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World through the Eyes of Children: A Qualitative Study of Preschool Children's Understanding of the World

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World through the Eyes of Children: A Qualitative Study of Preschool Children's Understanding of the World

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World through the Eyes of Children: A Qualitative Study of Preschool Children's Understanding of the World

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Abstract

In recent years, the dominant discourses on child-centered individualistic pedagogy representing Eurocentric models and grounded in developmental psychology have been increasingly challenged. Critics pointing to the diverse contexts of childhood, and the impact of globalization and technological advancement, have questioned the universal application of the developmental paradigms. Responding to a rapidly changing post-modern world, scholars have offered alternative narratives drawing on the scholarship in various disciplines like sociology, anthropology, human geography, science studies, postmodernist, and post-structural feminist studies. Pointing to the increasingly complex and ecologically challenging world of the 21st century, these scholars propose the concepts of "common worlds" and "nature-cultures" to re-conceptualize childhood within a broader context of a world that expands beyond the human/social dimensions to include other life forms and nature such as the natural environment, human made environments, and other life worlds. This ethnographic case study used participant observation with preschool children as co-researchers in the study design. It examined how preschool children described and expressed their knowledge and understanding about their world as well as their place in it through their experiences in both concrete and virtual ways. The findings demonstrate that children's world is without any boundaries spanning over the physical, spatial and virtual worlds. Children traverse these worlds as nomads forming multitude of relationships with family, pets, animals, nature, places, and material objects both far and near. Technology and media expand children's reach to cross boundaries and connect to human, non-human, and other co-inhabitants of their worlds. Their world is a common world shared by all, open to all, in its current form and all is future imaginings.

World through the Eyes of Children: A Qualitative Study of Preschool Children's Understanding of the World

"Don't limit a child to your own learning, for he was born in another time"

Rabindranath Tagore

I. Introduction

In recent early childhood education literature, the dominant discourses on child-centered individualistic pedagogy and developmental psychology have been increasingly challenged. Responding to a rapidly changing post-modern world, scholars have offered alternative narratives drawing on the scholarship in other disciplines like sociology, anthropology, human geography, science studies, postmodernist, and post-structural feminist studies (Grieshaber & Cannella, 2001). Pointing to the increasingly complex and ecologically challenging world of the 21st century, these scholars propose the concepts of "common worlds" and "nature-cultures" to re-conceptualize childhood within a broader context of a world that expands beyond the human/social dimensions to include other life forms and nature (Taylor, 2013; Pacini-Ketchabaw, Taylor, Blaise, & Finney, 2015). Children's world, these scholars argue, consist of a range of relationships, histories, traditions, and culture that are part of the place where they grow up (Taylor, 2013; Massey, 1993). These relationships include their natural environment, human made environments, and other life worlds. They emphasize the inter-relatedness and interdependence of humans and nature, a shift from the long tradition of situating early childhood in the idealized world of nature (Taylor, 2013).

Critical constructivist literature has similarly questioned the mainstream narratives and theoretical perspectives that have traditionally dominated the field of early childhood (Cannella, 1997; James, Jenks, & Prout, 1998; Grieshaber & Cannella, 2001). These scholars suggest that research conducted using a constructivist approach is influenced by the social, cultural, and

political factors and the power dynamics (Cannella, 1997; Grieshaber & Cannella, 2001). Dominant epistemologies, language of professional field, cultural symbols, and power influence ways in which construction of and assumptions about early childhood field are made (Cannella, 1997). There is also a growing recognition among scholars that our current knowledge about child development and learning is informed by research that is Eurocentric and narrow in scope. It only represents children from the western world who constitute less than 10% of children worldwide (Britto, 2011; Penn, 2005; Soto & Swadner, 2002). The universalist statements about children and their development without any recognition for socio-cultural variability have also come under criticism (Bloch, 1991; Burman, 1994). These critiques signal an emerging shift in conceptualizations of children and early childhood education. Cannella (1997) highlights the absence of the contribution by children, parents, and community members to the field of early childhood knowledge stating:

> Voices of "silent knowing" are those of the actual children with whom we work as they live their real lives in settings that we have not comprehended… these voices of "silent knowing" are also those of parents and community members whose life experiences represent different cultural strengths than our own, whose interactions with children represent rich histories that we have not experienced. (p. 3)

These scholars challenge the field, inviting critique based on their belief that in the absence of critical voices, the field confines itself to only one dominant knowledge base at the exclusion of multiple worldviews (Cannella, 1997).

For decades, the dominant view, influenced by modernist thought and grounded in developmental psychology, has shaped the field of early childhood education theory, practice, and policy. Its Western values – such as child centeredness and individualistism – have

dominated the field (Grieshaber & Cannella, 2001; Vogler, Crivello, & Woodhead, 2008; Bloch, Swadener & Cannella, 2014) endorsing the constructivist theory as posited by Jean Piaget . The constructivist paradigm proposes that learning is an active process of building knowledge through personal experience and engagement. Piaget's work demonstrated that development precedes learning and is a process of interaction between maturation and experience marked by series of sequential stages, moving on a continuum from simple to complex and concrete to abstract forms of thinking (Piaget & Inhelder, 1969). While Piaget's theory views children as active participants in their learning, it also implies the universality of a developmental model without recognizing the contribution of cultural and historic contexts on development (Agbenyega, 2009). These theorized principles of development and related expectations of children's growth continue to influence the field of early childhood education and practice in the Western world reflected in the construction of developmental inventories and tests (Agbenyega, 2009).

Piaget's theory found further support in the work of Arnold Gesell who stressed the importance of biological maturation as the key determinant of development (Agbenyega, 2009). This led to the construction of psychological instruments and tools designed to identify growth patterns in development. Scholars continue to debate the applicability of such instruments due to their over emphasis on biology and maturation and lack of attention to the role of social, cultural, and historical factors in the process of development (Bruner, 1996).

With support from international institutions such as the United Nations and various non-governmental organizations, the Western-centric principles of child development have been adopted in diverse global contexts (Fleer, Heregaard, & Tudge, 2009). An example is the development of an Australian early development inventory designed to inform communities on

how they support the development of young children in domains that are indicative of sound health, education, and social outcomes. This inventory completed by the classroom teachers compares the development of Australian children to western-normed milestones influenced by maturational and developmental theories. These western-normed assessments tools are inappropriate and problematic as they only view development from the perspective of the teacher without any input from families or communities and create a deficit image of young children and their communities (Agbenyega, 2009). These practices ignore the interactive and dynamic nature of development that happens between the child and their social environment outside of the school walls (Canella, 1997; Kincheloe, 2008).

Supporting a similar theme, a growing number of scholars have questioned the developmental paradigm and its universal applicability, building on the work of the social constructivist theorist, Lev Vygotsky (Rogoff, 2005; Soto & Swadener, 2002). According to Vygotsky's theory (1930), learning occurs in context and learning precedes development. Vygotsky's theory highlights the importance of social and cultural contexts in the process of learning and development. He proposed that children make sense of their world through their interactions with adults and peers in the context of the culture and society they are born into, while internalizing its values and beliefs (Fleer, 2014; Rogoff, 2003). Vygotsky posited that the cultural variables in children's lives are continually changing across space and time and these must be studied carefully to understand the development of young children. Vygotsky's theory, by emphasizing the role of the cultural factors in the development of young children distanced itself from the universalist approach to development (Rogoff, 2003).

The Impact of Globalization: Media and Technology

The world that children experience today is different than what it was a few decades ago. As Suarez-Orzco (2005) remarks, young children today are growing up "engaged in local contexts yet suffused with larger transnational realities" (p. 210). Children and families are exposed to increased cultural and linguistic diversity in all aspects of their lives – food, music, media, objects, and more. Technology connects them to objects, people, and places far away from their current locale. They are exposed to multiple ways of communication with family and kin living far through technological tools such as Skype, Facetime and other formats. Travel experiences of family and friends puts them in touch with places that would otherwise be beyond their reach. In other words, the lives of young children are influenced by forces of globalization in multiple ways.

Advances in technology and science now mediate the experiences of children through television, digital games, and other electronic devices. These toys and tools keep children indoor bound (Riney-Kehrberg, 2014). Children learn, grow, and construct their understanding about their world through daily experiences within their environment. Just as industrialization altered the experiences of children moving from outdoor spaces to more urbanized living, technology and media have influenced the way children experience the world. Additionally, the changing social landscape of communities which are viewed by most parents to be "unsafe" for children to explore their environment freely, have in some ways "islanded" them into closely supervised spaces especially designed for children. As historian John Gills (2008) describes:

> Children have been systematically excluded from the former main lands of urban and suburban existence…what has been described as a 'sanitized childhood, without skinned knees…is evident in the United States and Western Europe…parks and playgrounds, once the free spaces of childhood are increasingly supervised. (p. 316)

The impact of globalization and technological advancement is evident in the social and cultural contexts of children and the ways they experience the world in their daily lives (Steinberg & Kincheloe, 2004). Steinberg and Kincheloe (2004) call it the new emerging "kinderculture" reflecting the social, political, and economic power structures influenced by the big corporations and propelled by the forces of capitalism (p. 10). It is best exemplified in the way McDonald, the fast food company, has crossed geographical borders, standing as a symbol of transnational economic development, and promoting a culture of consumerism among children. Media tools are used effectively to influence young consumers affecting their daily lives and experiences including food consumption and places to play (McDonald has built playgrounds on the premise to attract their young consumers). Cartoons and children's program characters are used to market products for retailers in local and global markets (Cook, 2009). Steinber and Kinchloe (2001) succinctly state, "While children construct their own meanings, the corporate culture of power does exploit them – the corporate effort to ideologically construct children's consciousness is a cold reality" (p. 129).

The presence of globalization is evident in early childhood programs around the world where individualistic and child centered ideologies have been adopted even though at times they are in direct conflict with the traditional values (Pearson & Degotardi, 2009). Western values based developmental expectations for young children are applied to diverse global contexts. Penn (2000, p. 10) explains that while only primary color recognition is an expected norm in the west at formal school entry, Mongolian children are recognizing a herd of 320 horses in shades of black, gray, and white. She argues that developmental expectations are not universal or linear but are socially constructed within the local contexts.

Recognizing the varied contexts of childhood and the role of contexts in early development along with the impact of globalization on daily lives, there is a need to understand how these changes reflect children's construction of their understanding about the world and their own place in it. Drawing on Dr. Zsuzsa Millei's research, especially the preschool children's placemaking in a globalized world project (see Millei's presentation at Lehigh University on March 5, 2015), the purpose of this study is to examine how globalization (technology, consumer culture, and travel, among other things) influences the way children make meaning of their world and how they place themselves in it.

Research Goals

This study examined children's views of the world in the context of globalization and the processes they use to define and explain the world as well as their own place in it. It is referred to as a children's worldview in this study. The research study addressed the questions:

- How do children describe and explain their world?
- How do children place themselves and others in the world?
- How do children make the distinctions between immediate and beyond (far)?

This research is positioned within the context of comparative and international education as the primary focus of this study was to examine an aspect of children's socialization process in the context of globalization at a preschool site in the United States. Globalization is a worldwide phenomenon that has impacted all aspects of human activity. This study critically examines how globalization has influenced the lives of young children in multiple ways filtering into the local contexts and impacting their world view. The dominant narratives that have become institutionalized in the early childhood field are revisited using an interdisciplinary approach

combining sociology of childhood, anthropology, and other recent social science scholarship using postmodernist, poststructuralist, and feminist studies perspectives.

Overview of the Research Study

This dissertation presents the research study beginning with the introduction to the study in Chapter One. Following a comprehensive literature review, Chapter Two presents a theoretical framework, which guided the design of this research study. Theoretically, the study uses an interdisciplinary approach drawing on the current literature from sociology of childhood, anthropology of childhood, human geography and science studies while using postmodernist, poststructuralist and feminist studies perspectives.

Chapter Three describes the methodological approach, focusing on the ethnographic case study design, which was used to answer the research questions. While decentering the researcher from an ethnocentric base, the case-study approach gives an in-depth understanding about the views of children about the world and their place in it. Importantly, children in the preschool classroom were invited to participate in the research study as co-researchers. The researcher used participatory observation at the site for one semester. This gave ample time to gain an in-depth understanding about the children's daily activities and to engage in semi-structured activities designed to facilitate discussion focused around the research questions. The chapter also provides information on the qualitative data analysis methods and tools used to analyze the data.

Chapter Four presents the findings drawing on the dominant themes that emerged from the collected data. The data was collected and recorded in the form of field notes, child generated artifacts such as the daily journals, the world book, and other artifacts that were generated by children during the course of daily activities at the center. Emerging themes from the data were organized into categories and sub categories to answer the research questions. A recently

developed conceptual framework of the common worlds was used to answer the research questions of the study. Artifacts generated by children are used to illustrate or highlight specific points in the findings. Finally, Chapter Five presents conclusions and the key points of the study discussing its relevance in the context of the current literature while pointing to areas for future research.

Moving away from the dominant narratives grounded in the field of developmental psychology and drawing on literature from sociology of childhood, anthropology, and other social science disciplines, this study uses an interdisciplinary approach to study and understand children and childhood. This research highlights the importance of providing space for critical voices in the field to explore new horizons in knowledge formation that lead the field to unexplored spaces, overlooked perspectives and places unvisited before. It contributes to the body of scholarly work using the newly developed conceptual framework of the common worlds that uses an interdisciplinary approach to understanding children and childhood in a rapidly changing globalized world.

Inspired by the United Nation's Convention on the Rights of Children, this study includes preschool children as co-researchers, giving them voice to contribute to literature focused on topics about them, a perspective that is not sought often in the empirical studies focused on children. Methodologically, the study provides an example of how to include preschool children as co-researchers in a research project designed to study children and childhood while also pointing to the limitations that accompany such designs and strategies to minimize their impact. Results of the study have practical implications in the field urging educators to move beyond the human centric to include other species and forces that are part of the early childhood landscape.

II. Theoretical Framework: An Interdisciplinary Approach

"The child ever dwells in the mystery of ageless time, unobscured by the dust of history."

Rabindranath Tagore

"While we try to teach children all about life, our children teach us what life is all about."

Jawarharlal Nehru

A theoretical framework is a tool to examine a topic of interest from a given position. It provides a lens to look through and gain insight into the phenomena from a specific position that helps a researcher to answer the research questions. For this reason, selection of the framework is important to the research endeavor. Research on children is also influenced by the way the researcher thinks about them and how they are studied (Boocock & Scott, 2005). Selection of a theoretical framework and research methodology impacts findings.

This study examined the views of preschool children about the world and the processes they use to explain and define it in one global context. Specifically, it focused on how children construct their understanding of the world and the tools they use to make sense of it. The research questions were linked to the unique and context specific patterns of development of young children. This study used an interdisciplinary lens to answer the research questions grounded in sociology of childhood, anthropology, postmodernist, and post-structuralism perspectives as well as feminist studies, human geographies, and science studies. The following sections address perspectives from these disciplines.

Sociology of Childhood

During the last two decades, childhood sociology has developed as a field of study within the discipline of sociology. It has been a period of reimagination and reconceptualization of childhood marked by the constant flow of ideas drawn from other fields of social sciences. It

gained an official status in 1992 when the American Sociology Association officially admitted a subsection titled "sociology of children" into its fold. There were many factors that brought about this change in the field. It was partially influenced by the publication of scholarly work that presented children and childhood in new light supported by evidence. Some of the key publications were under the direction of the European Center for Social Welfare's five-year project on "childhood as a social phenomenon" and the publication of an influential work titled "Constructing and Reconstructing Childhood," a collection of studies about children and childhood by the European sociologists. This new wave of scholars viewed childhood as a distinct phase and children as active agents who shaped and were shaped by their social environments. This was the beginning of the paradigm shift in the study of children within sociology (Boocock & Scott, 2005). It spurred new studies in the field bringing children and childhood into the limelight globally.

Other factors included a rising critique of the functionalist theory by sociologists from varying perspectives, which had dominated the field for most of the 20th century. Research work in their sub specialty of sociology pointed to the inadequacy of the functionalist theory to explain the social phenomenon under study. For example, Kimberly Scott, a sociologist interested in studying playground behavior of African American girls, found the dominant socialization theories inadequate to explain the behavior she witnessed in her field study. These developmental models, while limiting, were still accepted as a norm for all children and those who would not fit were deemed "atypical." There was little reference in literature - theoretical or empirical - about African American girls (Boocock & Scott, 2005, p. xi). A similar observation was noted by Finnish sociologist. Alanen (1994), who found that developmental models specific

to white, middle class, and male subjects were not applicable to all children or could not be applied to all children.

Sociologists studying age life-course perspective critiqued the stereotypes attached to groups by age. These scholars brought attention to generational issues and the problems attached to segregating groups by age as homogenous groups (Alanen, 2009; Qvortrup, 2009). The concept of "age cohort," scholars argued, did not translate into the same experience for the group. Children experience the world differently in different historical and socio-cultural contexts (Foner, 1978).

Conflict theorists, influenced by the works of Karl Marx and Max Weber, pointed to the lack of attention given to forces of change within society and the inequalities that perpetuate within a functionalist society. Children were identified as one of the groups who lacked voice or control over their lives within a functionalist society. Exchange perspective scholars found children to be competent in negotiating deals through exchange of services that were beneficial to them demonstrating their ability to engage in economic activities (Zelizer as cited in Boocock & Scott, 2005). Gaining insights from the work of sociologists with various perspectives, scholars recognized that to understand how social life is reproduced in societies, it is imperative to understand children first as they are active agents in this process (Boocock & Scott, 2005). These studies and research in the field gradually brought about a paradigm shift, providing space for discourse about issues that relate to children in their own right within the subfield of the sociology of childhood. This new paradigm viewed children as engaged social actors in an interactive relationship with their environments where each influenced the other.

Critics of sociology argue that children and childhood have been viewed as a stage and time in "process" of becoming an "adult." As stated by Vogler, Crivello, and Woodhead (2008), "One

of the main areas of critique has surrounded theoretical positioning of children as human 'becomings' rather than human 'beings,' in other words, as competent and active participants in society from birth" (summarized by Uprichard, 2008, p. 6). However, in the last decade there has been a growing body of research to support the idea that children are active agents of their own understanding and demonstrate their unique ways of exploring, learning, and communicating (Doek, Krappmann & Lee as cited in Vogler, Crivello, & Woodhead, 2008; Boocock & Scott, 2005). The terms "children" and "childhoods" are intentionally used to emphasize two important aspects: firstly, that children are individuals in the category of non-adults; secondly, childhood is seen as a phase in life that is transitory and children live through it as individuals. The term "childhoods" is used in the plural to convey the diverse ecology that exists or existed in different times and places in history (Boocock & Scott, 2005).

Anthropology of Childhood

Anthropology as a field has contributed to the scholarly work on childhood through the publications of ethnographic field work focused on various aspects of child development in various global contexts. The anthropologic lens has been also characterized by its focus on cultural, social, and historical contexts in its description of children and childhood. This approach does not subscribe to acceptance of universal principles in development. On the contrary, many of the anthropology studies conducted in the first of half of the 20th century pointed to the limitations of such universal approach as put forth by developmental psychology.

