather than traditional boy toys. This did not mean that they did not play with boy toys, just that they preferred to play with girl toys. Even when they were presented with the option of playing with gender specific toys, they tended to lean toward the girl toys or they feminized the gender neutral toys. According to researchers Serbin, Connor, Burchardt, and
Citron, this could be due to the effect that children tend to “play more with own-gender-typed toys in the presence of a peer than alone” (as cited in Todd, Barry, & Thommesson, 2016, p. 3). This could also explain why the twins chose to play with toys that are typical girl toys in front of the older children in the home child care environment. An example of this was on February 23, 2017 and again on March 6, 2017 when the girls played with Mr. Potato Heads, making Mr. Potato Head female. This was seen when they dug through the box of parts to choose parts that are typically used by women. They choose parts of high heels, long hair, purses, and earrings. They would also choose pieces that are associated mostly with girls rather than boys, like pink, purple, orange, and yellow; while staying away from the blues and greens. In fact, they would toss out the parts that were not acceptable to them by putting them into a pile away from their play area. Another example was on March 2, 2017 when the girls were given a large box full to the brim with a variety of different dinosaurs to play with. Among them were large dinosaurs around eight inches high, while the smaller dinosaurs were around two inches high. The smaller dinosaurs tended to be plant eaters and were softer looking, while the larger dinosaurs were rough and more masculine due to their coloring. This may not seem important, except for the fact that Patricia claimed that the toy dinosaurs “Need a home”. The girls then decided to pull out the doll house, set the doll house up, and placed the smaller dinosaurs inside the dollhouse. They then proceeded to play with the dinosaurs inside the dollhouse as they would dolls, giving them human characteristics (i.e. having them go to bed, sit at the table, and pretend to wash the dishes). By using the dollhouse the girls feminized typical masculine dinosaurs by substituting them into dolls.

Another example was on March 15, 2017 where the twins enforced societal gender roles in their play when they were given one color of play-doh and dozens of different shape cutters to
play with at the table. After playing with the play-doh by rolling it out, flattening, and rolling it into a ball, they finally chose how they were going to use the play-doh. They began to make cookies, by rolling out the play-doh, and using the cutters to cut out the “cookies”. The girls used all of the cutters, but tended to use the butterfly, teddy bear, flowers, and animal cutters more. They would then clump the play-doh, reroll and cut repeatedly until the play-doh was used up as “cookies”. Taking a gender neutral activity and feminized it by pretending to bake, which is seen as a typical feminine pursuit; further showing that they prefer to choose activity choices that enforce societal gender roles.

**Finding 3:** As the twins played they performed a variety of different roles, based on the individuals in their environment who impacted their play behaviors.

While observing the twins’ play, I noticed that the twins behaved and played differently depending on the situation they were in and which children they were playing with at the time. I noticed that there were four prominent behaviors or interactions the twins exhibited based on their play situations, which are play by themselves, play with each other, play with younger children, and play with older children. Their play interactions and the language they used while they played differed drastically depending on their play situation. As they role played in each of the situations, not only did their behaviors change, but their temperament appeared to alter, depending on whom they were choosing to talk and interact with during their play time.

**Play Practices Alone**

Being twins, sharing and playing together is normal behavior for them; it is rare to find them separated, especially in the home child care environment. The only times they are alone are at the home child care, is when one of them home sick or when one goes on a play date.
Therefore, it is hard to observe them when they are playing by themselves, without interacting with each other. Fortunately, in my observations on March 3, 2017, the twins chose to play by themselves without interacting with the other. For this instance they were masters of their own play, where they were skilled at playing or performing an activity without the assistance of others, anything they wanted to with the toys that were available to them.

In an observation of their play practices on March 3, 2017 they were playing with LEGO, which provided them with the opportunity to use their imaginations to interpret how they were going to play and create with the blocks. Both girls chose vastly different ways to play with LEGO. Both girls had the same access to the LEGO box and to the same piece inside of the box. The LEGO box was placed in the center of the play space, which provided Abby and Patricia with easy access to the box. Abby created a phone, a tray, and a cake, while her sister, Patricia, spent her time building a cage/house for a toy dinosaur. I observed that both twins were confident in their building, worked quietly, and focused solely on their building. One important aspect that I noticed was that the twins’ play practices differed from each other in their imagination and how they chose to spend their play time. Abby’s play practices were building as many things as she could, while LEGO were available to her. She built a phone, a tray, and a cake within a twenty minute observation. She made her creations quickly and simply, where it appeared her end goal was to play with her creations, not in the process of creating the objects. This was seen when after building each one of her creations she would immediately begin playing with her creations by pretending to talk on the phone. She also placed the cake on top of the tray and carried it around the play room asking the other children if they wanted a piece.