The works of Mead, Malinowski, and Sapir influenced the development of anthropology of childhood in the last century (Levine, 2007). The early ethnographic literature documented the diversity in contexts in childhood environments and child rearing practices in various locales. Mead highlighted this point in writing about her work with Samoan children (1974). She

explained how the childhood of Samoan children was different than childhood in the United States. This was quite different than the views about children posited by the dominant theories of developmental psychology. Similarly, Malinowski's work in Melanesia also demonstrated the limitations of Freudian theory (as cited in LeVine, 2007, p. 249). Ethnographers' field work has often led to questions about long held views of child development in developmental psychology. A characteristic response of anthropologists to the dominant developmental perspective was to use ethnographic evidence to demonstrate that Western based developmental theory was inadequate to explain the culturally varied contexts of children and childhood. This study proposes to approach the topic in an interdisciplinary way to build theory that integrates ecological, cultural, social, and evolutionary perspectives inspired by anthropology of childhood studies (Bluebond-Langner & Korbin, 2007).

Postmodernism

Postmodernism is a theoretical perspective originating in disciplines such as art, literature, politics, and sociology – all outside the discipline of education. The addition of the prefix "post" to modernism highlights that this perspective crosses the boundaries of modernism adding a different dimension to modernism. Modernism developed in the late 17th and 18th centuries often referred to in history books as the "age of enlightenment." This period is characterized by a strong belief that the world can be known and "truth" uncovered using scientific method. These "truths" are based on logic and therefore objective and universal. Scientific thinking also at times called 'positivism' is the way to progress and prosperity in societies (Miller & Pound, 2011). Applying this modernist lens to child development and learning, modernist scholars explained developmental process as universal, rational, standardized, and orderly (Dahlberg et al., 1999).

However, in the last two decades of the 20th century, inspired by postmodernist thinking, scholarly work began to highlight the problems of applying positivist, western-based principles to child development and learning in all diverse contexts including North America and Europe. Some scholars go to the extent of stating that young children have been colonized by western models of development that leave little space to accommodate the diverse cultural or social contexts in which children grow (Fleer, Heregaard, & Tudge, 2009). Drawing a parallel between colonization of countries with children, Viruru (2001) further explains that children have been colonized in the same way as the minority world colonized the majority world. Just as people of the colonized countries were always assigned "undeveloped" status, in need of support from the colonizer, in a similar way the position ascribed to young children is also one of "undeveloped" or "in process of development" and needing nurturance from the adult. "Empirical truths" about child development that were accepted unquestionably came under criticism and "absolutism replaced relativism particularly with respect to the interpretation and judgement of complex human behavior" (Alloway, 1997, p. 1).

Postmodernism is not a theory of learning or an approach to learning. It contributes to the field of education by questioning the strongly held beliefs about children and development. It welcomes complexity and multiplicity and fluidity in knowledge. It does not endorse universal explanations for phenomenon. As Dahlberg, et al. (1999) state:

> From a postmodern perspective, there is no absolute knowledge, no absolute reality waiting 'out there' to be discovered. There is no external position of certainty, no universal understanding that exists outside history or society that can provide foundations for truth, knowledge and ethics. (p. 23)

Knowledge according to a postmodernist approach, is not value free, gained through scientific neutrality. On the contrary, knowledge is a product of interaction with people and the environment. Interactions are based on relationships and with relationship there is always power dynamics. The concept of power is associated with Foucault and post structuralism often used as synonymous with post modernism. Power of some of the 'commonly held truths' is often accepted unquestionably by people helping to perpetuate these truths. Postmodernism invites scholars to engage in discourse and critical analysis of commonly held beliefs about early childhood and early childhood education. Postmodernism recognizes the contribution it has made in deconstructing early education.

For decades, research inspired by positivist and scientific thinking dominated the field, building theory and practice leading to models of teaching and learning that were applied to diverse contexts. The postmodernist and post structuralism approach offers an alternative to the scientific or objective ways of explaining children and their world and instead, brings the focus on relative truths of each person. It recognizes that reality is constructed by individuals as they interpret the world around them in their own unique way. It opens the discourse to multiple perspectives, voices, and recognition of the complex nature of the diversity of childhoods. Postmodernist scholars have used genealogical critique and deconstruction methods to bring out "the underlying values, biases and beliefs that have generated a particular viewpoint" (Grieshaber & Cannella, 2001, p. 11). This approach welcomes including children in the research process as individuals with "voices" and perspectives that are as important as an adult.

Poststructuralist and Feminist Approach

The last two decades have witnessed a body of scholarly work in education research from poststructuralist and feminist poststructuralist scholars who question the humanist concept of the

child as an autonomous independent learner, outside the influence of environment. These scholars (Hultman &Taguchi, 2010) have conceptualized the child to be "situational, contextual and discursively inscribed" (p. 525). However, more recently, feminist scholars influenced by the works of Gilles Deleueze and Felix Guattari have advocated moving away from the human centric view, towards a leveled field where "difference is creative, positive and productive" (Hultman & Taguchi, 2010, p. 526) and "not the differentiation of some grounding identity (humanity), nor difference between male female identities" (Colebrook as cited in Hultman & Taguchi, 2010, p. 526). This dissolves all binary stances such as human/non-human or discourse/matter. These feminist scholars not only take account of the discursive in understanding children but expand the field of knowing to non-human and material engagements and its resultant learning and becomings. This turn in the field has been referred to material feminism or the new empiricism.

The newly emerging materialist turn in social sciences has begun to balance the influence of discursive practices on social construction of childhood (James & Prout, 2015). Drawing on the works of Bruno Latour, Karen Barad as well as Deleuze and Guattari, scholarly work has begun to combine the discursive with the materialist concepts in understanding childhood – a combination of biological evolution, natural environment, and built environment empowered by emerging technologies. It is no longer sufficient to explain childhood in merely socio-cultural terms. James and Prout (2015) describe this new perspective well stating, "In this account, childhood is a hybrid of both culture and nature. It demands multi-and interdisciplinary analysis and the creation of theoretical language that can merge these different concerns (p. ix)." An example of this shift can be seen in the conceptualization of the common worlds framework developed by Africa Taylor and Miriam Giugni to understand children's relations with all other

entities in the world which includes, people, animals, nature, and the material world (Taylor & Giugni, 2012).

Theoretical Assumptions: Conceptualizing the Study of Childhood

The theoretical lens that will be used in this study draws on the following assumptions and research strands:

- childhood is a social and cultural construct;
- childhood is time and cohort bound;
- ecology of childhood is diverse;
- development and learning in childhood is context specific;
- children are active agents of their own understanding;
- children are meaning makers; and
- children live in heterogeneous common world.

Childhood as a social and cultural construct

The Sociology of childhood has become a field of study within sociology in the last two decades highlighting the importance of children and childhood to inform the field (Alanen as cited in James, 2007; Jenks, 2005; Buhler-Neiderberger, 2010). Childhood is seen as a social construct and a new paradigm of childhood with key features was proposed by James and Prout in 1990. Accordingly, childhood is not viewed as a natural, universal, or a phase in the biological maturation of humans. It is a structural and cultural variable of societies just like gender, class, and ethnicity (James & Prout, 2015). Children are referred to as those members of society who are not adults. Childhood is a phase in the life of an individual that one passes through and by its very nature is transient. Corsaro (1997) and Qvortrup (2009) have further expanded on the concept of childhood as not only a phase in the life cycle of an individual, but also a structural

feature of society. Corsaro (1997) states that while childhood is "a temporary period for children, it is a permanent structural category in society" (p. 30). This structural form is characterized by the political, social, cultural, economic, and technological factors as well as the dominant ideologies influencing the discourse at any given time and place (Qvortrup, 2009, p. 25). Childhood, "at any given time is the result of strength relations between prevailing parameters which must all be counted as structural forces" (Qvotrup, 2009, p. 25). Evidence of the dynamic nature of childhood and the child can be found in the seminal work *"Centuries of Childhood"* (Aries, 1962). For example, the concept of French children being treated as little adults during the Middle Ages once weaned off their mothers later evolved into childhood as a stage to be protected from the declining morals in society during the Enlightenment period influenced by the church and clergy of the time. Modernist ideas supported by reason and science in the Twentieth century gave rise to the concept of childhood as a stage to be protected and nurtured. However, these notions represent childhood from a western viewpoint.

Cross cultural inquiries have shown differences in childhood as a unique feature of cultures and societies in various global contexts and through time (Rogoff, 2007). In Confucian China, for example, individuals were expected to show control and restraint as soon as they could walk and talk. Play was not viewed as work of child or appropriate (Cannella, 1997). Childhood in Australia during the nineteenth century became institutionalized due to economic depression followed by the social disorder of the gold rush era. As a result, reformatories and industrial schools were created where children would spend time learning (Cannella, 1997). Current accounts of children caught in the crossfire of civil wars, poverty, and trafficking present a very different picture of childhood in diverse contexts worldwide (Bluebond-Langner & Kobin, 2007). A study by Webbink, Smits, and Jong (2011) in 18 countries in Africa and Asia reported

presence of child labor in the name of household work and family business presents another aspect of childhood across various cultural contexts.

In a famous cross-cultural study of three cultures, researchers (Tobin et al. 1989) demonstrated the cultural variation of childhood. The role of preschool in childhood is viewed differently in all three cultures: families in the United States see preschool as a place for consistency and practice of social skills, families in China hope the preschool experience will help to balance against their child becoming a victim of "spoiling" by parents at home and Japanese parents view preschool as a place where the child is exposed to new experiences that are unavailable at home (Tobin et al. 1989, pp.184). This study highlighted that not only are cultural practices related to children different, their interpretations also vary from culture to culture. An example in their study is given of a Japanese boy who digressed from the expected behavior. This was captured in their video clip. Teachers from the United States interpreted his behavior because of boredom due to the lack of an intellectual challenge. However, their Japanese counterparts disagreed and felt that the child was not intelligent because he could not function within the group norms – a sign of intelligence in Japanese culture. Japanese culture emphasizes dependence while the American culture encourages independence. This landmark study points how cultural views about development differ and how the social and cultural practices support the kind of behavior that is accepted as the norm at a particular age.

The work of Berger and Luckmann (1966) referred to as the theory of social construction further supports similar thinking related to the social construction of knowledge and reality. Their scholarly work has combined two important ideas that are closely linked and mutually supporting: the sociology of knowledge and the social construction of reality. The social construction theory of Berger and Luckmann proposes that social interactions of individuals with

others and the world around them form the basis of their knowledge about the world and its reality (1966). Reality consists of two forms: objective and subjective. Reality that is socially constructed by one generation acquires the status of objective reality in subsequent generations and becomes accepted norms. As knowledge and reality are both constructed in the social arena, knowing the social, cultural, and historical contexts is important to understanding the nature of knowledge and reality.

The process of knowledge formation begins with daily interactions leading to a pool of knowledge that becomes "habituated" in society and leads to its "institutionalization" and finally, with time, "legitimation." An example of "legitimation" is the process that children's rights acquired on a global scale. The United Nation's Convention on the Rights of Children (UNCRC) began as an advocacy effort of selected groups, gained momentum and became "institutionalized" in a declaration that 189 out of 191 countries have endorsed. This has led to the legitimization of the Rights of Children in most parts of the world.

The subjective reality, on the other hand refers to the way individuals adapt to the objective reality. Socialization plays an important role in constructing the subjective reality and conversation plays an important role in building this reality. According to Berger and Luckmann (1966), childhood years are the years of socialization when individual identities are getting built through verbal and social interactions. These interactions are important to constructing the subjective reality as well as reshaping or deconstructing it. This study focuses on the subjective nature of reality that is constructed by preschool children interacting within a social and historical context characterized by globalization and technological advancement. While the work of these scholars and their theory of social construction of knowledge and reality apply to adults, this study explores if a similar process applies to preschool children. This study explores

how the social and cultural variables reflect in children's view of the world in the geographical location of the United States.

Childhood as time and cohort bound

A brief review of the history of childhood in the western world reveals how the conceptualization of childhood has changed over time. Hendrick (as cited in Jenks, 2005) has recorded images of childhood represented through public discourse over time as an evangelical, schooled, or a welfare child at different points in history. Childhood is imagined differently in different cultures and during different points in history. An "age and life course" approach to studying childhood provides a time bound image of early years that is contextually relevant and grounded in current historical perspectives.

Each cohort of childhood in a specific context has a distinct experience that is unique to the space and time of that cohort. The world that children experienced in the 19th century is quite different than the one that children live in today (Riney-Kehrberg, 2014). For example, in the years following the Civil War, most American families and their children lived on farms in rural settings within proximity to natural open spaces and a freedom to explore these spaces. This context influenced their play, school, and life in general including hazards of living in natural landscapes. The general perceptions reinforced that farms were the best places to raise children. The childhood experiences of this cohort of children would be in stark contrast to the cohort of children today in the same context. Most children today do not have freedom to roam in open spaces and neighborhoods unsupervised (Riney-Kehrberg, 2014). They play within the range of adult supervision for many hours with electronic gadgets and technology. The world that these two different cohorts see through their eyes would represent the "life time cohort" they experienced. This study will explore children's view of the world at this specific time and place

in history influenced by forces of globalization and technological advancement. The description and explanation provided by children will inform the field about the world as seen through their eyes and in what ways adult views are consistent or different with those of the children.

Diversity in ecology of childhood

The ecology of childhood represents the layers of influences contributing towards the quality of experiences during childhood and their impact on development of children (Bronfenbrenner, 1979). These layers range in proximity and their relative influence on children ranging from family structure, school, friends, and neighbors to systems of services, policies, and structure that are part of the nationwide environment.

Globalization has impacted the layers of this ecological system of childhood and early care in varying degrees around the globe accentuating the diversity of living conditions experienced by children (Woodhead, 1999). Increased communication due to technological advancement inform us daily about the challenges children face in various parts of the globe due to war, economic exploitation, abuse, poverty, and disease. Childhood has become the victim of civil wars, political unrest, refugee movements leading to mass migration, and regional conflicts. Children are forced into choosing arms for personal safety. These external events and conditions impact the childhood experience in affected areas. While on one hand awareness about the condition of children mobilizes international help, it also raises awareness about the diverse experiences of children growing up.

In the developed world, the idea of childhood conjures up image of free time, play, and learning supported by services and systems for healthy growth. In the majority of the developing world however, the ecology reflects gross inequalities and inequities that children face at school,

home, and the wider community. Childhood can mean work, school, family responsibilities, and in many regions, civil war and refugee camps. According to the most current data from the International Labor Organization, 168 million children work worldwide between the ages of 5 and 17 (ILO, 2013).

The United Nations Convention on the Rights of the Child (1989), guarantees rights to education for every child and yet millions of children do not attend school. For those who do, the quality is inadequate, resources poor, and only a fragmented system exists to support children. Many children work alongside their families viewing work as natural part of childhood. When a boy in the Philippines was asked about having a choice to work, his response as quoted in Woodhead (1998) was:

> We do not understand your question. Choice of what? It is not a choice. To work is a natural thing to do. Our friends do it. My parents work, my brothers work so why shouldn't I work? Even schooling is not an excuse not to work…. (p. 35)

The multiplicity of family structures and their work life arrangements also influence childhood in a variety of ways such as time spent in child care settings and other scheduled activities of children. Diversity in the landscape of childhood results in vast differences in the lived experiences of children and their views about the world (Woodhead, 1998). Childhood as a structural space exists in every society as Qvortrup (2009) points out; however, the experiences of childhood differ greatly in their quality and intensity. This study took into account the ecology of childhood at this research site to understand its influence on children's view of the world.

Development and learning is context specific

Current knowledge, beliefs, and expectations about child development and learning in early child hood have been primarily informed by the research in developmental psychology. These studies however, are narrow in their contextual scope limiting the generalizability to all cultural contexts (Woodhead, 1999). They have created a knowledge imbalance relating to child development and commonly held expectations for young children promoting developmental models, and beliefs related to what is considered age appropriate and normal (Kesson, 1979; Burman, 1994). These models are further spread through textbook accounts of early development portraying for example mother child relationships that are specific to Euro-centric perspectives.

Scholars conducting cross-cultural research have highlighted the limitations of these developmental models and their applicability pointing to the importance of contextual factors that mediate development and learning and are not universal in nature. Cultural beliefs, practices, and expectations about children's development differ from those proposed by professionals in the field. Examples below illustrate this further.

Studies focused on language development demonstrate the variations in communication methods of mothers with their infants. Observations of parental communication among Euro-American families showed how these parents support language development by exaggerating intonations, and repeting words used in simple sentence structures. These exchanges between the caregiver and infants promote language development within the "Euro-centered" model of development (Snow as cited in Woodhead, 1999). However, a study conducted in Papua New Guinea in contrast showed that caregivers did not engage in a similar dialogic exchange of communication with infants. Their communication was more directive or consisted of commands. Yet the children in Papua New Guinea acquire language skills to their culturally determined expectations (Schieffelin and Ochs as cited in Woodhead, 1999). This demonstrates

that in each culture, practices have evolved as a result of a shared experience and wisdom over time which define the norms and valued behaviors in that culture. These are sustained through daily social interactions.

A study conducted in preschools in three cultures further demonstrates that not only are the norms of development influenced by the cultural context, but views of development and the developmental process are also colored by the cultural lens (Tobin et al., 1989). In this study, when one of the Japanese boy stepped out of bounds of their cultural norms of behavior, the explanation for his behavior by the western educator was given using Erickson's psycho-social theory about the growing capacity for autonomy and self-control expected during the preschool years. The Japanese educator used their cultural specific concept of "amaeru" meaning dependency, which is a concept that is emphasized in the Japanese culture. The work of Joseph Tobin and his colleagues (Tobin et al, 1989) has drawn attention to the various interpretations of child behaviors mediated by culturally held expectations.

More recently, scholars have found the socio-cultural approach developed by Vygotsky to be more culturally responsive and globally applicable in understanding early childhood development and learning. This approach recognizes the contribution of culture to children's growth and learning. Culture is not viewed as a variable in understanding development but as the environment within which development occurs:

> The fundamental aspiration of the whole of modern child psychology… (is) the wish to reveal the eternal child. The task of psychology, however is not the discovery of the eternal child. The task of psychology is the discovery of the historical child… The stone that the builders disdained must become the foundation stone (Vygotsky, as cited in Rogoff, 1990, p. 110).

The idea that culture is part of human development has been further expanded by Cole (1997):

> This emphasis on culture-as difference overlooks the fact that the capacity to inhabit a culturally organized environment is the universal, species-specific characteristic of homo-sapiens, of which cultures represent special cases. A full understanding of culture in human development requires both a specification of its universal mechanisms and the specific forms that it assumes in historical circumstances. (p. 11)

Drawing attention to the numerous variations in settings and using a biological ecology perspective, Super and Harkness propose a framework of "developmental niche" (1986). Cross cultural studies, it is proposed, have informed the field about how various aspects of culture work as a system to guide development and the universality in the themes that families and children experience across time and place. Examples include children learning to walk, play with others, and acquiring gender roles specific to their culture. However, how each individual child "fits" into the cultural environment creates a "developmental niche" for him or her that lays a lifelong foundation for the ways of thinking and doing. Three key features of the environment guide development. These features include the physical and social setting; the culturally regulated customs and child rearing practices; the dominant beliefs or "ethno-theories about childhood." The combination of the features of the environment that each child uses is also influenced by sex, age, personality and dispositions. This determines their unique developmental "niche" within the larger context. This framework highlights the unique developmental pathway of each individual even when the context is commonly shared with other members of the group (Super & Harkness, 1986).