Patricia’s play practices were spent on taking her time to build one elaborate “cage” that she continued to add on to throughout her play time. She quietly sat down and worked intently on her
building by gathering the pieces she needed and without looking at the other children. She also did not interact with the older children either by talking to them or answering their questions. During this observation, Patricia was more attentive to the actual creation of her play object, rather than having the time to play with her creation. In fact, she did not play with her creation and as soon as she built it, she tore it down. She immediately began ripping all the pieces off and created a big pile of pieces, where she then began to pick up the pieces and returned them to the LEGO box.

**Play with Each Other**

The twins spend most of their time playing with each other in their home child care environment. Even during activities that are considered more independent play, they tended to find ways to play and interact with each other as they build and create. Piaget believed that children who are the same age are “more likely to construct knowledge and problem-solve when they can exchange ideas with peers with similar skills and abilities” (Plotka, 2016, p. 22). For example, they were playing with Mr. and Mrs. Potato Heads and they each were allowed to play with three. They were given the box and they immediately dived in and began to quietly work apart from each other. They were choosing their pieces quickly and went straight to work creating their own version of the Potato Heads. The following excerpt on February 23, 2017 is the twins’ conversation that took place:

**Abby:** Patricia do you have two orange (Mr. Potato Head hat)? I just have to borrow this!

**Patricia:** okay

**Abby:** Are you looking for another one?
Patricia: No, an arm.

Abby: Where is another girl face? Patricia if you have a girl and need high heels, I have some.

Patricia: I have some.

From this conversation the twins chose to talk about the task at hand, but in different contexts. Abby started the conversation by asking Patricia, “Patricia do you have two orange (Mr. Potato Head hat)?” From the twins’ individual play practices, I found that Abby does not like to take too long on any one task; therefore, she may have started the conversation to keep her mind on the task or to stay busy. This can be seen throughout this conversation because she was the one speaking the longer responses and was prompting Patricia to continue on with the conversation. This may seem like she was controlling the conversation and their play practices. Her questions revolved around what she could do for her sister, which suggests that she was seeking guidance from her sister on how to play and build her Potato Heads. She asked her sister three times in this excerpt if Patricia needed anything for the Potato Head pieces. Patricia on the other hand responded in quick, short phrases that seemed to be closing Abby out of her play. She responded in the negative, using phrases that resulted in her not needing the help from her sister. This could be due to one of two reasons; either she did not want to talk with her sister, because she was focused on creating or she was controlling the situation by not wanting to accept her sister’s help.

Throughout my observations of the twins’ play practices together and individually, I found that Abby often appeared to be dependent on Patricia. When the twins were playing by themselves they were masters of their own play, but together it appeared that Abby depended on
her sister to be the leader and looked to her for guidance. A pattern emerged of Abby following Patricia’s lead to determine how she should be playing. As I continued to observe the twins playing, Abby seemed to spend most of her time watching Patricia play and interact with the toys. After a while, Abby felt the urge to speak and either asked her sister a question or asked her to look at her creation or toy. I found this aspect of their play to be very surprising; since it appeared Patricia had forced Abby to be dependent on her as they played. Patricia had placed herself in the role of leader and expected Abby to follow her lead. For example, Abby asked Patricia to look at what she was holding. Patricia did not respond and did not look up from what she was doing. From the lack of response, Abby went back to what she was doing. There was a pause before Patricia looked up and asked Abby, “Should I do this one or that one?” During this exchange Patricia, chose to ignore Abby’s comment and instead of Abby repeating her phrase, she lets the phrase go without a response. When Patricia asked the question though, Abby immediately responded. Patricia appeared to control the situation by refusing to respond and then chose to ask her own question. This phenomenon was seen multiple times throughout the observation of the twins to the extent that if Abby did not respond or do what Patricia wanted her to do it seemed Patricia would force the issue by repeating the question or prompting Abby to follow her. For example, this occurred on February 22, 2017 when the twins were playing with plastic food. Patricia wanted Abby to place the food on the table in specific color groupings. She did not tell her sister of the groupings and when Abby placed the peas on the table, Patricia responded with “No it goes in green”. Patricia then forced Abby to place the peas in the correct color grouping by grabbing Abby’s hands and picking up the peas, and moving Abby’s hands with the peas, to the correct grouping. Patricia then told Abby, “This is not what I wanted Abby, I didn’t want it to be on yellow”. These phrases further support the idea that Patricia has placed
herself in the leadership position as they play and where she seems to expect Abby to perform
the play behaviors she deems acceptable.

**Play with Younger Children**

The dynamics of the twins’ roles in their play does not change considerably when they
were playing with younger children. Patricia’s role as the leader remained the same and Abby
was still dependent on her sister. Yet, when younger children were added to their play, both girls
together determined the play practices of the younger children. The following excerpt on
February 22, 2017 is a conversation of the twins and a younger child as they played with plastic
food that demonstrates this interpretation:

**Abby:** Let’s set them (plastic food) all out on the table. (This is ignored by the two others
and Abby repeats this phrase four times. Both girls ignore her.)

**Patricia:** (after a while) Let’s put this (plastic food) on the table. (Patricia gets up and
puts the food on the table. Abby follows her.)

**Abby and Patricia to the younger child:** Put the food over there. (They both point at
the table and make sure that the younger child is putting the food where they want it to
going.)

**Abby to the younger child:** No! We don’t need the picnic basket.

The first feature of this conversation was that Abby suggested that the girls move the food over
to the table, but she was ignored. Both Patricia and the younger child did not acknowledge that
Abby had spoken, even though Abby repeated the suggestion four times. It was not until Patricia
made the same suggestion that Abby and the younger child moved to do as she wished; thus
demonstrating that Patricia was in charge of the play practices of both her sister and the younger child. This behavior was not surprising, but it was surprising that Abby, like her sister, was able to control the play practices of the younger child. When the younger child played with the twins, she had little to no control over her play practices. When it comes to younger children, Abby has the control over their play practices, just like Patricia had over Abby. According to Vygotsky, mixed-age groups of children do a process of scaffolding where the more competent children, usually the older children display more leadership skills and support the learning process of the younger or less competent children (Plotka, 2016).

In another interaction with another younger child, both Patricia and Abby ignored the younger child when he tried to talk to them by refusing to look at him and instead looked at the toy they were currently playing with. They would also refuse to answer the younger child’s question and would instead talk to each other and pretended that the younger child did not exist. They both also led the play practices for him and they determined when their play was over in multiple observations. For instance, they would either claim, “I’m done” or “Let’s play with this”, effectively moving on to the next game by picking up the toys they had out and getting new toys out; even if the younger child was still playing with the old toy. The twins were displaying signs of leadership skills and were confident in their play practices by taking charge and guiding the other children to their ideas about the play situation.

**Play with an Older Child**

The dynamics of the twins’ roles in their play drastically changed when they were playing with an older child. Abby was still dependent on Patricia, yet also seemed to look at the older child for guidance as well. By doing this she had limited input about how the group should
play; which forced her to follow what the older child and her sister, Patricia, had determined the play context to be. Having the older child there created a new dynamic which I found surprising, Patricia was no longer the leader of play but not just a follower of what the older child determined the play practice to be. We can see the dynamic change in the observation on February 28, 2017 in a conversation of the twins and an older child as they played with LEGO ice cream pieces:

Patricia and the older child dived into the box and started creating their ice creams.

**Patricia to older child:** Can Abby play with us? (Abby joins in the play)

**Patricia:** Everybody gets three.

**Older child:** Guys, look at my ice cream, super double ice cream. (To Patricia) Want a breakfast sandwich, ice cream sandwich?

**Patricia:** Yes please.

**Older child:** Let’s build a super, double ice cream (Patricia immediately follows him to build a tower. Abby stands back and watches them.)

The first aspect of this conversation showed Patricia’s new role as a follower. Patricia asked the older child if her sister could join in their game. This was an interesting observation because in previous situations she was the leader of her and other children’s play practices. With the addition of an older child she had taken on the role of a younger child, choosing to watch and listen to how the older child interpreted the toys in their play. Patricia was able to assert some leadership by the action of stating a demand to all the children of, “Everybody gets three,” which exhibited signs of confidence in her play. Mostly, Patricia deferred to the older child on how to
act and play, while Abby was still dependent on Patricia and now became dependent on the older child, creating a sort of hierarchy. Her interactions with the older child were not observed, since she did not participate in their play. Instead of Abby joining their play, she just stood there, with her head down and did not utter a sound. She chose not to participate in their play and was instead bossed around by her sister and the older child told her to “stand there” or “hold this”. Mostly though, Abby did not participate and it appeared she “shut down”, because she was no longer smiling, active, or talking. According to Piaget, this occurs because of older children modeling the play, like the twins, where younger children tend to be intimidated by the older children, and where they will not share their ideas and will let the older children take the lead in the play behaviors (Plotka, 2016). From these actions it appeared Abby was intimidated by the older child and Patricia, causing her creativity and ideas to be lost in this hierarchy of play practices. When Abby interacted and played with her sister she attempted to assert her opinions and ideas by asking questions and stating how they should play. With the older child she either did not speak or rarely spoke. She chose to be on the outside of their group by being an observer and playing quietly with herself.

Overall, this finding establishes that individuals in an environment impact the roles that the twins will demonstrate as they play. In each situation the twins exhibited one or both roles of leader or follower. Abby is a leader when she plays alone and when she plays with younger children. In the other play situations with children Abby is the follower, where she either follows her sister, Patricia, or an older child. Patricia is a leader when she plays alone, with Abby, and with the younger children. The only time Patricia is the follower is when there is an older child participating in the play scenario. Each twin understands their role as follower when they seem to
willingly submit to another child’s play practices, and their role as leader, taking charge of the play practices.