Development naturally occurs within a socio-cultural and historical context. Children interact within their environment, which is influenced by the dominant beliefs, expectations, and norms. Significant adults in a child's environment are also influenced by their personal experiences and

the dominant beliefs about children's growth and development. The model of "guided participation" developed by Barbara Rogoff (1990) explains how social and cognitive skills deemed important within a given culture are introduced to a child by adults in their environment. Observing mother child interactions in a study conducted in India, Guatemala, Turkey and the United States, Rogoff found that while adults in these four contexts used "guided participation", the process used for its initiation were different in each of these cultures (Rogoff et al. 1993). For example, mothers in the United States used extensive verbal communication to support development of a skill or created a learning experience for the child. Mothers in Guatemala relied on the activities provided by the community. Guatemalan mother also used gestures and gentle touches to communicate a command rather than using verbal communication. In all contexts, the child understood the communication.

Rogoff (1990) has further elaborated the same clearly with respect to children's cognitive development, stating:

> The developmental endpoint that has traditionally anchored cognitive developmental theories –skills in academic activities such as formal operational reasoning and scientific, mathematical, and literate practices – is one valuable goal of development, but one that is tied to its contexts and culture, as is any other goal or endpoint of development valued by a community…each community's valued skills constitute the local goals of development…..In the final analysis, it is not possible to determine whether the practices of one society are more adaptive than those of another, as judgments of adaptations cannot be separated from values. (p. 12)

A socio-cultural perspective originating in the work of Vygotsky thus provides space to understand development in a context, moving away from the universalistic approach to development, developmental process, and outcomes.

Agency of children

In recent times, the most recognized and internationally accepted document about the agency of the child is embodied in the UNCRC (1989). Children's rights have been enshrined in this document. This important document is anchored with three principles related to children: protection, provision, and participation. The first two principles align well with agendas of international agencies and organizations promoting the rights of children and are addressed through their efforts. "Participation" however, has generated discourse among scholars, and policy makers with an interest in addressing this principle (Bluebond-Langner & Korbin, 2007). The UNCRC acknowledges that children are not merely recipients of care and concern, but in their own right, active participants in constructing their understanding about the people, places and objects with which they interact. Article 12 of the UNCRC emphasizes the rights of a child to express views in matters affecting them and that those views should be given due consideration, thereby giving legitimacy to the views of children.

Historically, 'the image of child,' constructed by developmental psychologists and social scientists, was one of a "developing child" where the child was presented in a state of "becoming" towards maturity and competence. Research methodologies adopted reflected this view, where the status granted to children was one of a "subjects of research" to help adults understand and support development and learning. Although developmental psychology provided valuable information, it also gave justification for taking action on behalf of children on the grounds that they were not "matured" enough to make decisions on their own.

During the decades of the 1970s and 1980s, a new paradigm with regards to children and childhood gradually emerged. Many factors contributed to this shift. There was a growing awareness about children's lives in diverse global contexts showing the influence of poverty, famine, and disease on children and their childhood. This was in sharp contrast to long held views of childhood as a free and happy time in the life course. The declaration of the "International Year of the Child" in 1979 also drew attention to children around the world. The long-held views about children, promoted by developmental psychology paradigm came under critique with new findings of studies conducted by anthropologists and sociologists. These studies demonstrated children to be active agents in a variety of contexts. In a study conducted by Bluebond-Langner (1978), children diagnosed with cancer in a cancer ward demonstrated their agency through their interactional strategies in making sense of their social world with the knowledge of death in a hospital setting.

The key features of this newly emerging paradigm includes childhood as a social construction; childhood as a variable of social analysis; the worthiness of studying children's social relationships and cultures in their own right; children as active participants in the construction of their social lives; usefulness of ethnography as a methodological choice for research with and about children; a new paradigm of sociology means engaging into the reconstruction of childhood in society (Prout & James, 2015). Scholars recognize a need for discourse, empirical studies, and theorizing to expand on these key features of the new emerging paradigm of childhood in sociology (Prout & James, 2015). Scholars (Oswell, 2013) also suggest viewing children's agency in the context of its temporal, spatial and material complexity brought about through technological advancement and globalization (p. 3).

One of the important features of the paradigm is that it views children as competent actors and agents. An actor is someone who performs an action or does something; an agent is one who acts in collaboration with others and makes thing happen. This helps the process of social and cultural reproduction (Mayall as cited in James, 2009). For example, when children learn to talk, play games, and engage in daily routines within their family and culture, they are playing the role of "actors." As children continue to interact with others, and grow over time, they begin to make sense of the world around them. In this process, children develop a culture of their own. The process of reproduction is not linear, but requires problem solving and interpretation along the way which Corsaro (1985) refers to as the "innovative and creative" aspects of agency. This is exemplified in one of his studies about nursery school children where the children chose to reinforce one of the school rules, which does not allow children to bring toys from home because they often lead to arguments amongst them. However, the rule is reinterpreted by the children. Children bring small toys from home, but they hide them in their pockets and show them to their friends secretly when the teacher is not present. This, Corsaro (1985) explains is an example of both reinforcement and reproduction. Keeping toys out of the vision of others is an act of reinforcement of the rule but sharing it with friends in secrecy reproduces the rule and leads to the development of "the peer culture". The idea of reproduction does not involve passive acceptance where children internalize cultural norms and produce them in the same way. Reproduction is a dual process of contributing actively to change and adhere to some of the norms of the culture in which children live in (Corsaro as cited in Boocock, 2005). The agency of children is not limited to their interactions with peers but is seen in the other spheres of social and cultural lives such as religions institutions, and legal systems.

Concerns have been raised about the extent to which agency of children may be permitted especially relating to safety issues and access to media. However, these concerns originate from the two oppositional perspectives juxtaposed against one another. The first one views children as passive recipients of media messages and therefore vulnerable; and the second one views children as active consumers who can make decisions displaying their agency. The challenge of the emerging paradigm is finding the balance between these competing viewpoints of vulnerability and agency as individuals in their own right.

Agency of children and its application also presents challenges for research in the field (James, 2007). These challenges are about authenticity, the dilemma of children's voices or the voices of children and thirdly the nature of children's participation in research. These are relevant issues related to the methodology and will be discussed in detail in that section.

This study examined the views of children about their world in their natural day to day childcare environment and included children as co-researchers embodying the spirit of the United Nation's Convention on the Rights of Children. Children were observed, their viewpoints, documented and interpreted by them to give voice and legitimacy to their views in their own right, not as persons in the stage of "becoming."

Children as meaning makers

Giving agency to children signals a move away from models that view children as evolving into independent, autonomous, and mature adults. Anthropology as a field has had a long tradition of viewing individuals as meaning makers whether they are adults or children. In a study with Fijian children, Toren (2007) states that "Like the rest of us, each one of these children was born into a world in the making that was already rendered meaningful in all its

material aspects, and with time they are making these meanings anew" (p. 292). Toren (2007) asserts that inter-subjectivity is a basic human condition which involves that humans including children are "making meaning out of meanings" that others have ascribed to things, people and places and are continuing to make. This study illustrates the emergent nature of 'meaning' and how through this process, children maintain and transform the knowledge of their world. In their daily encounters, children assimilate meanings that others give to the world, which continues to evolve. Using the lens of anthropology and its approach to this study will provide insight into children's meaning making process and the way they ascribe meaning to the world. The anthropological work of Margaret Mead, Bronislaw Malinowski and Edward Sapir influenced the development of "Anthropology of childhood" during the last century. Their field work suggested ethnographic field study of children in context as the most apt study of children and childhood.

There are important lessons that are learned from the research done in the feminist studies that highlight the importance of "standpoint." The works of scholars such as Barrie Thorne, Leena Alanen, and Ann Oakly have made a significant contribution to this new perspective within the field of early childhood. According to Alanen (1992), research is never neutral because "knowledge always contains a perspective from one or another location, a standpoint from which the world is known. Furthermore, pointing to the power relationships that can further muddy the research." Collins (as cited in Boocock & Scott, 2005) states, "Because elite White men control Western structures of knowledge validation, their interest pervade the themes, paradigms, and epistemologies of traditional scholarship" (p. 30).

Children in heterogeneous common worlds

Influenced by the new thinking of the material feminist scholars, the philosophy of Bruno Latour, Gilles Deleuze and Felix Guattari, "the common worlds" theoretical framework has been developed by Africa Taylor and Miriam Giugni (2012). These scholars have attempted to shift the focus from the anthropocentric to a world that is collectively shared among humans, non-human and other entities. The common worlds framework is interdisciplinary in its approach. It re-conceptualizes the meanings of common, inclusion and belonging in new ways within early childhood field both in theory and practice (Taylor & Giugni, 2012).

The key concept in the framework proposes that children's worlds are heterogeneous, a complex network of relationships within the natural and man-made environments inhabited by humans, non-humans (plants, animals, and other living organisms) characterized by its rich diversity, common inheritance, and the implied collective responsibility for its sustainability (Pacini-Ketchabaw, Taylor, Blaise & Finney, 2015). These relationships are within the socio-cultural contexts and historical legacies in which children live (Pacini-Ketchabaw et al., 2015). The common worlds framework discounts the usual dividing binaries of nature/culture, local/global, imperial/colonial issues and concerns moving towards a more holistic approach strengthened by connectivity.

The usage of the word "common worlds" not only denotes that the universe is a shared field with other inhabitants or species, but an invitation to build together or "assemblages" highlighting its inclusionary, resilient, and generative characteristics (Deleuze & Guattari as cited in Taylor & Giugni, 2012). This theoretical framework is informed by the theories of geographies of power, Doreen Massey's (1993) conceptualization of the global/local spaces of power, the work of Donna Haraway's understanding about the "worlding" effects of

human/more than human relations" (Taylor & Giugni, 2012), and other scholars such as Margaret Sommerville and Karen Martin (Taylor & Giugni, 2012).

The common worlds framework proposes a shared world, different from the idealized world of childhood, in harmony with nature and inspired by Rousseau's concept of the 'nature child'. This has been part of the Euro-centered western tradition (Taylor, 2013) endorsed by developmental theorists. While many scholars in the developmental tradition promote environmental education, it is primarily because of the developmental benefit of engagement with nature, that such activities are promoted (Wilson, 2011; Davis, 2010) and its preservation encouraged (Chawla, 2006). However, even the most nature-based early childhood programs practice child-centered and individualistic approaches in their pedagogies influenced by the Euro and Western-centric theories and philosophy.

The common worlds framework reimagines the concept of inclusion within the early childhood field that includes children's relations with not only humans but extends it to "more than human" others with whom they share the world. "Common worlds is an active, cumulative and inclusive concept, that resists the division between human society as distinct from nature…to move towards an active understanding of and curiosity about the unfolding and entangled worlds we share with a host of human and more-than-human others" (Taylor & Giugni, 2012, p. 111).

This creates a new model of inclusion that continues to identify and create commonalities rather than highlight differences. Taylor and Giugni (2012) suggest referring to this as "common worldling."

The philosophical linkage of the framework is associated with "the common" as referred to in Plato's *Republic* where Plato characterizes a society free of bias as one that upholds the interest

of all over any individual interests (Brown as cited in Taylor & Giugni, 2012, p. 110). However, Plato's world pertains to humans only. The common world framework uses the expanded version of Plato's notion of "the commons" as proposed by Bruno Latour (2004), opening the door to include all others who co-inhabit beyond humans thereby re-configuring the composition of the "common worlds" to include what is commonly present, hidden and yet to be revealed world (Latour, 2004).

The common worlds framework conceptualizes a diverse world that is complex in structure, relationally entangled, and filled with inequities that children share with other species and entities (Pacini-Ketchabaw et al., 2015). It envisions a world that is multifaceted in all its aspects including the constituents, interactions, relations, and material elements. These interactions and the resulting relationships occur among and between a host of actors and actants including humans, other living species, objects, technologies, natural forces and elements. This is a shift away from the usual anthropocentric approach that early childhood along with other social science disciplines have used in the past (Taylor & Giugni, 2012).

This study used an interdisciplinary approach to examine the research questions to build knowledge that integrates ecological, cultural, social and evolutionary perspectives informed by anthropology of childhood studies, sociology of childhoods, post-modernist and post structuralism scholarship.

III. Methodology

"Directing our action toward mankind means, first and foremost, doing so with regard to the child. The child, that 'forgotten citizen', must be appreciated in accordance with his true value. His rights as a human being who shapes all of mankind must become sacred, and the secret laws of his normal psychic development must light the way for civilization."

Maria Montessori

This study is based on qualitative research methods, using an ethnographic case study design with participatory observation. The qualitative design of the research entailed gathering detailed information about a small sample of the population of preschool children. Denscombe (2010) uses the analogy of a flash light to explain the difference and the rationale for selection of a qualitative study. When one shines a flash light close to an object, it illuminates many details about the object that may not be captured by shining the flashlight from a distance. Qualitative studies aim at accentuating close-up details about the object of their inquiry. Case studies focus on one instance of a phenomenon delving deeper to gain an in-depth understanding about the events, relationships, and experiences that occur in the selected case (Denscombe, 2010, p. 35).

Ethnographic Approach

Ethnography, fieldwork, and participant observation are elements found together in a qualitative study and are used as synonyms in literature (Delamont, 2007). However, ethnography is the umbrella of which both fieldwork and participant observation are a part of data collection techniques. Ethnographic research has been used widely by sociologists and anthropologists for more than a century highlighting childhood experiences and the active agency of children in various socio-cultural contexts (James, 2007). It became the preferred methodology in the newly developed sociology of childhood (James & Prout, 1989). This approach has slowly gained ground in other disciplines.

The ethnographic approach used in a case study is found to be useful in early childhood settings, as it affords the researcher time to observe the development of children over a period while learning about various contextual aspects about the child, children and their childhood community. Early childhood programs bring together the operationalized version of public policy, and socio-cultural beliefs about children with the individual philosophy and beliefs of early childhood practitioners. It affords the researcher an opportunity to study an early childhood world both at "micro and macro" level (Mukherji &Albon, 2010).

Ethnographic work is done in a naturalistic environment, which is particularly effective with young children as the researcher can witness the daily experiences of children within their comfort zone in close proximity to their subjects of research. The gradual immersion of the researcher at the site in accordance with ethnographic study design helps to empower children. It gives children time to adjust to the presence of the researcher within their environment and can "negotiate" engagement with and of the researcher in the classroom environment (Edmond as cited in Mukherji &Albon, 2010, p. 90). The researcher initiated the process of embedding herself in the selected preschool site to familiarize herself with children, staff, and daily routines one semester prior to the beginning of the data collection phase of the study. Vising three to four times per week helped the researcher learn about the preschool classroom from the perspectives of both the teachers and the children. It also afforded families to become familiar with the researcher before the start of the study. The investment of time upfront provided the opportunity to understand the complexities of the processes and relationships involved at the site. Various factors such as family profiles of the children, family teacher dynamics and other factors that influenced the big picture came to light building on the holistic nature of this study.

According to Dunn (2005), observing children in natural surroundings acknowledges their presence in a complex social world and provides useful insight to the researcher. Home is often considered the "natural" environment for young children. However, there are other environments such as a playground, and a range of other early childhood programs that fall under the umbrella of natural settings for young children. A child's natural environment is a place that has emotional significance to him/her. Mukherji and Albon (2010) caution researchers that what might be natural in one socio-cultural context may not be natural in another. An example could be found in variability of home settings of children or the childcare environment, which are both considered a part of their usual places to spend large amount of time. What might be "natural" for one child may not apply to another.

The idea of a "naturalistic" environment begs further scrutiny especially when the research is conducted in early childhood programs designed for groups of children (Albon & Rosen, 2014). Currently, early childhood programs are operated under the rules and regulations of local, state or national governments that guide the day-to-day operations and practices of these programs. Rules regarding the staff qualifications, group size, and adult-child ratios are mandated by the assigned governmental agency. While childcare programs may seem to be "natural environments," these are "usual" set-ups for group programs for children and not necessarily "natural" for children. Albon and Rosen (2014) draw attention to this aspect of ethnographic field sites.

One of the strengths of the ethnographic study research method is the ability to gather rich data from the natural environment instead of a lab setting. Boocock and Scott (2005) endorse the use of multiple ways to study children and their childhood and recommend using more than one method of data collection and analysis. Daily observations, field notes, semi-structured

interviews with children, interviews with teachers and parents, and child generated artifacts were used as data to answer the research questions.

Millei and Rautio (2017) recommend 'slowing down' research process to help researchers to attend to the 'overspills' of data which are seemingly unimportant but revealing about the research, based on their ethnographic study and drawing on the work of Horton and Kraftl. They recommend, "a careful going over of the research events as not means to an end but an end in themselves: the ongoing 'doing' of whatever the researched phenomenon is. Research events reflect and produce children's lives and the very phenomena we study" (p. 20). I found this slowing down approach critical in my own study allowing myself time to immerse in the preschool setting and tune myself into the everyday life of children.

Case Study

A case study approach was used to answer the research questions of this empirical study. Selection of the case study methodology was based on the nature of the research questions and a focus on understanding a contemporary phenomenon in depth within a real-world context of a preschool with all its multifaceted intricacies (Denscombe, 2010). The selection of the site was based on conscious and deliberate choice including its distinctive attributes. The site represented one instance of a private preschool program within the community. As recommended by Stake (2013, p. 23), three main criteria for the selection were used:

- Is this case relevant to the research question?
- Does the case provide diversity?
- Does the case provide good opportunities to learn about complexities and contexts?

The selected early childhood program site met the three criteria mentioned above. The site was Reibman Children's Center in Bethlehem, Pennsylvania. The children's center is situated on the campus of Northampton Community College. Children and families in this program represent members of the community college students, faculty and staff at the college. The demographics of the center reflect cultural, linguistic, ability social and economic diversity among children, families and the teaching staff.

Case study approach is an effective approach for research studies as it accommodates different epistemological orientations: realist, relativist, and interpretivist (Yin, 2014, p. 23). This was especially a good fit for this interpretivist study as it assimilated and accommodated multiple realities with multiple meanings represented by the group of preschool children at the research site. According to Stake (1978), "case studies will often be the preferred method of research because they may be epistemologically in harmony with the reader's experience and thus to that person, a natural basis for generalizations" (p. 5). It also allows for the participant observer to study subjects and their context up close within their natural settings. This case was bounded by the unique characteristics of the case: preschool children in a lab school setting at a distinct geographical location of a community college in Bethlehem, Pennsylvania.

There are several benefits to selecting a case study research design. It allows for in-depth study of the topic of inquiry providing insights into the contextual elements of the "case." Studying one instance of the case affords the opportunity to understand the subtleties and nuances of relationships and process at play while examining the research questions in a holistic manner. Insights gained from in-depth study of a topic may prompt revisiting other topics of inquiry or a theory. Case study approach encourages as well as accommodates use of multiple data sources, types and methods. This helps to inform the field about the phenomenon under

study. Readers can also benefit from the detailed description of the case by the researcher (Stake, 2005).

One of the ongoing critiques levelled against the case study approach lies in the limited generalizability of its findings to the wider field (Mukherji &Albon, 2010). Scholars question how findings from one unique case can be assumed to be true in other instances. One "case" it is often stated, is too narrow and unique to be a representative sample for the larger group.

Generalizability of the findings is one of the limitations of this case study research. The findings of this study are specific to the sample population of this case only, and are not generalizable to all 3 to 5 years old children. However, this limitation can be addressed by repeating the research in other contexts using similar design model. Each additional study will add to the findings of this case study and to the knowledge base related to this research topic.

However, some qualitative researchers view case studies as a "bedrock" to scientific investigation (Bromley as cited in Mukerji and Albon, 2010, p. 102). These scholars claim that many advances in scientific theory have been spurred by initial case study research. Scholars (Merriam, 1998) propose that the insights gained through case study serve as "tentative hypotheses that help structure future research" (p.41). This helps to advance the knowledge base of the field. For all these strengths, despite its limitations, case study continues to be a desirable design for research especially in applied fields such as education (Merriam, 1998).

Another limitation of a case study design is its dependence on the researcher for data collection and analysis. Researchers are not always trained in the techniques of observation, and interviewing which may lead to bias in the data collection and its analysis. There is also ethical question that may emerge because of the selective usage of data that a researcher may choose to

promote his/her personal bias. In this study, the researcher is an early childhood educator with years of experience in observing young children. Observation notes were shared with the two classroom teachers to safeguard against any bias or misinformation.

Additionally, a case study design requires more time and effort on the part of the researcher (Yin, 2014, p. 57). The in-depth understanding and data gained through the research process was robust as it was gathered from multiple sources, data points and over the course of a semester. A summary of the research project timeline has been provided in the Appendix A.

Participatory Observation

The nature of research questions and the study design that included children as co-researchers was well suited for using participatory observation. The study investigated children's understanding about their world and their place in it. Participatory research design involved embedding the researcher in the context providing direct contact with the subjects of the research. Participant observation included observing the field and interacting with people within the field. The goal of this method was to gain a deeper understanding about the culture of the group being studied in their specific context. This generally includes both observation, interviews, what the subjects believe, what they do, how they feel in different situations and their emerging interpretations about how they feel. This requires spending time at the field site and among the subjects of study until the data saturation point was reached.

The term "participant observation" does not imply doing all the acts that research subjects do but the researcher interacts with subjects as they conduct their daily work and observe activities do what they do enough to experience and understand what it "feels like." This helped in

understanding the experiences of the children with more accuracy while adding a sense of reality (Delamont, 2007).

The presence of the researcher inevitably has some impact on the workings of the group in a variety of ways such as stopping activity to talk to the researcher, move away from the researcher, or become more self-conscious, especially if the conversation is recorded (Mukerji & Albon, 2010). A warm-up time during the fall semester of 2015, per the input from the classroom teachers, helped to build familiarity and comfort level with the researcher among children, families, and the classroom teachers. Few new children were enrolled in the preschool group at the outset of the spring 2016 semester, but familiarity of most children with the researcher helped to ease the transition for the newly enrolled children.

Fieldwork

Field work in research refers to going to a locale or working with a specific population to gain insights about the way they think, talk, and live their daily lives. Fieldwork in ethnographic studies is discipline specific. Traditionally, ethnographic studies have been conducted mostly in anthropology. In these studies, the researcher moves to the location of the study to embed herself into the culture of the subjects under study for an extended period. This is an example of total immersion in the field site. However, studies in some disciplines require the researcher to visit the field site more daily while remaining in their own residence. This is referred to as partial immersion in the field site. This study used partial immersion at the site participating three to five mornings a week for the spring 2016 semester. The researcher spent about three hours at the site each morning to observe and engage in daily interactions with preschool children and gain an understanding about their perceptions about the world and their place in it. Data gathered focused on words and images that children used and generated to answer the research questions.

Additionally, the cultural ecological framework model by Bronfenbrenner (1979) informs the field that the layers of ecological contexts not only impact children's development, but also the field and the fieldwork. Contexts that are most relevant to the fieldwork are the macro-level and the micro-level contexts although each level filters into one another (Holmes, 1998). The macro-level represents culturally held beliefs about children, and policies governing children and their environments. The children's center operated under the rules and regulations established by Health and Human Services. These regulations guided daily operations including the physical site, size of the program (number of students), indoor and outdoor environment, student/teacher ratios. health and safety policies, and staffing requirements. These rules also determined the process of gaining access to the field site. The researcher was required to provide clearances for any past criminal record or child abuse to obtain permission for her field work. Additionally, the center also complied with the standards of quality associated with its accrediting professional organizations such as the National Association for the Education of Young Children and the Middle States Association of Colleges and Schools.

The micro-level context relates to experiences, influences within direct environment, and institution that influence children's daily lives. more directly relating to the home and school environments, communities and work settings. Child rearing patterns of the family, the family structure and the family environment influenced children's time of arrival and departure from school. Children arrived at school at a specific time based on their family schedule each day. Relationships with the classroom teacher influenced the daily communication and transition from home to school for both the parent and the child. The presence of staff who provided support services to the children who also influenced the dynamics of the classroom, and the field site. These systems impacted the field site and the researcher during fieldwork. The relationship

among the teaching staff as well as with the researcher also impacted the overall classroom environment.

Child as a co-researcher

In this study, preschool children participated as co-researchers within their familiar childcare environment, doing what they usually do during the day according to their daily routines. Children were informed about the research and they were regularly asked to give input and suggestions. They were active agents of the data generation and interpretation of their data as co-researchers. The challenge of power relationships in a research study is well established especially when there is difference in knowledge, competencies, and perceived power relationships (Fine & Sandstrom, 1988). Historically, four perspectives have influenced the research and methods employed to study children and childhood (Christensen & Prout, 2002). These include child as an object of study, child as the subject of study, child as social actor, and most recently, child as participant co-researcher. The first two approaches have been part of the social science research tradition for a very long time. These various approaches co-exist within the field and influence the research methods employed. Viewing children as objects of the research approach uses methods seeking to understand children through the perspectives of those who take care of them, hence a "dependent and vulnerable view of children and childhood" influences this approach. Using children as the subjects of the research approach employs methods that are informed by the cognitive and social competencies of children. The researcher pays close attention to developmental maturity and often uses age based criteria to include or exclude of children in the study. The third approach also views children as subject in research but extends it to include the status a social actor to them. Viewing children as social actors gives children an independent status of an individual with rights and understanding about their world.

As a result, this approach does not make any distinction between children and adults when making selection of techniques giving "equal" consideration to children and adults alike as stated by Christensen and Prout (2002), "Children are seen to act, take part in, change and become changed by the social and cultural world they live in. A common characteristic of this research perspective is that children are given central and autonomous conceptual status" (p. 480).

The most recently developed approach views children as active participants in the research process just as in social and cultural life. "It promotes the idea that children be involved, informed, consulted, and heard. This approach is paralleled in new social science methodologies that see research as co-production contributed to by both researcher and informant" (Christensen & Prout, 2002, p. 481). This approach is guided by the principle of "how we study kids affect what we learn about them" (Boocock & Scott, 2005). It acknowledges the active agency of children and invites them as equal participants in the research process (James, 2007). The central point of this approach is the belief that children are active participants and can contribute to the current knowledge about them by adopting methodologies such as ethnography and participatory research (James & Prout, 1990). Children as co-researchers approach is best summarized by "children are the best sources of understanding about childhood" (Corsaro as cited in Boocock & Scott, 2005).

The last two approaches have implications in the practice of research methodologies when working with children. According to Christensen and James (2002), this is the principle of "ethical symmetry" which refers to the research relationship established through the techniques employed in the process. The guiding principle in this approach is that techniques used must work for all participants including children as independent social actors. Equal attention must be

given to both children and adult participants in the research. This study used the most recent approach of including children as active participant co-researchers in the study.

In recent years, the shift in views about the role of children in research is linked to the emerging interest in "listening to children" and has paralleled the growth in children's rights movement across the globe (Christensen & James, 2008; Taylor, 2013). Including children in the research process has been propelled by the content of the UNCRC. According to the document:

> State parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child. (UN Convention on the Rights of the Child, 1989, Article 12)

Article 12 is a reminder that children have their own views on issues that affect them and need to be weighed in when policy decisions are made. The work of the child is to make meaning of the world. Their views may be different but they provide unique perspectives that are important in their own right. Their rights as citizens of the globe should be recognized (Woodhead, 1999). The underpinning of the UNCRC is the foundational concept of children as capable social beings and the multiplicities of "childhoods" experienced by children across various socio-cultural contexts. The UNCRC is a symbol of international recognition of the rights of children to participate in activities and decisions that impact them as well as express their own perspectives about the world. In the past, research practices treated children as passive object with the adult researcher explaining the development and understanding of children for them. The trend in the research process has shifted to include children as equal partners in "creating" understanding as opposed to adults creating understanding about children (Mukherji & Albon, 2010). Additional factors bringing about this change in approach include the Gillick

Ruling of 1985 in UK, which made provision for children under 16 to give consent on matters without parental approval and a gradual increase in the body of research that demonstrates children's ability as researchers.

In this study, children were engaged in the research process beginning with signing an assent form to participate in the project. It was recognized that some children may sign an assent form to please the adult, however, their behavior would be closely observed to ensure no mental stress was caused by their participation. The classroom teachers supported this effort due to their familiarity with the children and the hours they spent with children each day. Additionally, children were informed that their assent was subject to change anytime at their will. The researcher explained the project and expressed interest in finding children's views about the world. All children in the identified preschool classroom were invited to participate. Additional explanation about the project was provided on an ongoing basis based on the interest level of children. Some children demonstrated their withdrawal by non-interaction with the researcher or any materials provided to elicit their views about the world. Any sign of discomfort or stress noted by teaching staff, family, or peers was a signal to the researcher to distance herself from the child. Informed assent in this research study was viewed as "ongoing negotiation" even when a child and the family gave their consent to participation (Albon & Rosen as cited in Mukherji & Albon, 2010). Consent of the parent was obtained prior to the beginning of the study. There was one family who refrained from giving consent but was comfortable to let the child participate in all research related activities. Any artifacts generated by this child or his/her views were not included in the collected data and analysis.

The level of children's participation is demonstrated by mapping their activities using Hart's ladder of participation (Hart, 1992). Hart's Ladder of Participation has been adapted for children

from an article written about degrees of adult participation (Amstein as cited in Hart, 1992). This ladder is helpful when designing projects for children's participation. It is not meant to be a yardstick to measure the quality of a program. Participation of children can be affected by other variables such as ability, personality, or culture. Participation may also vary from child to child at different stages of the project. The guiding principle in determining participation is one of offering choices to children. The project should offer children the maximum opportunity for participation according to their ability. Hart proposes the following criteria for a project to be called participatory:

- Children understand the intention of the project;
- They know who made the decision about their involvement and why;
- They have a meaningful rather than a decorative role; and
- They participate in the project after the project was made clear to them.

The above elements were integrated into the design of the study. Children were explained the research project, its goal, and the role of the children in the project. The researcher also informed children how their participation was voluntary, but would help the research study. The following chart uses Hart's Ladder of Participation to demonstrate how children participated and the level of their participation in the research process using the activities planned in the research design.

Hart's Ladder of Participation

Degrees of Participation	**Activities (How)**
Child initiated and shared decisions with adults	
Child initiated And directed action	Children create their own activities to express their understanding of the world.

Adult initiated shared decisions with children	Study is designed by adults, but children participate as co-researchers providing their interpretations and analysis on the data in collaboration with adult researcher. Children choose activities that will be part of the research.
Consulted and informed	Children are invited to provide their input on activities that will help the researcher find out children's view about the world. Children's ideas implemented and results interpreted by the children and adult together to decide its continuance or not. Children are consulted for their interpretations of their peer's drawings of the world.
Assigned but informed	The preschool site has been selected to be the field site. Children are informed by researcher about the opportunity to participate. Children have the choice to participate or decline.
Tokenism	Non participation Instances in which children are apparently given a voice, but in fact have little or no choice about the subject or the style of communicating it, and little or no opportunity to formulate their own opinion.
Decoration	Non participation Occasions when children are given T-shirts related to some cause, and may sing or dance at an event in such dress, but have little idea of what it is all about and no say in the organizing of the occasion.
Manipulation	Non participation Examples: preschool children carrying placards to protest a social policy.

The interpretivist nature of the design recognized that there might be multiple explanations as well as meanings that children may ascribe to their actions, which would help in answering the research questions. As Hughes (2010) points out clearly:

> Interpretivists argue that rather than simply perceiving our particular social and material circumstances, each person continually makes sense of them within a cultural framework of socially constructed and shared meanings, and that our interpretations of the world influence our behavior. (p. 41)

The above quote highlights some key ideas about the impact of the culture on the way both the researcher and the subjects are influenced in the way they view the world. The interactions with people further help to expand the understanding about the world around these. And finally, Hughes (2010) acknowledges that the view of the world each person has impacts the world itself. The interpretivist nature of the study design allowed for a multiplicity of viewpoints legitimizing them in their own right.

Role of the Researcher

Ethnographic studies involve extensive fieldwork as a participant observer in the field site, and building relationship with the participants, both adults and children, is an important methodological consideration for the researcher. Coffey as cited in Mukherji and Albon (2010) refers to the role a researcher might adopt as "negotiation or crafting of ethnographic selfhood in the process of fieldwork" (p. 23). Establishing and maintaining the relationship with the site throughout the research process facilitates the research process. Having a similar philosophical approach to early education at the field site ensures a smooth research process as incompatibility in values can lead to undue stress during data collection. In this study, the researcher initiated the contact with the field site and explored the interest of the teaching staff in the research project. Meetings with the administrator of the center were held to discuss the feasibility of the project in the preschool room including strategies to gain parent/guardian consent as well as the assent of the children. The project proposal was submitted after obtaining the consent of the program.

Entering the site as a participant observer of research was also given careful attention. The researcher spent a semester in the classroom to develop a relationship of a trusted co-habitant around children and teachers. This required ongoing communication with all the members involved at the field site – a social web of teachers, families, administrators, and children. The

researcher's long standing relationship with the program as explained elsewhere, helped in this process. Most families and children were familiar with the researcher as she worked at the site prior to the beginning of the research study.

The researcher played the role of participant observer most the time. However, children were aware of her role as a researcher along with the children who assented to join the research inquiry. The researcher kept field notes daily and acted as a participant observer while she drew upon her professional skills as an experienced preschool teacher to support the day-to-day activities at the site. The researcher's unfamiliarity with the daily routine and ground rules of the preschool classroom also provided children with opportunities to "show their classroom culture" to the researcher. This helped to build a balanced relationship between the children and the researcher. Children demonstrated their familiarity with their classroom and felt empowered to share this with the researcher.

Some scholars have advocated the adoption of the "least adult" role, which involves taking a "childlike" posture to gain entry into children's group. Corsaro (1985) has made references to playing the role of "incompetent adult" in one of the research projects due to his inability to speak Italian which allowed him to gain entry into children's world and helped him to build rapport with young children in Italy. Corsaro (1985) suggests freeing oneself of "adult conception of children's activities, and enter the child's world as both observer and participant" (p. 3). A "middle ground approach" has been suggested where the adult researcher plays the role of friend and a co-player with children while leaving the door open for children to determine the role of researcher through their interactions and behavior (Corsaro, 1985). This approach is referred to as "reactive" (Corsaro, 1985) and demonstrates respect towards children and the

importance of flexibility in navigating the complex world of the preschool classroom. It also maintains the trust and confidence of children in the roles of both an observer, and a participant.

Research on children in the past has suffered from "adult ideological bias" as research on children was gathered, analyzed, and interpreted by adults (Christensen & James, 2008). Children's views were not taken seriously by adult researchers. Adults are also viewed by children as outsiders in their world. As Fine and Sandstrom (1988) elaborate that, "like the white researcher in Black society, the male researcher studying women, or the ethnologist who attempts to understand a children's culture cannot pass unnoticed as a member of the group" (p. 13). Adults believe that since they experienced childhood at some point in their lives, they can understand children. This belief may present a barrier in truly understanding children and their views as adults may use their "old frames of references" which may not be relevant at the time of research.

The researcher intentionally did not play the role of an authority figure in the classroom. Instead, she observed the children, played with them whenever invited, assisted them if asked, but chose to direct them to the teacher when it involved conflict related to other children or toys in the classroom. The researcher made herself available to the children to listen, play, problem solve, and support their emergent curiosities without ever getting herself entangled in a power dynamic within the classroom.

Proximity to children does not necessarily translate to understanding children or the social meanings they ascribe to actions and behaviors (Fine & Sandstrom, 1988).
James (2007) further elaborates on the inclusion of children in the research process and points out that giving children "voice" is not just about giving them a chance to "speak," it is about examining the contributions they provide to our conceptualization of their social world.

Engaging children as co-researchers provided opportunities to integrate the voice of children in design, data generation, gathering, and analysis whenever applicable while integrating some of the aspects of the UNCRC.

Young children have a distinct ability to sense what is important to the adults including the teachers in class. When adults convey genuine interest in children's ideas and how they express them, young children create complex work (Katz, 1998). Reggio Emilia schools provide an example of how children can be encouraged to follow up on their interest and ideas expressing them in their own unique ways which is referred to "the hundred languages of children" in the Reggio approach. In this study, children were encouraged to use their own preferred language to express their understanding of their world within their natural environment. Few semi-structured activities were introduced to engage children in the conversations but preference was always given to the emergent ideas of the children.

Additionally, this program integrates the arts into its curriculum and has resident visual and theater artists visiting the classroom on a weekly basis to support children in using arts to express their emergent thoughts and ideas. For example, one day a child expressed his interest in one of the action figures while the visual artist was visiting the classroom. The artist led the child through the process of planning, drawing, and creating a costume for the action figure while helping him to refine skills needed to make the costume. This prompted other children to make costumes out of paper of their favorite action figures. The languages of the arts were encouraged, supported and developed in children to facilitate expression and construction of their understanding about the world.

Ethical Considerations

With the increased interest in doing research with children, a code of ethics has been developed informing researchers about their ethical responsibility towards protecting young children. Engaging in research requires that careful consideration is given to questions related to ethics at every stage of the research process. This includes the research paradigm, data gathering, analysis, and tools that are used.

One of the ethical challenges researchers face while working with young children is to accurately represent what the child means or says through writing. This challenge required identifying and using new ways of "listening" to children, recording their views, and getting the child to verify and their peers to interpret what they said. This also meant to "listen" to the words and other languages of the child with more than ears by employing all senses to capture the message of the child. Artifacts were not used as mere "tokens" of a child's participation – children as researchers in the study selected what would be included in their world book.

James (2007) cautions researchers about the fine line between representing children's accounts of the world and claiming to see the world from children's perspectives. "Text positivism" is another term used to caution against making assumptions about what children say to be true representation of their voices. This study acknowledges that the descriptions used in this ethnographic case study are the descriptions of the "describer" not the "described" (Geetz as cited in James, 2007). Words of the child were dictated, recorded and used in the description, but there were times when audio recording was not possible and field notes were used to record verbatim how the child described his or her viewpoint.

The concept of "ethical symmetry" must be respected in the research process. This refers to giving equal ethical considerations to both adults and child participants in the study. Appropriate strategies were used in the research process that were sensitive to the needs of the participants

equally. For example, children used the camera to take pictures of their artifacts just as the adults did whenever needed. Binoculars were also available to them if and when they wanted to use them for looking at objects up close just like adults.

It is important to recognize that since this research project is an ethnographic case study, most of the interactions unfolded naturally during the day. Some intentional activities were introduced to children, but participation was voluntary. For example, when children were invited to draw the picture of the world. Some children chose to participate while others declined. However, this activity was offered a few times so that children would have ample chances to contribute to the research data at different points within the timeline of the project.

The concept of "informed consent" requires planning in its implementation when children are engaged in research. This becomes more critical when the focus of research is young children who are competent and yet vulnerable at the same time. This study earned the approval of the Internal Review Board (IRB) at Lehigh University prior to starting the project. This was reciprocated by Northampton Community College where the children's center is located. The Consent of families, administrator, and teachers was also obtained.