**Finding 4:** The twins appeared to have an awareness of specific rules of play and they used symbolic function in their creative process during their play.

As I observed the twins play together I noticed that while they were using their imaginations, they were imitating actions, behaviors, and movements that they must have seen others perform. The twins would imitate scenes like a coffee shop, or act out behaviors like birthday parties, and family relationships that they have seen, during their pretend dramatic play. They pretended that they were different people with different names, and they pretended to act out scenes and spoke phrases that were related to their pretend situation. This was seen when each twin would initiate a game of play by either calling out to the other twin by using a new name. For example on March 2, 2017 Abby told Patricia, “You are Shena and I’ll be the child”. Through pretend and dramatic play the twins are internalizing the actions and behaviors that they have seen others do to make sense of their environment (Phillips & Soltis, 2009).

**Rules in Pretend Play**

Pretend play was a dynamic part of the twins’ play practices and it was important to see how they imitated actions and behaviors they have seen in their environment. The first example of pretend play was on March 13, 2017 when the twins were playing with LEGO cupcakes, brownies, and candles. Each of the special LEGO pieces was looked over, the girls decided what pieces they were going to use, while they built their cupcakes and brownies. Once they finished making their creations the twins chose to create a play scenario or game, where they could use their creations. Patricia initiated their game by saying, “I am the mom”. She claimed her position
or role in the game placing Abby as her child. Abby appeared to agree to Patricia’s game by responding with, “Mom, I woke the baby up from her nap.” Abby then went and grabbed her baby doll and began to rock it back and forth in her arms, while patting it on the back. The first aspect to point out is that Abby engaged in the play scenario and accepted her position as the child. She followed the rules of the game, by following along with the context of the game. The next important aspect was her behavior with the baby doll, rocking it and patting its back. She must have seen this action from her environment and therefore, when she played with the doll she was imitating the actions she had seen others do with babies. The game continued when Patricia stood up and placed the cupcakes and candles on the table. Abby began looking on the ground, searching for something, because she asked Patricia, “Where is the brownies?” Patricia kept following the context of the game by saying, “I have it”. For many onlookers it would be confusing to understand the game that the twins were playing. It may not make sense to adults, but to the twins this pretend game of play made sense to them and fit into what they probably have seen others perform.

Another example of the twins’ imitated pretend play was when they were playing coffee shop on March 24, 2017. The coffee set included a coffee dispenser, two coffee cups, a menu, a packet of sugar, a spoon, an ice cube, and three different cup flavors. As their pretend game of play began they were busy playing with the coffee dispenser by changing out the flavors and spinning the dial at the top. Abby began to make the coffee by using the coffee dispenser and making noises of, “ssht, ssht” as she filled a coffee mug. This demonstrates her knowledge of how coffee is distributed and the sounds it makes, therefore, hinting that she has been to places that serve coffee. The twins continued their game by playing around with the accessories, using
the spoon to stir inside the coffee mug, making coffee for themselves to drink, and pretending to order from each other.

Then Patricia said, “Somebody else” and grabbed her Barbie to join in the pretend game. She sat the Barbie down and began to talk by pretending the Barbie was ordering a coffee by saying, “I want vanilla”. Patricia had become the role of the patron and understood that patrons say specific phrases. This was seen when Patricia told Abby, “This lady wants this one (points to vanilla flavor), this lady wants this one (points to the sugar),” Abby took on the role of the server and understood the actions and behaviors of a server by making Barbie a cup of coffee. When she then stated, “Two other ladies are here”, Patricia stood up and headed to the closet door, saying, “I’m a different lady” and went to knock on the door. Patricia understood that there was more than one patron in a coffee shop, showing her understanding by taking on the role of a patron. Abby, in the meantime was still the server and was at the coffee dispenser calling out “come in” and handed Patricia a menu. Patricia continued her role as patron by looking at the menu and pointing to what she wanted, while Abby made her a cup of coffee.

Not at any point of their game did the twins interchange roles, when they were the server they never ordered or when they were the patron they never made the coffee. When they wanted to switch their roles Patricia moved over to the coffee dispenser and began to make the coffee. Abby witnessed Patricia’s actions and immediately went to the closet door to knock like a patron would. After being let in by Patricia, she then sat down at their table and ordered coffee from the menu. Their pretend game of play followed an understanding of previous experiences the girls have witnessed. They understood the rules of their game in the context of their experiences. They understood that there was someone to take and make orders, and that people enter coffee shops to order drinks. Through their imitation of this scene they were establishing a deeper
understanding of what occurs and what is deemed acceptable behaviors and actions for this scenario.