Children as co-researchers in the study were invited to sign a child friendly assent form with the understanding that they could withdraw from the study at a moment's notice. The research project was also explained to the children. This was accomplished in a small group format during the free play time as the researcher realized that it would allow time to explain the project at a personal level. However, the scope of the project was explained as children asked for information based on their interest and need.

Data generated through children's drawings in their daily journal, and the block structures they created were photographed with permission for future reference. Those children whose

parents were comfortable with the audio or visual recording had access to their child's recording. Notes recorded during the field site time were transcribed daily including the audio recordings most of the time. Occasionally there was a gap of a day or two due to schedule conflicts. These notes were shared with the teacher for comments and input from time to time. Modifications to field notes were added.

Additional ethical implications for the adult researchers engaged in this project related to ensuring the authenticity of the data. Data generated by the children was at will – no pressure tactics were used to force data from the children. No mental or physical benefits were offered to elicit responses on the questions. The researcher maintained neutrality towards all child participants. Some children were found to be more open and willing to share than others. Other children were quiet in their demeanor, but demonstrated their understanding of their world through languages they were most familiar.

Reliability and Validity

The quality of an empirical study is determined by measuring its reliability and validity. Four criteria are used to test the strength of the study (Yin, 2014). These are: construct validity; internal validity; external validity; and reliability. Construct validity was addressed by using multiple sources of evidence such as observations, informal interviews, document reviews, and artifact analysis. Some of the data gathered, such as field notes and interview notes were analyzed by teachers, which further enhanced the construct validity.

Internal validity was established during the data analysis process by engaging children in providing their interpretations of the data. Whenever possible, children were encouraged to interpret the work of their peers. This occurred informally during their journaling time when two or three children were doing their daily journal. As children worked on their journal entries,

conversations regarding their journal naturally happened. At times, children's input came in the form of a comments on drawings of other classmates. The classroom teachers provided feedback on field notes and the emergent theme log reflecting children's interests. Teachers concurred with the researcher's observations and themes captured in the data. The final draft of the case study report was reviewed by the classroom teachers for comments and input.

External validity relates to the generalizability of the findings to other sites and the field. This concept is closely linked to the research question that the study seeks to answer. Generally, "how" questions tend to be broader in scope and therefore more generalizable. Stake (1978) defends the merit of the case study by stating that a comprehensive understanding of any knowledge leads to the ability to identify similar patterns in other situations. According to Stake, this "is a form of generalization too, not scientific induction, but naturalistic generalization arrived at by recognizing the similarities of objects and issues in and out of context and by sensing the natural co-variations of happenings." (p. 6)

The principle of chain of evidence was observed in this study. The principle of chain of evidence refers to the clear connection that can be identified between the evidence used in a case study, its purpose, and the findings. There was no use of electronic sources for the collection of data, such as conducting electronic interviews or participating in live events electronics in this study. This fact helps to ensure the reliability of the study.

A step-by-step protocol of the case study design was documented for reliability of the research. A detailed description of the procedures is written for future reference. This will facilitate future research endeavors focused on similar themes. The ecological validity of ethnographic based case study strengthens the validity as the research was conducted within natural environment of children representing the "real life" of children and not in a lab setting

(Tobin et al., 1989). It allows future researchers to arrive at the same findings if the study is repeated at the site at a later date.

The findings were corroborated with more than one source of evidence, which also support the triangulation of data and enhanced the validity of the findings. According to Pattan (as cited in Yin, 2014), there are four types of triangulation: data triangulation (using multiple sources for data); investigator triangulation (using more than one researcher); theory triangulation (multiple perspectives on same data); and methodological triangulation. In this study a data triangulation technique was used to strengthen the validity of the findings.

Limitations

The quality of an ethnographic case study is dependent on the experience and skills of the researcher. As this is the first ethnographic study for this researcher, other experienced adult researchers guided the study and provided support to the primary researcher during the course of her research work.

The influence of the researcher on what data are collected and how they are analyzed is a limitation. This was balanced by the presence of children as co-researchers and validation from other key informants, such as the two classroom teachers. It was also balanced by the transparency of the researcher about her personal beliefs, attitudes, and values and the practice of self-reflexivity.

The researcher recognized the transient nature of the children's interests in research activities and for this reason; the scope of the study expanded more than a semester to allow for the ebbs and flows of the children's interest in the study. There were normal fluctuations within the group due to enrollment shifts in the preschool, but these were minor and are normal for a child care setting. Mostly, the selected preschool classroom for this research had a robust enrollment; a

consistent group of preschool children engaged as co-researchers in the study. There were also some shifts in the part time teaching staff, but the core lead teachers were present throughout the course of this study.

An exit plan for the researcher was discussed with the teachers to ensure a smooth transitioning out of the field site. Once the data collection was completed, the researcher continued to visit the site on a regular basis, but slowly phase herself out of the site without causing any emotional concern for the children and the families involved.

Ethnographic studies are conducted in natural settings, which contribute to the collection of rich and authentic data. The semester-long duration this ethnographic study generated multiple data sources that helped to answer the research questions. Children as co-researchers provided ongoing interpretation of the data as it was generated. Ethnographic case studies have been critiqued for their narrow scope confined to a single or small number of cases (Boocock & Scott, 2005). This makes the findings limited in generalizability even though the data are rich in quality and authenticity. Replication of this study design in a different context would benefit the field and provide feedback and guidance for future studies that include children as co-researchers in their research design.

Scholars have voiced concern stating “ethnographic work among children often ‘othered’ the world of children” by highlighting “a separate children’s culture with belief system and social methodologies foreign to an adult’s eye” (James, Jenks, & Prout as cited in Boocock & Scott, 2005, p. 37). The research design of this study addressed the concerns that are inherent in an ethnographic and participatory research using young children as co-researchers. At the same time, it opened fields of knowledge that have been closed to adults due to the methodological

approaches in the past of researching about children by adults and for adults, which will be discussed in the results section of this study.

James (2007) points out that including children as co-researchers presents some methodological challenges related to translation, representation, interpretation, and representation of children's views. For example, would the voice of each individual child be represented as an individual or part of the group? This question is articulated in the statement, "The key question is, then how might childhood researchers hear, at once and the same time, children speaking both as individuals, with their unique and different experiences, and as the collective inhabitants of that social, cultural, economic, and political space that in any society is labeled as 'childhood'?" (p. 262). Hart's Ladder of participation was used to guide and monitor participation of the children as co-researchers in the research process. This study used a postmodern and post structuralism approach to data analysis allowing for multiplicities of viewpoints and interpretations, which is typical to this approach.

Research Design

The research study was conducted at the Reibman Children's Center located at Northampton Community College in Bethlehem, Pennsylvania, United States during the spring semester of 2016. The children's program served children from six weeks to five years old serving the staff and students of the college as well as the families in the community. The demographics of the program reflected cultural, linguistic, socio-economic, and ability diverse composition of children and families. The preschool classroom selected for the study reflected the same diversity. There were seven classrooms at the center serving different age groups.

The children's program was accredited by the National Association for the Education of Young Children (NAEYC) and Middle States Association of Colleges and Schools (MSA). The

philosophical underpinning of this program is constructivist with a strong emphasis on arts integration in both teaching and learning. The Art as a Way of Learning curricular framework guided by the emergent interests of children was used in the children's classroom. A visual and theater artist in resident were part of the teaching team visiting the classroom on a weekly basis throughout the year. These artists supported children's multiple languages to express and construct their knowledge and understanding of the world around them. The program also served as a model childcare program for inclusionary practices for the state of Pennsylvania and uses Universal Design for designing, structuring and organizing the environment and the program. The outdoor space connected to the classroom designed was a natural playground. All the equipment in the outdoor space was made of wood with many spaces for children to use multiple languages to express their thoughts.

The children's program served as a lab school for students of the early childhood education program who visited children's classrooms to gain field experience. One of the preschool classrooms served as the site for this study. This classroom had an enrollment of 20 children from three to five years' age range. In the spring semester of 2016, with some fluctuations in the enrollment, 10 of the 20 children attended the program every day, while the rest had a part time schedule of two or three days per week. There were two full time teachers with support of part-time teaching staff.

The researcher went to the site during the spring semester of 2016 each morning between 8:00 am and 1100 am to participate in the daily activities of the classroom. She spent the entire fall semester of 2015 building relationship with children, families, and classroom staff at the site. As a result, children were comfortable with her presence in the classroom. There were a few

absences due to her personal schedule or weather related closings. She spent two to three hours in the classroom depending on the schedule and activities planned for the day by the teachers.

All children were invited to participate in the study, but data was gathered from 16 children. Of these, nine children came every day while the remaining seven children were enrolled for either two days or three days per week. Three children participated for only part of the semester, but were withdrawn from the program in the middle of the semester due to family circumstances. However, of the 17 students, 13 were present through the course of the study with a few absences due to personal reasons. Nine students were boys and eight were girls. Seven participants were children of students at the college, seven were children from families in the community, and three children were of staff members working at the college. Of the 17 children, two children had a home language other than English. One had Spanish as her home language and the second had Polish spoken at home. Some children only participated in the large group activities, but chose not to participate in the world book or passport activity. The researcher expected some families to decline participation and some children to be excluded due to absenteeism and other unforeseen circumstances. Only one family declined to sign the consent form. This child participated in activities, but no data were gathered on her work in the classroom. All participating children in this study, whenever referred to subsequently in this document during analysis, are given aliases to protect the identity of the child.

As the study site was a lab school, there were times during the semester (10 weeks) when there were two students present in the classroom on scheduled days and times to gain practical experience of working with young children. They were required to implement lesson plans with groups of children. This, at times would interrupt children's self-initiated activities. While teachers would encourage children to participate in these activities, they were optional for

children. However, these activities would often distract children from whatever they were engaged in. One of the children in the group received support services of a therapist on a weekly basis. This added another adult to the environment that changed the dynamics at times.

On designated days of the week, the resident artists visited the classroom to work with children and support them to use their languages of the visual arts and theatre. When the visual artist, Mr. B, visited the classroom, there were certain children who followed him around and performed activities that he engaged in. Upon arrival, the visual artist scanned the classroom and identified a small group of children to work with whatever their focus of interest was at the time. Soon other children followed and joined the group. There were times that he would help children learn simple skills that would help them express themselves such as ways to fold and cut paper to make costumes or making shapes of objects that interested them. Ideas were always emergent and fluid each week. With the theater artist, children often requested to play out stories assuming various roles of characters. There were some children in the group who chose to be the audience and others who preferred to take center stage. These exercises presented opportunities to observe children engaged in role taking and improvisation of characters that informed the researcher about children's personalities and dynamics in large group play settings.

Data Sources

Numerous discussions related to childhood studies have centered on the theme of using "child friendly" methods of data collection (Boocock & Scott, 2005). Punch (as cited in Boocock & Scott, 2005) recommends an integrated approach of combining traditional methods, such as participant observation and interviews with those that allow children to express their views about themselves and their world.

Yin (2014) recommends following the four principles of data collection that help in construct validity and reliability of the evidence. These include:

- using multiple sources of data collection;
- creating a case study data base;
- maintaining a chain of evidence; and
- using data from electronic sources cautiously.

Using multiple sources of data for the study contributed to the richness of the data with multiple perspectives included in the data pool with converging lines of inquiry. Accordingly, data for the study came from multiple sources: documents review; observation data; child-generated data; and interviews with parents, teachers, and administrators.

Document review

The long association of the researcher with this program had already given her a good understanding about the curriculum, philosophy, and approaches to teaching and learning. The program website was reviewed to verify information, corroborate information gathered from teachers, learn about the context and other aspects of the program. Enrollment records were used to gather demographic and geographical information about the site location. As the researcher had worked at the site for many years in different roles, she was well informed about the historical and institutional context of the program and its evolution into its current status.

Observations

Observations are used routinely in early childhood settings to learn about children, their interests, abilities, and day to day activities. Observations were written each day. Not all happenings were observed and recorded. The researcher closely observed the activities that children were engaged in each day and then selected an area for observations accordingly. As an

experienced early childhood practitioner, the researcher switched roles as an observer or participant based on children's cues according to the situation. In either of the roles, the researcher continued with a "least adult" stance.

Observation data were in the form of daily field notes through participant observation recorded to reflect the daily ongoing at the site. These notes included factual features, such as the number of children and teachers present for the day, as well as any lab students or visitors in the classroom. These data yielded information on children's daily activities, interactions with peers and adults, including their journaling, free-play, and snack time. The notes provided a better understanding of the context within which children were socialized in the preschool daily, as well as a deeper understanding of the children's individual personalities and characteristics. Observing families drop off children in the classroom gave opportunities to observe children's relationships with adults in their family and close family network. Children were dropped off by their parents, grandparents, aunts, and family friends.

All the "impromptu" conversations with children were audio recorded to capture their thoughts and ideas whenever possible. In the absence of a recorder, conversations with children were noted down "after they were done" whenever the researcher was involved in the conversation in order to keep the flow of the conversation going.

Child-generated data

Children-generated data were produced as a result of daily activities that children engaged in as well as a few semi-structured activities that would facilitate discussion about the children's view of their world. This included artifacts (e.g., drawings, journals, construction objects, photographs) and transcripts of discussions related to activities with children.

Artifacts from children included their daily journals that each child made entries into when s/he arrived in the morning. These entries were in the form of drawings, as this was one of the outlets for children to express their ideas, thoughts, and feelings about their world. Teachers wrote the words that children dictated to describe their entries. Drawings and paintings that children generated spontaneously also became data sources. Photographs of these drawings were taken with permission from the child. At times, children took the pictures on their own for the researcher with a sense of pride in their own work. This began to happen more frequently as the study progressed and children became more familiar with the researcher.

A notebook was given to each child to create his/her own "world book." Each child was invited to author and illustrate his/her own world book which would represent their world as they saw it. They had complete ownership of this artifact. Children could use drawing, painting, collage, or photographs to create their world book. Children were often reminded about their option to take photographs instead of drawing in their world book but they almost always chose drawing over photographs. Children could dictate stories and add anything in their world book that they thought was part of their world. This was introduced to children early in the semester and they were free to work on it whenever they wanted. Some children chose not to have one.

The concept of passports was introduced to children by giving each child their own passport (photograph in Appendix G). This document was another way for children to express places that they wanted or wished to visit in their world or had already visited. Children stamped their passport and told the researcher the name of the place they specifically wished to visit or had already visited. This often lead to discussion about how the child was going to visit the place of their choice giving the researcher more insight into the child's views about transportation to a specific geographical location in the physical world or the world of space.

Other artifacts included photographs of block and Lego structures. Other materials in the environment such as painting, play-doh, puppets, and other materials served a similar purpose. These are activities commonly found in most preschool classrooms and are inclusive of all children of varying abilities. Children's play using blocks, toys, table games, and manipulative tools provided spaces to engage in conversations and informal interviews.

Interviews

Both formal and informal interviews served as data sources. Most of the interviews with children were of an informal nature embedded within the context of a naturally occurring conversation. Occasionally small and large group formats became the place to facilitate discussion following an intentionally designed activity with the children, such as reading a book or sharing an artifact. These were recorded, transcribed and included in the field notes for the day. Semi-structured and face-to-face interviews were conducted with teachers, parents, and administrator (director of children's program) to gain their perspectives about the program and the children. Whenever possible, interviews were audio recorded.

Interviews with parents were semi-structured and held at a time and place that was most convenient to the parent. Interviews were conducted as needed to clarify some of the ideas that emerged from planned activities and/or conversations with children. The purpose of these interviews was to understand the children's home and family background, as well as the sociocultural context of child. It provided a format to ask questions to get clarification on some of the observations made in the classroom. Not all parents participated due to their busy schedule. Some children were brought to school every day by a family member and researcher did not meet the parent throughout the course of the study. A parent interview questionnaire was developed and approved through the IRB process. Interviews were conducted according to the convenience of the

parent. Some of the interviews were conducted on preschool grounds while others were held at an outside location. This was to accommodate the need of the parent. There was a total of five interviews with parents. These interviews were not recorded but notes were taken and transcribed. The information gathered helped to provide background information about the children.

Interviews with two preschool teachers and one administrator were conducted face-to-face in a semi-structured format. A questionnaire for teacher and administrator interview was developed and approved through the IRB process. Notes were taken during the interviews and transcribed by the researcher later. Interviews were conducted at the field site. Interviews helped in gathering additional information about the preschool and gain a better understanding about their personal philosophies and pedagogical approaches as well as their expectations of children's development. The information gathered aligned with the overall program philosophy focused on arts integration and emergent nature of curriculum planning.

Data gathering methods were ensured to be feasible within the daily routine of the children. To accomplish this, input and suggestions of the site administrator and the teaching team were sought prior to the beginning of the research and were integrated into the data collection plan. During the study, the researcher had regular conversations with the teachers to get their input and make modifications as needed.

Other Methodological Influences and Dimensions

The "Reggio Emilia approach" was used as a source of inspiration for this study. The field site used a similar approach called "art as a way of learning," which encourages children to use multiple languages. In both of these approaches, young children are encouraged to explore their world and express their understanding by using all of their languages – "expressive, communicative and cognitive languages" (Edwards, Gandini & Forman, 1998, p. 7). These

languages can be used through drawing, sculpting, painting, collage, block building, and many more. Using the participatory observer approach and including children as co-researchers in the project allowed the researcher to "listen" to the many languages of children to address the research questions.

This study was also informed by the mosaic approach developed by Clark and Moss (2011), which emphasizes including children's views in the decision-making process involving the improvement of their program setting. In this approach, children are encouraged and enabled to use cameras to document their ideas, and thoughts that are significant to them relating to people, places, or happenings. Clark and Moss (2011) refers to this as an "interview on the move." The researcher's phone camera was made available to children as part of their classroom environment to use for documentation of their thoughts, ideas, work, or play. Children were also given binoculars and access to computers to explore ideas as co-researchers in this study.

Clark and Moss (2011) use the phrase "creative listening" to expand on the Reggio approach suggesting that researchers keep an open and receptive mind to the various languages that children use to understand their perceptions about the world. Creative methods suggested by Clark and Moss (2011) do not translate into "different" methods from adults. However, it does suggest a shift in the mind-set which, views children as competent, and the use of methods that are best aligned with the current level of interest, abilities, knowledge, and the context of the group of children who are participating in the research. This was followed through by the researcher. During the study, the researcher periodically asked children how their research about exploring their world was coming along. During one of these conversations, the children expressed interest in using a telescope to explore what was in their space world. A telescope was brought to the classroom for children to support children in their research.

Research tools allowed all children to be included in the process. Attention was given to the evolving nature of the growth and development in children. Methods selected had the flexibility to accommodate for the varied and changing abilities and interest of children. Just like the researcher, the research process influenced the children and their development. The research, the subjects, and the researcher, all evolved through time and this can be viewed as a strength as well as a challenge in researching children.

Engaging children in the research process is highly dependent on the ability of the researcher. In this regard, the researcher's both personal and professional prior experience helps in the research process. The researcher in this case has years of experience, knowledge, and skills to engage with children, which supported the research study. Time spent with children a semester before the start of the study helped building relationships at the field site. This strategy highlights the difference between "being with" children as opposed to "things to do with" children (Clark & Moss, 2011).

As co-researchers in this study, children chose to initiate activities based on their interests and abilities. Their voice was represented both in the emergent design and implementation of this study. Children's input was sought, acknowledged, and integrated into the research design throughout the course of the study. Working with children requires flexibility and ability to adapt to their emergent ideas and interests. This group of preschool children was fascinated by robots, evidenced by the journal entries about robots or robot structures created using a variety of blocks available in the classroom. Children pretended to be "robots" in the dramatic play area. The teachers worked with the theater artist to help children express their ideas and construct their understanding by providing them with more tools and opportunities to build robots using a variety of tools such as recycling materials, blocks, and books.

Data Analysis

Qualitative data analysis is inductive in nature. It consists of a rich description of the site, participants, and their viewpoints, which are analyzed to identify patterns, and common recurring themes without any preconceived hypothesis (Schutt, 2011). Experts call this an "emic focus" of qualitative data. The researcher constructs an explanation based on his or her interpretation of the data by undergoing a series of data analysis steps. It is conceivable that another researcher may arrive at a different conclusion based on his context and background, due to the differing approach to data varying degrees of importance each researcher ascribes to various aspects of the collected data.

There are distinct stages of data analysis with many variations. It begins when the researcher starts documentation of various aspects of the study. Each time notes are taken, an interview is conducted or a parent visitor comes by, these become opportunities for formative analysis about the research study. Field notes were recorded each day by the researcher to capture observations and impressions at the end of the morning session. Questions that emerged were clarified the following day with the classroom teachers and the parents as necessary. For example, when David drew a picture of himself with his mother on a roller coaster in his daily journal, the researcher verified with the mother if this had happened. His mother confirmed that they had gone to the local amusement park to take the ride together.

Another stage of data analysis is the familiarization stage. This involves reading and reviewing the collected data to look for emerging ideas and any aspect that might not be fully represented in the data. This continued to occur on an ongoing basis since field notes were written daily and coded in a data framework based on the themes that emerged each day.

Using an emergent coding data framework helped to sort through the collected data regularly highlighting the recurring themes that emerged at the field site. Each day as the field notes were written, emerging themes were identified and recorded in the field note theme log. If a theme emerged recurrently, a separate category was created. The theme log evolved with the course of the study. Each code was assigned a specific meaning and described so that there was consistency in the coding method. Codes were categorized to identify emerging themes, which were linked back to the research questions and how they might help to answer them. The classroom teachers, who were the informants in the study, were invited to give their feedback on the coding scheme. They were given field note log with field notes to provide their input on the categories that were identified by the researcher and the relationships that were seen between the categories. The classroom teachers concurred with the identified emerging themes and data coding. This helped in balancing the subjectivity of the case report due to the participation of only one researcher and her years of experience in the field. This is a usual phase in ethnographic studies and it helps to weave the data into a coherent explanation for the research questions asked in the study.

The core of data analysis in a qualitative study is coding (Goodwin &Goodwin, 1996, p. 143). Strauss and Corbin (as cited in Goodwin & Goodwin, p. 144) identify three types of data coding: open, axial and selective. These are not bound with any clear guidelines. Open coding occurs when the researcher categorizes the data after careful examination. Data are compared within categories to identify common or opposing ideas or concepts. Axial coding involves using a new lens to examine the data that may reveal linkages within the data categories, their contexts, and perhaps causal conditions. Finally, the selective type coding entails arriving at a few core categories that help to explain the relationships with other categories and presenting the data in a

meaningful way to answer the research questions. A similar process occurred in the data gathering and coding of this study as explained in the following paragraphs.

As a qualitative study, most of the data collected was in the form of text or images with descriptions by the children. This included field notes, daily journals, world book authored and illustrated by children, and interview notes. Images from the world book, daily journals, and other classroom activities were photographed for future reference. Field notes were written and filed each day with emergent topics identified and highlighted. The notes captured children's free play, journaling, regular visitations of lab students (early childhood education students doing field work), support service experts, and other classroom activities and conversations. The highlighted themes from the field notes were categorized into a field notes log. This log was entered each day after transcribing field notes which helped organize the data into categories that connected to the research questions of the study. This process identified similarities and differences in the data while remaining open to new themes or direction that data would reveal. As the new themes emerged, categories were added to the data log. This regular data organization and documenting system facilitated in highlighting the ebbs and flows of interests among this group of preschool children.

The field note log had the following categories: family; relational (relationships with extended family and friends); pets; animals; nature; media; video games; space and technology; place; time; distance; place and positionality; concepts and objects. Some of the themes appeared more consistently than others while some categories were added as they emerged during the course of the study. For example, initially, nature related conversations or images were placed in the general category titled "concepts," but as more children talked about various natural

phenomena, a category for “nature” was created in the log. Likewise, categories were merged to accommodate new ones or create more to log new ideas generated by children.

The axial phase of coding was derived by identifying links between the categories in the field notes log. Of the categories created in the field note log, it became apparent that children viewed their world through a “relational” lens regardless of their status as human, animal, or fictional character from media or video games. Similarly, children expressed a great deal of interest in natural phenomenon such as tornadoes and volcanoes or landscapes such as mountains, oceans, or forests reflecting their keen observations and the resulting interest in nature. Finally, the selective coding process highlighted the key themes that emerged from the data collected. These themes are: family; pets; animal; nature; space; and media characters which are discussed in the results section.

Qualitative studies are integrated with a “data analysis spiral” (Denscombe, 2010). Referring to the cyclical nature of the data collection process involving initial data collection, interim analysis, and additional data collection. As the data were generated, the researcher, along with children as co-researchers, continued to reflect if the methods used for the study were a good fit for the research questions that it sought to answer and if any modifications were needed. It was during one of the group meetings that the children requested for a telescope to look into the space world. However, as the study progressed and the data was generated, certain pattern in the categories began to emerge. By the end of the semester, a data saturation point had been reached as similar themes emerged each day at the field site. During the ending phase of the study, while the researcher slowly began to withdraw from the site, similar themes continued to emerge in the classroom.

Children shared their world book with other children at group time whenever they were ready, which provided opportunities for comments and questions. Most of the time, children listened as each child shared their world book explaining the drawing on each page regarding what or who was part of their world. At times, children would comment if similar objects appeared in the world book of others. However, the majority of the time, children listened as a world book was presented by each child.

After the data gathering phase had ended, the researcher continued to read, review, and revisit, the data. While the data coding process was necessary, it was equally important to reflect on the cumulative "experience" of the researcher at the field site including the challenges, variations in group dynamics due to the absence or presence of people, objects or activities in the environment, and events such as "family breakfast days" or "pajama days" in the classroom. The scrutiny of the researcher in remembering the many months spent at the field site and the feelings associated with her "experience" as field researcher were equally important to acknowledge in the notes generated piece by piece and day by day. The positive memories as a participant observer would make it easy to fall into the trap of viewing the data through a rosy lens. However, the researcher had gained valuable insights in her "least adult role" about working with young children as co-researchers. This experience helped to inform the data analysis phase of the study. The uniqueness of the data and its interpretation would reflect the balanced integration of the single day experience with the combined total experience of the study.

The process of data analysis is best summarized in this quote by Michael Quinn Patton, "Qualitative analysis transforms data into findings. No formula exists for that transformation.

Guidance, yes. But no recipe. Direction can and will be offered, but the destination remains unique for each inquirer, known only when—and if—arrived at" (as cited in Schutt, 2011, p. 321).

Reflexivity

Reflexivity is a key element in a qualitative study. It is particularly helpful in studies focused on early childhood due to the dynamic nature of the early childhood contexts (Edwards, 2001). Reflexivity refers to an open acknowledgement by the researcher about how his/her presence may impact the research process and how the research process may impact them as a researcher during their fieldwork (Lincoln & Guba, 2000). Mukherji and Albon (2010) echo a similar idea stating that, "In qualitative studies, the influence of the researcher, on both what is collected and recorded as data and the way this information is analyzed and understood is profound and in some ways fundamental to the process" (p. 276). In this study, the researcher engaged in a self-reflection about her field almost daily while writing her field notes. This would often include reflection about what was observed, why it was observed, and what factors might have led to certain interpretations made by the researcher. The following definition of reflexivity captures the essence well:

> Often condemned as apolitical, reflexivity, on the contrary can be seen as opening the way to a more radical consciousness of self in facing the political dimensions of fieldwork and constructing knowledge. …Reflexivity becomes a continuing mode of self-analysis and political awareness (Callaway as cited in Hertz, 1997, p. viii).

Scholars in research methodology have commented on the importance of a researcher as an individual stating, "The self is the key fieldwork tool" (Maanen, Manning, & Miller as cited in Reinharz, 1997). However, literature related to fieldwork mostly speaks about the "role of

researcher" than the researcher "self" (Reinharz, 1997, p. 3). Being a researcher represents only one aspect of the "self" that a researcher brings to the field; the personal attributes, history, experiences that a researcher brings to the field. The norms of the field site and the interactions with the research participants creates a new self in the field, that affects the ability of the person as a researcher. It is also important for the researcher to recognize the nature of his/her past relationships with the site, the participants and the informants to fully understand the complexity of the field site. For similar reasons, scholars (Fine & Sandstrom, 1988) have characterized the researcher as a potential corrupting agent advocating "something to be separated out, neutralized, minimized, standardized and controlled" (p. 108).

According to Reinharz (1997), the researcher brings multiple selves to the research field which can be broadly categorized into three aspects: the research-based self; brought-self; and situationally-created self. The research based self refers to the knowledge and skills a researcher brings to their research project. The Brought-self is the cumulative personal experiences and history that accompanies the researcher to their site, and includes, age, gender, culture, and views about children and families. The situational self is the temporary role a researcher may assume to better understand the research participants. All these elements color the lens of the researcher.

As a research-based self, the researcher started the study having prior experience in research based field work in United States, India, Zambia and Cambodia under the guidance and supervision of a professor at Lehigh University. Through these experiences, she developed skills to conduct interviews, focus groups, and observations in the field that helped in this study.

The researcher's "brought self" includes both her personal and professional self. Professionally, her decades of engagement in the field of early childhood education as a teacher, director, supervisor, trainer, and professor for several years gave her multiple perspectives. Even when the

researcher worked in other roles in the field, she continued to work directly with children in a classroom setting. While years of field experience was helpful in her work with preschool children, guarding for personal bias stemming from her professional views developed over time related to children's development and learning required daily reminders and reflection. This was also addressed by having the lead teacher and an expert colleague in the field read through field notes to get feedback and verification.

Personally, having spent her growing years in India, the researcher had another cultural lens to filter her observations of children, families, and activities at the site. Her own experiences as a child could influence her work in subtle ways that she may not consciously recognize. Her experiences are both historically and culturally bound in a time and place, distinctly different from her current site. The researcher has also traveled extensively around the world having visited variety of early childhood settings. However, these personal experiences have been modified over time due to her long years of residency in United States. Her views have gradually modified through her own experience living in a different culture other than the one in which she grew up. In other words, her ethnocentric lens has undergone a change, some observable and perhaps some that led to who she is both personally and professionally. Acknowledgement of these influences as an ethnographer is an important part of reflexivity in research.

The preschool site is part of a lab school attached to an early childhood program for pre-service teachers pursuing their associate degree in early childhood education at a community college. The researcher has had a long association with this early childhood program in various roles ranging from a member of the advisory board, faculty, assistant director, and director prior to stepping down to conduct research. However, the selection of this site was based on its suitability for the research project and not on the history that connects the researcher to the place.

The demographics of the families who enroll in the program reflected the diversity of the community at large. This is a high-quality program demonstrating best practices in the field of early childhood in their daily practice. The researcher recognized that her prior supervisory relationship with the site could potentially influence the interactions with classroom teachers, but this was overcome by allowing plenty of initial warm up time with children, families, and the classroom teaching staff. One of the teachers in the preschool was also a past student of the researcher. This also required allowance of time at the beginning of the research to reestablish a more balanced and equal relationships with her and the second teacher in the classroom. This was addressed by soliciting input from the teachers at the outset relating to various aspects of the research, such as the feasibility of including children as co-researchers as well as the most effective time for the researcher to be present on the field site for collection of data.

During the study, the researcher had an ongoing conversation with the two teachers to get their input and guidance on how the children were responding to the presence of the researcher and their role as co-researcher. Both teachers felt that during the warm up time, children had become familiar and did not demonstrate any signs of stress due to the presence of another adult. On the contrary, they noticed the researcher's absence when she was away for a short period and expressed concern for her. The children would also welcome her into the classroom each morning and invited her to join their play and to their house or restaurants for play dates. Some of the families mentioned that the child was coming home with songs they were singing in class with the researcher. Overall, the researcher gradually embedded herself into the classroom becoming part of the preschool environment and culture.

Over the years, as a practicing teacher in the field, going through the academic course work as a student, and the ethnographic field work in the preschool, the researcher became aware of her

humanist focus in viewing the child and other adults as the center of attention and "the origin of all knowing" (Hultman & Taguchi, 2010, p. 526). The focus of her attention was always children and other adults stemming from years of habit and practice. This, in literature has been referred to as the "anthropocentric gaze," human centrism or human supremacy (Hultman & Taguchi, 2010).

Anthropocentrism stems from the humanistic traditions naturally leading the focus of the researcher on the human, in this case, the child, placing other non-human entities in the environment at a lesser plane. There is a hierarchical stratification that occurs unknowingly but habitually where other material factors are relegated to a position of lesser importance. During field work, at times while observing children in the block area, the researcher often found herself focusing her attention on a child or children engaged in building objects with blocks as central piece of her observation. While other material elements in the area were not ignored, they often became the background for the main actor, the child. The habitual gaze "focused" like a camera on the main character (in this case, the child/children) putting other material elements such as the blocks, the shelves, and the place in the foreground. However, through this research process, researcher became exposed to the post-humanist approach and the interdisciplinary scholarly work of Africa Taylor and Miriam Giugni. Their newly developed framework of the "common worlds" guided the study in discussing and interpreting the findings in the of the research questions.

Additionally, this researcher recognized her engagement in research and associated field work as a great phase of learning and growth both personally and professionally. Personally, the researcher learned to let go of her leadership role in the field and became a student of child studies, as an observer, participant and reflective thinker. Professionally, she became engaged in

reading, reflecting, and applying scholarly work related to the research topic that expanded her knowledge, opened her vision to new possibilities and alternative narratives emerging in the field. Learning about the common world framework offered an example of using a multi-disciplinary approach to inform knowledge and understanding about children and early childhood education.

IV. Results

"Do not say, 'It is morning,' and dismiss it with the name of yesterday. See it for the first time as a new born child that has no name."

Rabindranath Tagore

"Learn how to see. Realize that everything connects to everything else."

Leonardo Da Vinci

The data in the study shows that children's worlds revolves around the theme of relationships. These were demonstrated through conversations, and created artifacts related to people, animals, nature, media characters, technologies, the world of space, and geographical places. The term "relationship" is used to denote a connection, association, or engagement that was expressed because of exposure, interest, or curiosity facilitated through technology and/or direct engagement or social interactions. Children connected to various dimensions of the world that were beyond the human relationships or, as the common world framework terminology would suggest, beyond "anthropocentric." In addition to family members, children expressed interest in natural phenomena such as volcanoes, tornadoes, or rainbows. They often drew pictures of these in their daily journals and requested teachers to read books on these subject. Many children were focused on action figures and would draw them regularly in their journal or build them out of manipulative materials like blocks or Legos. Animals were referenced and integrated into block play or in the "house-keeping corner" of the classroom. Children's field of focus spanned across the human, animal, natural, and space world blurring boundaries of differences in pursuit of their interests and curiosities. Their world was a world without divisions – physical, social, and space. To examine the manifold relationships that became visible, this study uses the conceptual framework of the common worlds to answer the research questions:

- How do children describe and explain their world?
- How do children place themselves and others in the world?
- How do children make the distinction between immediate and beyond (far)?

The key themes that emerged through field work were related to children's relationship with family, pets, animals, nature, media characters, geographical places, and space world. These are discussed below in the context of the research questions.

How do children describe and explain their world?

The results from the data demonstrate that the children's world covers the physical as well as the world of space and nature consisting of humans, animals, forces - known, unknown, and other entities. It is a world bound by a web of relationships shaped through direct personal experience or indirectly through media and technology. The impact of forces associated with globalization such as media, travel, and technology became visible in the daily interactions of children and their living experiences. Most children during the course of the study conveyed their connection with family, animals, nature, objects, technology, and place both far and near. Children viewed themselves as part of the world they co-inhabited with other people, species and objects around them both in their immediate environments and beyond.

It is equally noteworthy to observe the absence of some of the themes from children's daily interactions. Children rarely referred to basic human needs such as food, shelter, and clothing in their play. Occasionally they would refer to things they would like to experience or play with but the idea of ownership did not dominate their play. Consumerism or interest in buying or owning objects was absent from children's play.

Relationships with family members

Family relationships are a prominent part of children's worlds. The importance of family relationships in children's lives was evident through the numerous journal and world book entries where they often drew pictures of their moms, dads, siblings, grandparents and other extended family members. Occasionally, friends were included too. At times, these were in the context of an activity they did with parents such as going to a game or visiting grandma. And at

And at other times, it related to their interactions at home. One of the children, whose mother was going to have a baby, often drew pictures of his mother with the baby her belly. Even after the baby was born, he continued to draw pictures of his mother almost every day engaged in baby care.

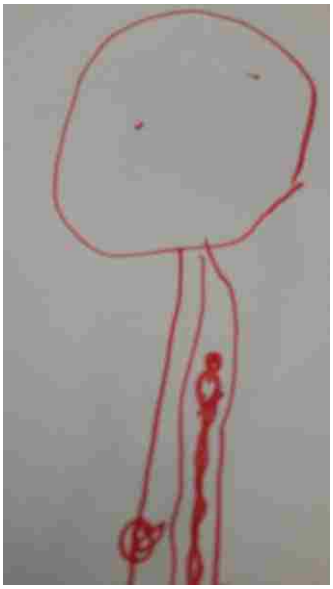

Figure 1. My mom and the baby inside

When asked to draw a picture of their worlds, most children drew a picture of their family with their mom and dad. Some also included grandparents, extended family, and close friends as the following conversation about the world book entry illustrates:

> Emily began her World Book stating, "I have a lot of animals. Dad has a snake." "Yes, you told me about it," I responded. "I am going to make my cousin," Emily announced. "It is whatever, whoever, wherever – it is your world Emily," I said again. Emily began a long monologue as she began to draw a picture of her family: "This is my cousin. She is very tiny. And this is Jack. Yes, his name is Jack. My mom's name is Samantha and his name is Dwain and I call him Daddy. May be his friends call him Daddy. He is saying come

on. I am going to draw me, my Grammy, Pop Pop (grandfather) and then my aunt Heather. Pop Pop is holding my mom's hand. I call my Grammy "grand gram." "Is she your mom's mom?" I asked. "Yes, Pop Pop is my mom's daddy and Aunt Heather." "Who is this?" I asked. "Liliana. She is a baby. She does not have a lot of hair. My dad does not have a lot either. Mom has a lot of hair. They are long. Grandpa does not have much hair because he is a Pop Pop," Emily responds. "Oh, is that what happens when you are a Pop Pop?" I asked. "Yes," Emily replied. "Anything else in your world?" I asked. "Oh, I have to draw me," Emily said. "Yes, you must be in your world," I answered. "Want to draw my name?" Emily added. "Ok. All right. I can write the words for you," I answered. I began to write as Emily dictated to me: "Skyler, Liliana, Mommy, Pop Pop, Grammy, Daddy, Aunt Heather, and "These are the people in your world?" I asked. "And, I have three kittens," Emily reminded me. She drew three kittens and calling their name each time she drew one. "Write my kitts name" she asked. "I will give this to my daddy," she added. "You can take this book home when it is all done," I told Emily. "Who is the author of this book? Who is writing this book?" I asked. "Me," she answered. "Who is illustrating this book? Who is drawing the picture?" I asked again. "Me" Emily smiled and said, "I want to put this in my cubby." (field note, 2.3.16).