**Symbolic Function in Play**

Symbolic function is where children make an object represent the creation of their ideas and how they can use that object in their play (Diachencko, 2011). LEGO blocks are a great source of imagination or symbolic function for children, because they are able to create their own concept and idea about how their LEGO creations should look and be used in their play practices. It may change and alter each time they play, and vary depending on the situation or the concepts each child wants to express. This is considered open-ended materials, which are “materials with no specific set of directions and they can be used alone or together with other materials” (Mirzeoğlu, 2015, p. 197). Like LEGO, open-ended materials can be moved, carried, combined, redesigned, lined up, taken apart and put back together in multiple ways (Mirzeoğlu, 2015). In two different sessions I observed the twins playing with LEGO, where they chose to play and create by themselves. Each twin created her own creation that caused them to play differently and to be unique individuals.

The first time I observed Abby playing with the LEGO pieces on March 3, 2017 it was interesting to note her behaviors and the creations she built. Abby dived at the LEGO box and began pulling out the LEGO she wanted; sitting near the box she had quicker access to and made quick work creating her ideas. The first creation was a phone that consisted of a few LEGO pieces and was simplistic in nature, as seen in figure 4a. As soon as Abby built her phone she began talking on it by holding the “phone” up to her ear and began mumbling to herself. She demonstrated the stage of object transformation or substitution, where she was able to give an identity to her creation (Stone & Stone, n.d.). Her creations were not random; she was able to
make her creation represent her own experiences. She then put the phone down and began to create her second idea, which took a little longer to form. It was a flat surface with different colors, and she claimed that it was a box of chocolates as seen in figure 4b. As she built her creation, she said out loud, “I am going to do chocolate, caramel, and vanilla”, showing that she understood and knew about the different types of chocolates. She then attempted to balance her creation in her hand, like a tray and walked around the room. As she walked around the room she presented her creation to each child and asked them if they wanted a piece of chocolate. If the child wanted a piece she would take off a LEGO piece and handed it to them to “eat”. This further demonstrates her understanding of object transformation, and that a box of chocolates contains different types of chocolates. In addition, she was able to accurately use and play with her creation, by walking around the room and offering chocolate to the other children. Therefore, she understood the purpose of her creation and why she created her box of chocolates. It appeared that Abby was more intent on creating her creations quickly, so that she would have time to play with them. Her creation reflected her ideas about how LEGO should be used in her play. Even though her creations were simple, she used her imagination to make her creation represent something that was important for her to express.

Figure 4a: Abby’s phone  
Figure 4b: Abby’s box of chocolates
The second time I observed Abby play with LEGO was on March 17, 2017. During this observation I noted similarities between the first and second play sessions. In the second observation she quickly grabbed the pieces from the box and placed them on the table, as in the first session, she sat near the box and went straight to work building her creations. Since, she went straight to building her creation; this suggests that she knew what she was going to build and how she was going to use her creation in her play. The first creation she built was a laptop that consisted of a few LEGO pieces, as seen in figure 5a. Like figure 4a, Abby’s creation looked very similar in nature; the only difference was that the LEGO pieces were laid down differently. Abby quickly built the laptop then put it aside to work on building her second creation. Her second creation was a box of chocolates, just like her creation in the first observation in figure 4b only with many different colors to represent different types of chocolate, like caramel and white chocolate, as seen in figure 5b. This time she brought her creation to me to see, and she used a longer LEGO piece to take the smaller LEGO pieces or chocolate pieces off of her board. Due to this change, it suggests that she knew her original creation, in the first observation, was flawed. Therefore, she had created a plan to fix her problem by using her imagination (Diachenko, 2011). She told me that the longer piece, “Let me take it off” the LEGO or chocolate pieces to hand out to the other children. Not only did she solve her problem, but she was able to tell me the function of her lever, and why she needed to leverage the smaller pieces. By changing one aspect of her creation she made it easier for her to take the pieces off of the box, thus enhancing her play. She had used her imagination to use a longer LEGO piece as a lever, to lift off the smaller LEGO pieces. Abby further used her imagination to create a plan to solve her problem of taking off her LEGO chocolates. Her creations were similar to her creations as seen during the first observation, which lends to the idea that she may prefer using her imagination to create the same
type of object to play in a manner that she is familiar with and where she is the leader of her play.

The first time I observed Patricia playing and creating with the LEGO pieces was on March 3, 2017. I noticed different behaviors and how she used her imagination to build her creation. Unlike Abby who rushed through building her creations, Patricia took her time and built only one creation. Before she began building her creation she looked for the LEGO pieces in the box and chose what pieces she wanted. This suggests that she had a plan in mind on how she wanted to use the LEGO to create her creation. She then took her pieces and went to an empty space to build her creation. She started with large flat pieces and then began to build up the sides, like she was building a house. She took a dinosaur that was lying around and put it inside her structure, suggesting that her creation held a specific function of housing the dinosaur. Patricia spent the next few minutes working quietly by herself, going back to the box if she needed more pieces. Patricia built up the sides of her creation and put a lid on top to create a box, which she told me was a cage for the dinosaur, as seen in figure 6. She was able to provide a
label for her creation, demonstrating the stage of object transformation or substitution, where she was able to give an identity to her creation (Stone & Stone, n.d.). After Patricia created her “cage” she looked at it for a couple of seconds, and then proceeded to destroy her creation by taking all the pieces apart and putting them back in the LEGO box. She had only taken a brief glance at her creation and smiled the whole time she was taking it apart. By taking apart her creation without playing with it, would suggest that she did not know how to use her imagination to play with her creation. This could mean that she is more comfortable in understanding how to build her ideas, but may not be able to understand the next step of playing with the object she had created. Therefore, she is still trying to understand the function of her creation in the correct context and its purpose to her play.

![Figure 6: Patricia’s cage for her dinosaur](image)

The second time I observed Patricia playing with the LEGO pieces was on March 13, 2017. I noticed that like the first observation, she chose to create only one creation effectively by demonstrating symbolic function. She spent her entire time carefully building her creation. Just as before, she found an empty space to build and would go back to the box if she needed more pieces. Patricia worked quietly and seemed very focused the entire time and ignored any
conversations from the other children about her LEGO creation. She started out with a base and began to build up on her creation, where she would periodically pick her creation up to look at it from different directions or perspectives. It appeared that she was analyzing her structure to see where she needed to add more pieces to create a taller structure, as seen in figure 7. By looking at her creation from different perspectives, it appeared Patricia was looking for flaws in her design, because she would add pieces to her design to make sure that her creation would stay standing. This demonstrates the idea that she was problem solving her creation, to fully understand how she was going to make her idea come to a reality (Diachenko, 2011). Patricia seemed to also add more details to her creation making it more elaborate, when she told me it was “A very high house with a high view”. Once again she was able to provide a label to her creation, which suggests she was able to give an identity to her creation. Calling it a “high house with a high view” further suggests that her creation had the specific function of a house that allowed a LEGO figure to see a high view. Patricia showed awareness that tall buildings have different views that people can look down at the things below them, suggesting she is cognitively thinking about the different environments she is exposed to. After she built her creation she then proceeded to destroy it without playing with it. Patricia seemed to find more enjoyment in building a creation then actually playing with it, as seen in the two observations of her play with the LEGO pieces. By taking apart her creation without playing with it, could mean that she did not know how to use her imagination to play with her creation. Her symbolic function is in the actual building of her creation, rather than using her imagination to play with her creation. Overall, she is still trying to understand the function of her creations and their purpose to her play.
Discussion

Summary of Findings

The purpose of this project was to understand the emergent literacy development of five year old twin girls in a home child care environment and the possible factors that may have an impact on their literacy development. This study focused on the following research questions:

- How might each twin’s perception of self-impact her emergent literacy development?
- How might their play in the home child care environment impact the twins’ emergent literacy development?

During the four weeks of this study, I found that environment impacted each twin’s emergent literacy development differently. Even though the twins share the same child care environment, they have different perspectives and views on play. During their play time, each twin creates and
plays differently with each other, other children, and with the toys she is presented with. The twins have different philosophical ideas about how to play, where they are able to create new and vastly different methods of play that is both spontaneous and unique from each other (Smith, 2011). Each twin also expresses her creativity and ideas differently, depending on her role in play. If they are the leader they will express their ideas and initiate the play scenario. If they are the follower they will struggle to express their ideas and will defer to the other child’s play practices. Also during their play the twins are aware that based on their role in the play scenario, there are specific rules and language that they must imitate. They use language and phrases that best fits with their role in the play scenario, and they can not deviate from their role. Through their vocabulary and the specific language they use, their “scripts reveal how they’ve been and are socially and culturally connected to people in place and time” (as cited in Kalkman & Clark, 2017, p. 294). The twins are using specific language scripts based on their experiences and the roles that they understand people play, within different scenarios, like coffee shops, restaurants, and playing doctor.