In the example, above, the child described and explained relationships beyond her immediate family. Her family included members of the extended family and all her pets. The description of relationships with family members reflected her family structure as well as the quality of relationship that existed among the extended family members.

Experiences were recalled and expressed using the language of drawing. David, one of the five-year-old boys in class, drew a picture of his mother and himself riding a rollercoaster. As he drew the picture, he described his experience at the park. David was fondly remembering his rollercoaster ride. The next day, when it was verified with his mother, she confirmed that David

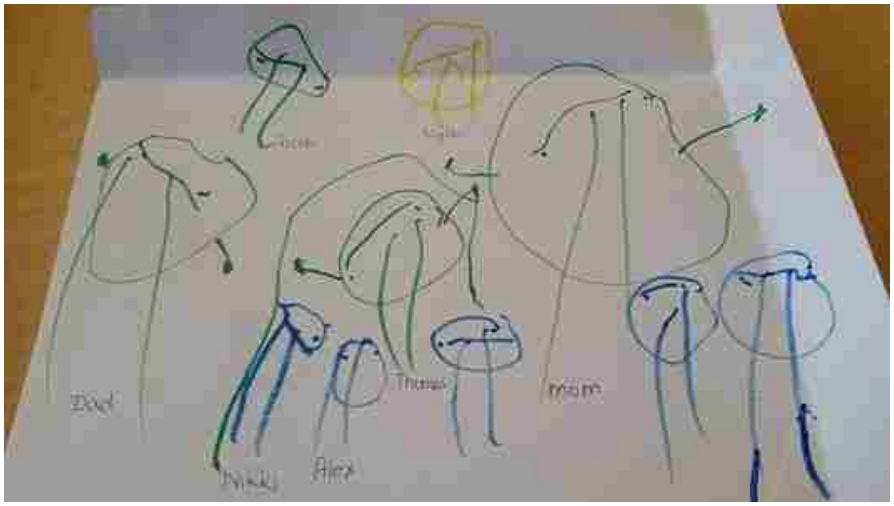

Figure 2. My extended family

had gone to an amusement park in the area with her during the summer. The child was drawing a picture almost six months after the experience. This demonstrated that children connect with family members through fond memories of an experience for a long time and can express it accurately later. For David, every experience he had with his mother was special. He expressed it through his drawings each day in his journal even if those experiences happened months before (field note, 1.29.16).

Figure 3. Me and my mom on the roller coaster

Traditionally, children are part of the family structure in society. Families are also considered to be the primary source of acquiring social and cultural norms by children. Although the forms and structures of families around the world vary and have evolved over time, it continues to be viewed as an important factor in the lives of young children (James, 2013). As Corsaro (1997) points out, "The nature of the adult world has profound effects on childhood. Even in the most impoverished and threatening environments, however, children appropriate and construct their own worlds" (p. 255). Children are not passive recipients of family practices, but active agents who construct their own perspectives through their lived experiences within their family contextualized by the broader landscape of their community and society at large. Viewed from the child centered approach, the socialization of children, as James (2007) explains, would have to be understood individually from each child's daily experiences with their family. The daily journal entries and related conversations offered some glimpses of their connectedness with their families. Viewed from the common worlds perspective, children live in a world characterized by

a complex web of relationships where differences are the norm and inclusion of all is a guiding principle. Family was the closest social unit of experience for preschool children and was part of their world. However, data analysis revealed that the children's relationships included animals, objects, and other entities that moved beyond the human society to include children's engagement with nature and "more than human others" in the world of relationships.

Relationships with pets

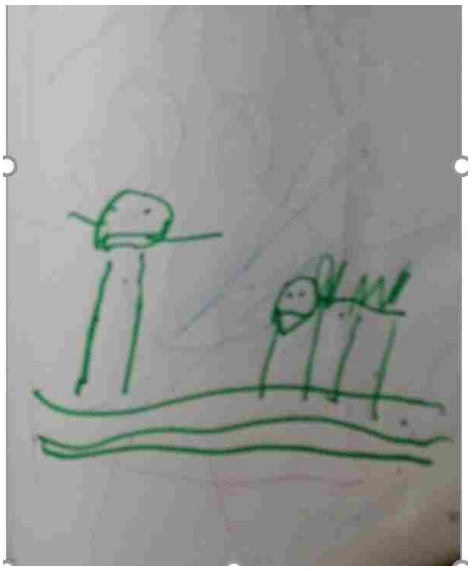

Figure 4. Me and my dog with grass

Figure 5. Mom, dad, my two dogs, my two cats, and me

Pets were viewed as an extension of family and an integral part of children's worlds. They were referred to in relational context in conversations, play, or in the artifacts such as the daily journal and some of the world book entries. Similarly, other studies conducted in the US found that pets are often considered as a part of the family (Melson, 2001).

Many children had pets at home and would draw their pictures in their daily journals. Emily was one of the children who drew pictures of her pets in her world book and journal regularly. She had two dogs, two cats, and a snake as her pet. She also referred to an animal scale that

veterinarians use to weigh the pets. When asked to draw a picture of her world, she drew a picture of her pets along with her family. It was evident that she viewed her pets as part of her family and had a very close relationship with them. During one of the conversations, the child also informed me that she helped her mother with the care of her pets at home. Her world book included many drawings related to her pets.

Callie also had two dogs as her pets. She added them to her world book by drawing their pictures one morning. She pulled her world book out of the basket and sat down to draw her pets stating:

> I have two dogs. Ciara and Dunkin. Dunkin has a lot of hair. I do not know how to draw them." I suggested, "Well, let us think about the different parts your dog has." Callie begins to draw. She made a circle and then drew a triangle with two dots. Callie described her dog stating, "This is Dunkin's nose and two nostrils. I think I will draw Ciara another day. Ok, I am done for today." (field note, 2. 5. 16).

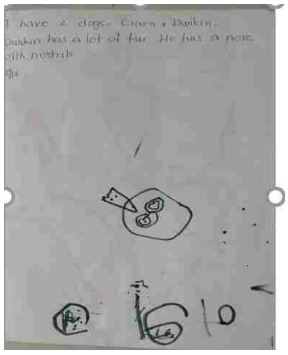

Figure 6. My dog Dunkin with two nostrils

The common worlds approach reframes children's relationships with pets disrupting the long held romanticized imaginaries of children in nature and with animals in the western world. The English cultural tradition of having family pet animals has permeated the western world. Animal pets are viewed as family members and treated as "children" who need protection and care. For decades, much of children's literature has affirmed child animal relationships through stories (for example Winnie-the-pooh, Heidi, and many more) and pictures glorifying the harmonious connection of the two (Taylor, 2013, p. 84). This image has been further entrenched through its popularization by Disney productions and other popular children's programs (Taylor & Giugni, 2012).

Despite the strong presence of animals in children's lives, there is a clear absence of discourse or empirical research in the field of developmental psychology regarding its potential significance in children's lives (Melson & Meyers as cited in Taylor, 2013, p. 86). The importance of animal-child relations is encouraged and endorsed for its benefit in the development of empathy and environmental stewardship as adults. The common worlds terminology ascribes the name of "queer kin" to the relationship with pets expanding the definition of kinship beyond the traditional family network (Haraway, 2008). "Queer kins" in Haraway's (2008) conceptualization, replaces the pet/master hierarchy while recognizing that the "queer kin" relationships are "almost never symmetrical" (p. 74). The concept of "queer kin" promotes the idea of working towards finding ways to live in a responsive and reciprocal manner despite the apparent differences.

Relationships with animals

Relationships with animals developed through direct experiences as well as through media and technology. Books were also an important source of learning about the animals. This was reflected in their free play with classroom materials. At times children's play would be inspired by a television show such as the Lion Guard. Lion Guard is an animated television series produced by the Disney Channel. It is a sequel to an award-winning Disney movie, The Lion King. Lion Guard is a group of animals who protect Pride Land, the home of The Lion King. Children pretended to be part of the Lion Guard, saving animals from some imagined danger such as predators (child used this language). They built a shelter constructed with blocks to rescue them. Their facial expressions and body language conveyed concern as well as excitement about saving the animals from danger.

This was explained in detail by children as the following conversation illustrates:

Callie: “This is an animal hideaway.” I asked, “What is a hideaway?” Callie replied, “Animals hide away from their predators.” I asked “Predators, what are those?” Callie answered, “Animals that eat up other animals.” She runs to get a tiny giraffe and says, “Look here is this baby giraffe running from a coyote. He runs into the hideaway inside. Now the coyote cannot get him.” (field note, 3.16.16)

Figure 7. Circle of life

Exposure to animals from distant lands was through television shows such as Zoboomafoo produced by Kratt Brothers, a production company. This is an animated wildlife show that takes place in Madagascar and is designed for preschoolers. Each episode is presented by an animated Madagascar lemur along with the Kratt Brothers introducing animals from around the world to children. One child specifically referenced species that were extinct such as the Dodo bird and other endangered species. When asked how she was aware of these animals, the child referenced the show mentioned above.

Artifacts in the environment triggered conversations about children’s relationship with animals from distant lands. This became evident during a conversational exchange between a child and the researcher as illustrated in the following conversation:

The classroom teacher had hung a Chinese calendar on the wall with pictures of animals that represented each calendar year in the soft area of the room. One morning, while reading a book to two children in this area, one of the children, Callie noticed the picture of the tiger on the calendar and said, “Oh the Tasmania Tiger. They only have two more weeks before they

become extinct." "What does extinct mean?" researcher asked. "They are not there – the end." Callie responded with concern and disappointment. Callie then stood up and demonstrated the way a Tasmanian tiger stands like kangaroo and eats kangaroos. "The Dodo birds are also extinct," she informed with disappointment in her voice. The researcher continued the conversation and asked, "Oh, we cannot see them anymore?" "No, only in the mind," Callie replied in a quiet voice (field note, 1.22.16).

Callie's mother explained the next day how the source of most of Callie's information was from a television show that she watched often. This interaction demonstrates how technology and media had connected the child to animals whose habitat was far away from her own. But even more important was her obvious concern for the animals that were endangered or extinct. Through her media encounters, Callie was learning with the animals in a common space that would transform their relationship and open more possibilities for future engagements.

Animals that symbolized power such as sharks, dinosaurs, and crocodiles were also referenced in children's daily journals. Children talked about their strength as they drew them in their daily journals. Knowledge of these creatures was mostly through their exposure to media. Other examples in the data referenced animals such as penguins, deer, and other animals that became part of children's world through exposure to media and technology as well as artifacts in the environment that the teachers introduced to broaden children's horizon.

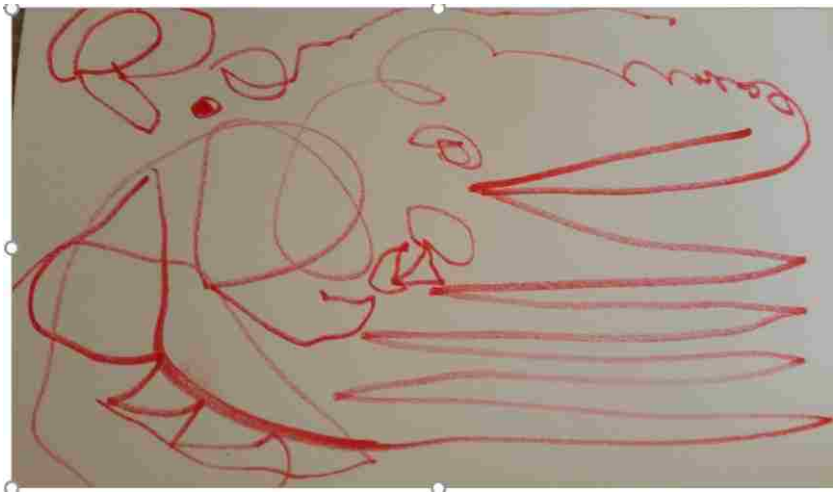

Figure 8. A crocodile

Additionally, animals such as the peacock and camel were discussed in the context of travels of the researcher with children, along with artifacts related to these travels. These artifacts became part of classroom environment, inspiring some children to draw peacocks in their world books integrating these animals as a part of their world.

Figure 9. A peacock

Children also talked about animals when they had casual encounters with backyard animals such as rabbits, a snapping turtle or a woodpecker. This usually lead to drawing in their daily journals or the world book. One day, Alex one of the boys in the classroom, announced upon his arrival that snapping turtles were a part of his world. He had seen one at his aunt's house while visiting her over the weekend. He drew a turtle in his world book and dictated to add in writing, "Snapping turtles are part of my world" (field note, 2.26.16). His personal encounter with the turtle created a new relationship, one that he did not have before. It was not in the experience of "seeing" the turtle that his new understanding emerged, but in the mutuality of encounter that he experienced which created a new assemblage that expanded his world.

Figure 10. A snapping turtle

The children expressed concern about animals. During the study, the researcher had gone to an island and discussed her experience at the beach during large group time. Children wanted to know if there were sharks by the beach. One of the children asked the researcher if during her Segway ride on the beach she had hurt any crabs. Children expressed relief when they were told that vacationers walked or rode bicycles on the sidewalks to avoid stepping on crabs and/or other small beach creatures. The expression of relief on children's face revealed their concern for animals. It demonstrated that children were sensitive and respectful of animals and their habitat. They seemed to share common concerns of safety for animals. It is possible that having a pet, "Frogeesha," in the classroom and helping the teacher with its care and maintenance had helped to foster respect and responsibility towards animals. However, it could also be interpreted that both "Frogeesha" and children were learning to co-inhabit a space with respect and responsiveness to the needs of the other. As Taylor and Pacini-Ketchabaw (2015) state, "We

want young children to sense and register, in more than cognitive ways, that it is never just about us. And we also want to stay open to the possibility that other species and life-forms shape us in ways that exceed our ability to fully comprehend" (p. 6).

Figure 11. Frogeesha, the classroom pet

Relationship with nature

Children demonstrated their awareness of nature as they experienced it in their daily lives influenced through media. Sometimes it was related to the current weather such as thunder storms or snow storms that are typical for this region. At other times, children expressed interest in learning about volcanoes and tornadoes even though the geographical area of this study did not experience these natural phenomena. This was due to the children's exposure to media. Often children requested the teachers to show images or videos of tornadoes and volcanoes. They exclaimed while watching the hot lava, bursting out of the volcanoes and the power of the twister winds. Their interest persisted in the subject as evidenced through continued entries of drawings of tornadoes, volcanoes and twisters in their daily journals numerous times. The following interaction illustrates the fascination with a twister:

> David was busy drawing in his daily journal one morning. When he was finished, he turned to the researcher and asked if she could write the words in his journal saying that it is a "Twister." He further clarified that a twister was same as a tornado, but it was a hot sand like

dust that destroyed everything. It was different than tornado because it twisted. David requested if he could see some pictures of a twister on the phone or the computer further adding that he would also look up penguins after watching the tornado video on the computer (field note, 5.2.16).

Boys seemed to be more drawn to these natural phenomena than girls. When parents were asked about their child's fascination with these natural phenomena, they were unsure about the source of curiosity related to their children's interest in natural phenomena.

Figure 12. Tornado, rain and lightning

Figure 13. A storm

Figure 14. A volcano

The subject of rainbows dominated the daily journal entries as well as the children's world book throughout the course of the study. Rainbows were often drawn in the daily journal and the world book both by boys and girls. During one of the large group gatherings, a book reading provoked an interesting discussion about rainbows. The title of the book was "If I had a Rainbow," and it was selected based on the expressed interest of children in rainbows. Many interesting questions were raised by children such as, "How do rainbows travel?" "Can you ride a rainbow?" and "Can rainbows be held in arms?" However, all children unanimously agreed that rainbows were part of their world. Many children had only seen rainbow in books or through

television shows and movies. Some wondered why rainbows disappeared when the sun came out. One of the girls in the class summarized her understanding of a rainbow stating, “Because this is how it goes. When it rains then the sun comes out and then the rainbow comes out.” Another remarked, “When the sun comes up, the rainbow disappears and then it comes up at another place, and another place” (field note, 5.20.16). A child expressed her wish to visit a rainbow that she believed was up in space. She wanted to slide down its colors (field note, 4.26.16). A magical attribute had been ascribed to rainbows by children. Many expressed a desire to see a real rainbow having seen them only in print and digital form.

Figure 15. A rainbow

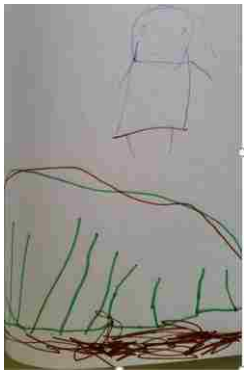

Figure 16. My mom by the rainbow

Figure 17. My family under the rainbow

Awareness of other natural elements such as rocks and seashells was expressed through drawings in the world book. After drawing many sized rocks in the world book, one of the children requested the teacher to write the words stating: “Today Omar explores nature. Today he explores rocks.” On another day, the same child added seashells as part of his world. The words dictated for his drawing said, “I explored the seashells because I am very happy. I love to hear the sea in the shells. I hate the taste of the sea because it is totally disgusting” (field note, 2.19.16).

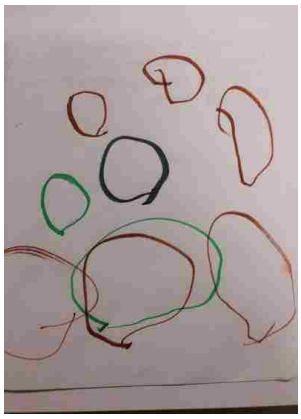

Figure 18. Rocks

Tammy, a 3-year-old girl, during her travel by plane observed the sky through the window and said, “I watched the sky through the window. I like everything about the sky” (field note, 5.11.16). The passport activity also revealed children’s interest in visiting a wide range of natural environments such as mountains, forests, gardens, volcanoes, caves, woods, and beaches. Children viewed these places as desirable to travel to and explore places to have close encounters with the natural world.

Figure 19. A volcano erupts and destroys the world for ever

Observing the children’s connection with various aspects of nature presented an opportunity to examine these experiences more closely through the lens of the common world framework

resisting a habitual human centric lens within the framework of subject-object and other triad distribution (Taylor, & Giugni, 2012). In all the three examples, children were engaged with the elements of the natural world facilitated through media and other tools that the modern world affords us. However, upon closer observation and reflection, there was more happening than what met the eye. In the case of Omar, he was using a tool to draw visual images of rocks and seashells. He had encountered both seashells and rocks elsewhere and these had become part of his knowledge. As Barad (as cited in Ashton, 2015) points out "Knowledge is an engaged material practice and never a set of disembodied ideas" (p. 16). In his experience with rocks/seashells, Omar had developed a relationship with the material world which led him to announce one day that rocks and shells were part of his world. Barad (2007) explains, "Knowing is part of the world making itself intelligible to another part of the world" (p.185). Omar and the rocks were engaged in an "Intra-action" experience. The concept of intra-action is grounded in the theoretical work of Karen Barad (2007). She proposes that "'Intra-action' signifies the mutual constitution of entangled agencies … intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action" (Barad, 2007, p. 33). Intra-action is different than interaction. In interaction, as it is understood commonly, subjects come together to perform an action while retaining their individual entity. In intra-action, the individual entity emerges through their encounters, each influenced by the other. Omar's entanglement with the rocks/seashells was leading to a newly formed relational connection with the material world. Along the same lines, children's engagement with natural forces of tornadoes and volcanoes also brought awareness and understanding about the presence of these forces in the world that they co-inhabited. Massey as cited in Taylor and Giugni (2012) t a similar approach stating that the nature of "throw togetherness" of the world that we co-habit with other species and forces of

nature requires us to consider how to be responsive to the "Rocks, stones, and trees" (p. 114). The common worlds framework highlights the mutual intra-action and continually changing equation among all actors and actants while emphasizing the responsibility for mutual sustainability.