**Conclusion 1: The twins’ perception of their role in play impacts their oral language.**

The results of this study indicate that how each twin plays with other children has an impact on the language that she will use. According to many researchers, “language skills are related to the ability to forge and sustain complex social relationships, especially with same-aged peers” (as cited in Beaver, Boutwell, Barnes, Schwartz, & Connolly, 2014, p. 144). As the twins play they are using specific language and phrases that they are either familiar with, or language that relates to their play scenario. The language they use is also directly related to how they view themselves as children playing. During their play the twins exhibited confidence, but only when they were in control of the play situation. When they were confident in their play practices they
were bold and more willing to share their ideas and creative process. They were able to say anything related to their play without fear of being censored or mocked for their ideas. Therefore, they were able to express their thoughts and ideas into confident role play scenarios that expressed their understanding of their environment. Along with confidence, the twins would sometimes express meekness and lack of desire to express their ideas and speak during their play. This occurred when they were with other children who dominated their play practices. In this case either one or both of the twins would defer to the confident child, where they would not share their thoughts and ideas, or they would not participate in the play activities. Therefore, how they view themselves as they play relates to their play behaviors and the language they use during their play.

**Implication 1: Children should be allowed ample time to play with other children.**

Children need the time and space to play with other children, where they can learn to express their thoughts and ideas. According to Zauche, Thul, Mahoney, and Stapel-Wax (2016), “Children learn language by extracting it from a larger utterance and connecting it to the relevant aspects of the experience shared with another person” (p. 319). Children need to be able to interact and forge connections with other children to learn and grow. In fact a study performed by Mirzeoğlu (2015) showed the importance of play for children, because “they see play as motivating and as a way to increase attention, retention”, and focus on their learning (p. 199). The twins have always been together, yet one twin is more confident in her play practices than the other one. This is seen when one twin leads the other twin’s play practices on how they are going to play, and who they are going to play in their games. When the twin who is the follower is around younger children, she becomes the leader of their play and gains the confidence to share her opinions about the game of play. Another case is when the twin who is the leader,
becomes the follower when there is an older child present. Therefore, it is important for children to be exposed to many different ages and types of children, so that they learn to be both the follower and the leader. Children need to learn to be confident in sharing their ideas, but also learn that they have to listen to other children’s ideas and perspectives. According to a study by Plotka (2016) even though there will be leaders and followers, mixed-age environments decrease competition and comparisons. Children are learning and understanding that each child is an individual with different skills and abilities, that they bring to the group play dynamics.

It is also important that children are allowed to play with children who are the same gender as them and those who are the opposite gender than they are. According to Todd, Barry, and Thommessen, (2016), “Children’s toy preferences are likely to be influenced by gender-specific socialization and be augmented as knowledge of gender-typed behaviour, derived from observation of others” (p. 2). Therefore, by exposing children to both genders, it allows them to observe various play methods and to be open to playing with all types of toys. The twins are both girls and tend to play mostly with toys that are deemed acceptable girl toys, even when they are presented with the option of playing with gender specific toys. They tend to use language that is more feminine and related to dolls and dress up. Yet, they also do play with toys that are deemed acceptable boy toys and it is important that they are exposed to the types of toys and language that boys use as they play. By playing with children of different genders they are exposed to more experiences and gain an increase in vocabulary and the terminology that can be used in play.
Conclusion 2: The twins’ imagination and concepts of play are impacted by their environment.

Based on the research, environment has played a huge role in the twins’ play practices. Since the twins attend a home child care they are in an environment with other children besides themselves. They are exposed to both younger and older children who have a wide assortment of vocabulary, play practices, and ideas about play. For example, in mixed-age environments children engage in more interactive play, and learn complex language and social cues from more competent peers (Plotka, 2016). They are able to hear different terminology and words that they may have never heard before in this environment, where they not only hear them, but where they can begin to understand how the words are used in their play. During play time they are experimenting with the different words and language in different scenarios to understand how to correctly use the words and language. According to Kalkman and Clark (2017) through role-play events, children are attempting to understand everyday societal roles (e.g, doctors, soldiers, teachers), where their role-play scripts allow them to explore who to be and how to be in these roles. Also, they are able to see different ways on how to play and interact with the toys and children in their environment. Therefore, they are beginning to see that there is not one correct way on how to play and each child has different ideas that are valid.

Implication 2: Children need to be exposed to different environments.

Children need different environments to grow as learners and to understand how things work and are done in different scenarios. Through different environments children are actively observing their world, seen through the twins’ dramatic play and imitation. The more new places children are exposed to the more connections they make and an increase in knowledge and
understanding has been gained (Pritchard, 2009). When children witness actions and behaviors of others they begin to imitate the same action and behaviors in their play. They are being introduced to new experiences, where they actively attempt to understand what they witnessed through play. They are able to pretend to be at the grocery store, or coffee shop, or car dealership, or to be someone who was baking cookies. In each environment there are different words that are spoken and different actions that take place within the setting. During play they are able to act these scenarios out where they can expand, grow, and process the information into vivid dramatic play, where they express phrases, words, and actions that belong to the specific scenarios. Also, when children are exposed to new environments with new children they are learning prosocial behaviors. According to Fisher DiLalla, Bersted, and John (2015), “engaging in prosocial behaviors, especially during play, is critical for young children’s social adjustment” (p. 1465). By engaging in prosocial behaviors in play, children are learning to adjust to their new environment, where they are learning acceptable behaviors, actions, and language in a variety of different and new environments. Therefore, the more environment children are exposed to the more they learn and understand about their world.

Limitations

The limitations of this study were number of participants, time, and member checking. First, there were only 2 participants in this study and they were conveniently selected, due to ease of access to observe the twins. This means the results can not be generalized to all sets of 5 year old twins in a home child care environment. Second, due to time constraints, this study was conducted through 4 weeks of data collection and analysis. Therefore, there was not ample enough time to observe the twins in a wide variety of different play situations and to analyze all of their interactions and play. Third, I was the only researcher conducting the study.
Research Suggestions

Based on my research, I would like to expand upon my study to encompass more children and for a study to be conducted in a school setting. After observing the twins in a home child care environment, I have seen the importance of play in children’s literacy development. Therefore, I would like to attempt a similar study to this one, but in a school setting, to see how multiple children learn and use language as they play. I would like to observe how children of similar ages would play, what roles they would develop, their funds of knowledge, and how their perspectives of play may impact their literacy development. I would also like to do further research into the importance of children singing when they play. Based on the twins singing in their play, I would like to study how many children sing as they play, the importance of adding singing to play, and if singing enhances their play.

Overall Significance

This study is important to look at to understand that all children play and use language differently, even if they share the same environments. It allows teachers and researchers a basis to realize that twins are different in their perspectives of play, and have different creative thought processes. Therefore, observing children playing is important because it provides observers an understanding of the importance of play for children and how they process and understand the world around them. The results of this research show how environment and each child’s perspective of self-impact their literacy development. It is important to recognize that children are different and it impacts their learning. Therefore, this study can be used for those who work or raise children in understanding the importance of play on children’s literacy development.
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Appendix

Observation form

Participant____________________________
Date__________________________

Time__________________________
Location_______________________

<table>
<thead>
<tr>
<th>Observe</th>
<th>Interpret/ Analyze</th>
</tr>
</thead>
<tbody>
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Parent/Child Care Survey

Getting to Know Your Child’s Language and Literacy Practices

Dear [Name],

This information will help me get to know [Name] and you. Please return it at your earliest convenience. Thank you. (Use the back, if needed.)

1. What are some of the things your child likes to do and talk about?

2. What are some places your child visits frequently?

3. In what settings does your child talk most comfortably?

4. What language(s) does your child speak? What language(s) are spoken in your home? Does your child hear different languages at family gatherings or in the community?

5. Do you ever read with your child or other children at home?

6. What different languages do family members read and write?

7. What kinds of reading does your child participate in alone or observe at home? In what languages?

8. List any of the family’s favorite books, authors, characters, cartoons, or videos.

9. Does your child ever read TV advertisements or captions?

10. Does your child ever use or play on a computer?

11. What are some things your child likes to write or draw when given a blank piece of paper? What other kinds of writing does your child do?

12. What kinds of reading or writing do you and other family members like to do?

Figure 2–2, p. 18

## My Child as a Language Learner: Parent Observation (Pre-K–1)

Please tell me about your child’s language learning in the following areas, and share examples where possible. If more than one language is spoken in your home or family, please include information about which language you are referring to. I appreciate your insights as we work together with your child.

<table>
<thead>
<tr>
<th>My Child:</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Comments and Examples (If more than one language is spoken, let me know about your child’s strengths in each.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaks clearly so others can understand</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is able to follow oral directions</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enjoys listening to and telling stories</td>
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<tr>
<td>Enjoys being read to</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Has favorite books, characters, magazines</td>
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</tr>
<tr>
<td>Understands stories we read aloud</td>
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<td></td>
</tr>
<tr>
<td>“Reads” to me (telling about pictures and/or the story)</td>
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<tr>
<td>Helps with grocery lists, coupons, shopping, recipes, and so on</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Tries to read words in real contexts and settings (street/store signs, cereal boxes)</td>
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<tr>
<td>Draws pictures and writes some letters</td>
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<tr>
<td>Writes in invented spelling (makes up spellings for words)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likes to tell about what he/she writes</td>
<td></td>
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</tbody>
</table>

At home my child enjoys:

I have questions about:

Parent:

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Adapted from Language Arts Committee, Palo Alto Unified School District (1994)

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*Figure 2–3, p. 18*

Child's Interview

1. What does the word play mean to you?

2. What do you do when you are at home?

3. Who do you play with at home?

4. What kind of things do you play with at home?

5. What do you do at daycare?

6. Who do you play with at daycare?

7. What kinds of things do you play with at child care?

8. Do you like to read books? Why or why not?

9. What do you like to read?

10. Do you like to draw and/or write?

11. What types of things do you like to draw and write about?

*Other questions will arise during the interview with the child.*