Relationship with space

The world of space was viewed by all children as a world far away. The children's conceptualization about the space world was formed through exposure to media and technology. It was a world that was mysterious and unknown to them. The children's drawings and constructed images about space were though movies, television show, games, and books. Their keen interest became evident through the world book activity as many children made visual images depicting travel to space in space ships or rocket ships. The passport activity revealed the children's interest in traveling to destinations in space such as planets the sun, the moon or stars. Sometimes their drawings depicted them to be traveling to space alone, and other times with friends and/or family members.

Figure 20. A rocket ship

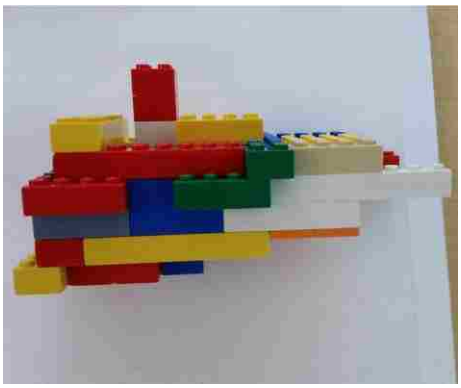

Figure 21. A spaceship going to sun

Figure 22. Mom, Dad, Sister and me going to the moon in a rocket ship

Classroom mateirals such as Lego blocks were used as tools to demonstrate their understanding and interest about space. Many children stated that space was part of their world and that it was a faraway place as illustrated in this conversation:

After drawing circles a few times to represent a space ship, Reena, a four-year old preschooler announced, “I am the pilot.” The researcher asked, “Where are you going?” The child replied, “I am going to the very hot planet.” The researcher asked again, “What is the name of the planet you are going to?” The child replied, “Sun.” “What would happen if you get too close to it?” She was asked by the researcher. Reena made a sound, “Shewww… and added, “I will catch fire” and started laughing. “How long will it take you to get to the planet?” She was asked again. Reena responded, “It is far away.” (field note, 2.25.16).

Figure 23. Space ship going to the hot planet sun

Knowledge about space varied among children based on their interest in the subject. Most had acquired information about space through their exposure to media and technology. Many children drew their own pictures traveling in a rocket ship or a space ship to visit planets. Sometimes this included friend and the researcher too. One of the children, Paul was very interested in space and planets. His mother reported that he watched YouTube videos on space and planets almost every day due to his interest in the subject matter. He had acquired a lot of information about various planets in space. Paul described the unique qualities of each planet as he drew them in his world book, on the chalk board, or in his journal. One day, while the weather was cold, Paul declared, “I want to draw the sun because it is cold and it will make us warm.” He then continued to draw Mercury and other planets in his world book. He told other children sitting around him that he was making “Sparkly nodes of the north” (field note, 5.2.16).

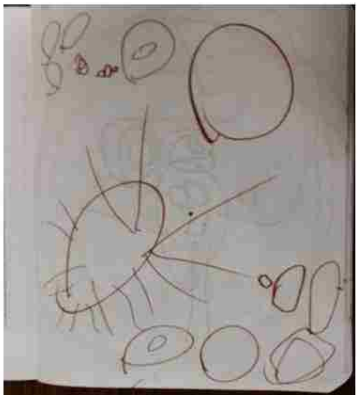

Figure 24. A solar system land

Another example of children's connection with space became evident when a four-year-old boy informed one day that he was building a space ship with a person to go to the "Japanese World", When the child was asked to elaborate on the "Japanese world" and his reason for choosing the Japanese world, he did not explain, but expressed interest in taking a picture of his space ship with the camera (field note, 3.14.16).

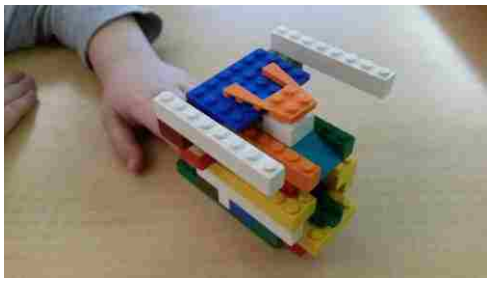

Figure 25. Space ship is part of my world. There is an astronaut in the space ship. It is going to the Japanese world.

Children were aware of the tools they need to look in space. During the study, the children were asked by the researcher if they needed anything to support their research in exploring their world. While most of them acknowledged the usefulness of having binoculars to look at their world, they expressed interest in looking up at the sky to explore space through a telescope. This was used a few times but children found it difficult to operate them outdoors and although they

acknowledged that it helped them to look at the sky up close and the high tree tops, their interest waned. The telescope used was not of a professional quality, but one commonly used among households.

Children demonstrated a natural curiosity about planet Earth and the space above it. Their interest was triggered and supported by media and technology. Research on children's scientific understanding about Earth suggests that such knowledge is acquired culturally and that children's views are somewhat similar to the scientific knowledge about Earth. While the children's knowledge in this area is not fully coherent, it is slowly achieved over time as they get older (Nobes, Martin & Panagiotaki, 2005; Nobes et al., 2003; Siegal et al. as cited in Nobes et al, 2005). Scholars have also shown that knowledge in some aspects of cosmology cannot be acquired experientially through daily living experiences (Seigal et al as cited in Nobes et al., 2005; Panagiotake, Nobes, & Banerjee, 2006). Children construct this knowledge socially. Harris (as cited in Nobes et al., 2005) states, "In the absence of empirical feedback, children use that alternative, species-specific mode of information gathering – discussion and conversation – to seek enlightenment. In such contexts, they are likely to learn about, and come to rely on, the collective representations of their culture concerning the nature of numerous phenomena" (p.165). Scholars agree that this does not imply that the knowledge acquired culturally is scientific in nature, but may serve as a bridge until such a time when more formal understanding of these complex phenomena is acquired. The same may not be applicable in domains such as physics (McCloskey as cited in Nobes, Martin & Panagiotake, 2005), and biology (Slaughter, Jaakkola, & Carey, 1999). In this study, children's socio-cultural context was permeated by media and technology. Their family contexts were also infused with media and technology. Children, like sponges, soaked up information piece by piece about space and cosmology while

engaged in their meaning making process as they played in their classroom each day. The children's curiosity combined with their imagination propelled them to traverse beyond the physical world to the universe of space, planets, and rocket ships, a social space to play with friends and close associates. The drawing below illustrates this point. Their world appeared to be a seamless and boundary less world open to all known and yet to be known objects, forces, and people, a lived example of inclusionary practice as proposed by the common worlds framework.

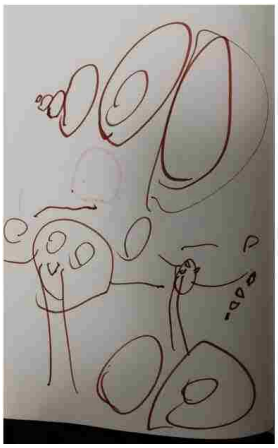

Figure 26. Ms. Anu and Paul hanging out with the planets

Relationships with media characters

Characters from children's shows and media were often the focus of children's play. Block building area, quiet corner, and other classroom materials were used to play out the roles of these characters. Daily journal and world book entries also demonstrated their connection with these characters. Children often referred to them by the name and stated that these characters were part of their world. The characters named and drawn spanned a wide range from Donald Duck, Peter Cottontail, Goldilocks, and The Three Bears to other Hollywood movie characters such as Darth Vader, T-Rex, The Lion King, Frozen, Power Rangers and other children's shows such as Minions, T. J. Masks, Max and Ruby and The Lion Guard. The children could relate to these

characters because of their exposure through television shows. Many children could tell which show could be watched at which channel or if their family had DVDs to watch them.

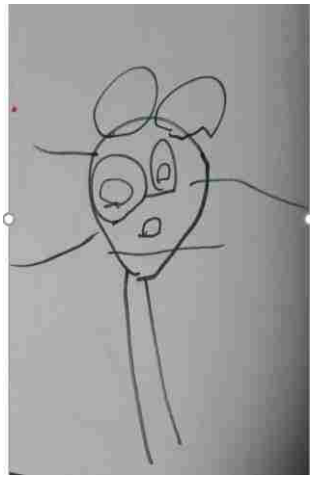

Figure 27. Micky Mouse

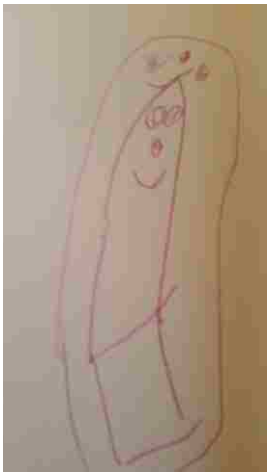

Figure 28. Frozen

Figure 29. Ninja Turtle

Superheroes such as Avengers, Spiderman, Batman, Captain America and others were part of daily conversations, and indoor and outdoor play among boys. There was a sense of awe for the power these action figures seem to symbolize and convey though their actions. Some children drew pictures in their daily journals and their world book regularly. There was one boy who drew detailed pictures of superheroes in his daily journal spending sometimes up to 30 minutes drawing their images. When asked about the reason behind his fascination with the superheroes, the little boy said that the superheroes were powerful and always defeated the "bad guys." In a follow-up interview with his mother, she admitted that her son was very interested in the superheroes and had a lot of toys and other paraphernalia connected to these heroes that he played with at home. Some children would wear T-shirts with the image of superheroes or bring their costumes to show their friends at school.

Figure 30. The Superheroes

Superhero play has been a subject of debate in the early childhood field. Parents and teachers have questioned its value to children's development. Some of the expressed concerns about superhero play relate to its negative impact on children's play and interactions (Levin & Carlsson-Paige as cited in Parsons & Howe, 2013), inability to differentiate between fantasy and reality (Boyd, 1997), and its connection with aggressive behavior (Carlsson-Paige & Levin as cited in Parsons &Howe, 2013). Based on the belief that superhero play leads to aggression, many early childhood programs have banned such play (Holland as cited in Parsons & Howe, 2013). However, current research indicates that superhero play, contrary to the concerns expressed by some educators, provides opportunities for children to increase creativity, social, emotional, and cognitive skills (Bergen as cited in Parsons and Howe, 2013; Parsons & Howe, 2013). Superhero characters were dominant in the shows that children watched regularly at their homes. Children were fascinated by their acts of power and strength. Superhero play was not a banned subject at this site as the program valued the emergent nature of children's interests.

While some children would assume the role, others engaged in creating the image through drawing or block play. It is during these engagements with the characters, whether in play or watching the show, that the new assemblages were being created.

Children draw the play themes generally from their family and community contexts both in real and virtual life (Fleer, 2014). Accordingly, Fleer (2014) explains that play activities are used by children to make meaning of the world around them both in various roles they encounter and rules they live by. In drawing images of superheroes, children were engaged in making sense of their characters as well as the power they symbolized. According to Fleer (2014), play provides children a space to exercise will and power, understanding of social roles, as well as meaning making that contributes to their growth. However, in this act of meaning making, children were creating new assemblages born out of shared events (in this case, television shows) with the media world characters (Drotner, 2009). Viewed through the lens of the common world framework, the engagement with various media characters helped children to become and continue to become who they were (Taylor & Giugni, 2012, p. 112).

Relationships were also expressed with other characters on television shows or movies. Omar, one of the boys in the classroom, one day drew a figure of a Zombie in his journal. He made Zombie figures from time to time in his journal and talked about them in the block area. When he was asked about his reason for drawing Zombies so often in his journal, he explained that he liked Zombies because they destroyed bad guys (field note, 5.18.16).

While superheroes were mostly found in the world of a few boys, interest in robots was expressed by most children, both boys and girls. This was also the influence of media as many children would tell where they saw the robot. One day, three boys built what they said were "power robots" with blocks in the block area. One of the boys also built a Star Wars building and

said that there were robots in Star Wars movie. When these boys were asked the reason for building robots, they informed that robots could blast anything (field note, 5.13.16). “Robot play” was so prevalent that the teachers in the classroom in collaboration with the resident artist decided to make this a class wide inquiry project.

Figure 31. Power robots

Figure 32. A robot prototype

The teachers recognized that robots were an emerging interest among children and they used this opportunity to facilitate an inquiry project. An interesting group meeting was called to further discuss children’s understanding about robots. The following paragraphs provide the context and the recorded conversation that took place:

> The theatre artist, Mr. Matthew, entered the classroom. All the children ran over to him to greet him and gave him hugs. Some asked him to do the Billy goat story. The teacher asked children to finish the work and come to the circle. When all were in circle, the teacher informed the artist that children had been talking about rainbows and robots in the classroom and how could these two ideas be explored further.

Artist Matthew - “Maybe we could make a story about them.”

Child (C) 1 – “We can make a lot of robots with gizmos.”

Artist Matthew – “What are robots made of?”

C1 – “Metal.”

C2 – “Paper.”

C3 – “Pizza.”

Artist Matthew began, “Ok so they are made up of stuff. What about people? How are people made? Sarah answered, “They give one half out of their mom and one half out of dad and then they gave it to the kid and then I got born and then the baby.” Artist Matthew repeated, “Yeah, what Sarah is saying is how people are made up kind of half of our mom and dad and they made us and that is how we are made up. We are made from people, people stuff. What are we made up of? What is this (points to his skin)?” All the children shouted together, “Skin.” Artist Matthew asked,” What is under my skin?” All children answered, “Bones.” Artist Matthew repeated, “I am made up of skin, bone and something in between.” All the children respond, “Blood.” “And”, the artist asked. All children shouted, “Muscle.” The artist repeated, “We are made of skin, bone, muscle, and blood.” The children laughed. Artist Matthew stated, “This stuff is people stuff. Now, robots are not made of people stuff. They do not have bones. So, let me ask you – how do people move?” Some children responded, “By the heart.” Artist asked further, “Tell me what you mean by heart.” Omar answered, “Well, because when ninja was bleeding one day, I used my legs to move. Artist Matthew asked again, “What made your legs move?” Omar answered, “My heart and I did not bleed.” Artist Matthew explained, “When you walk, your knees move. What tells your body to move?” There was silence. Artist Matthew continued, “Ok, let’s do an experiment.” He asked Zen,

one of the children, to stand up in the middle of the circle and directed, “When I say go, raise your hand above your head.” Zen did. Artist Matthew asked, “How did he do that?” Zen laughed. “How in the world did he do that?” Artist repeated and asked everyone, “Ready, everybody does the same. Put your hand above your head and now put it down.” All the children do it. Artist asks again, “How did you know to move your arm?” All Children shouted out, “My head, my head.” Some answered, “My brain.” Artist remarked, “You guys are very smart. I want to tell you something, your mind is made up of your brain in your head and the rest of your body. Your mind is not just in your head but it is in the rest of your body. You can think not only with your brain, but with your mind that includes your whole body.” Some children exclaimed, “Oh man!” Sarah shouted, “Yeah! Yeah!” The artist directed again, “Everybody close your eyes and put your hand on top of your head, you can’t see your arm, but you know where your head is.” Repeated. “Open your eyes,” artist commanded. “How in the world did you do that?” Artist asked. “You could not see, but you could do.” Some children responded, “We are very smart.” Artist emphasized, “That is something we can do. We can. But robots, I don’t know if they can remember. They can only remember what people tell them. Someone has to give them information.” The artist asked the children to repeat the word “information.” The teacher wrote the word on the board. “That is a good word,” artist told the children. Omar, one of the children, began to tell a story, “One time I watched Star Wars Luke Skywalker, and C3PO is a robot. Droid is a robot. R2D2 is a robot but Droits are not.” Artist redirected the conversation and said, “Let us talk about information. Information is anything that you know that you can put together to make sense. That is Something. Information is stuff we know so that we can do things. Your mind learns information in all sorts of ways from your body – things that you touch, hear, things that you

taste, touch, and things that you smell. These are our senses. You have 5 senses." Children laughed. Artist continued to explain, "You hear, you see, you smell, you touch, and taste. Your senses give you information. If we are going to build a robot, I want you guys to think about what things you want the robot to be able to do." Sarah quickly responded, "Give us chicken." Tammy asserted, "Give me rice." Artist summarized, "So feed you. What else? So you want robot to feed you and eat." One child stated, "Robot helps you to drink." Artist asked, "What other things? What do you want robot to do? Another child said, "a kitten." Artist asked, "Give you a kitten? You want robot to give you things?" Tom said, "May be the robot can give me a dog because I do not have a dog. Artist reiterated, "This robot should eat, feed, and give us things. What else?" One child said, "Do gymnastics." Artist asked, "You want a robot that does gymnastics?" If the robot must do these things, then what does he need to have? So, hold on, if the robot has to do all these things what does robot needs to have? ...Ok next time we will have to figure out how this robot can give you things" artist summarized and added, "We did a lot of good thinking? You can think about what this robot should looks like so we can plan. We are going to make a plan. Do drawings of what it looks like. We will make a list of what a robot is made up of. Maybe made up out of stuff and you have to figure out what it is made up of. I am going to be looking for your drawings of robots so I know what kind of robot you want to make and what is a robot." (field note, 2.5.16)

The above dialogue demonstrates the children's understanding about robots based on what they had been exposed to through media. It also illustrates how the artist was using dialogue with children to learn what they knew about robots while providing space to nurture their interest through guided questions and inquiry strategies.

There have been rising concerns among child advocates about the increased influence of media and digital technology on children's understanding of the world and their interactions with it in their daily lives since the last decade of the 20th century (Cook, 2009). The technological advances, critics say, have opened a field of opportunity for marketers and advertisers to use television and the internet to appeal to children's consumerism. Television shows, characters are created, branded, and marketed to young children through programming supported by a myriad of consumer products. Robots are present in many of the shows. It became clear through the children's conversations that they had constructed their understanding about robots through their exposure to media. Their play and conversation with peers in the classroom sustained their interest in robots. Through their classroom play and conversations, children were expanding their understanding about robots.

Studies have shown that preschool children attribute less humanlike qualities to robots when they see a remote used for operating a robot (Somanader, Saylor, & Levin, 2011). Preschool children can differentiate between a girl and a robot as well as a girl and a camera when shown pictures. They are also likely to attribute living characteristics to a girl than to a robot or a camera (Saylor, Somanader, Levin, & Kawamura, 2010). The discussion with the artist showed that children were figuring out the humanlike attributes of the robots through their conversation. Robots were part of their world and children were processing the available information with peers and adults to describe and explain what robots meant to them. The classroom structure provided space to build on their prior knowledge through engagement with peers and other adults in the environment while strengthening their connection with the media generated character of a "robot."

The multi-layered relationships of children were spread across various aspects of the universe beyond their family, pets, and friends. Driven by the engine of their insatiable curiosity, boundless energy, and imagination, children blazed the trails beyond the boundaries of their immediate environment, to the world of nature and space undaunted by barriers of time, distance, and mobility. The children's world had no boundaries, always expanding, making new connections while fostering the ones already made.

Mechanisms of Forming and Maintaining Complex Relationships

The depth and breadth of relationships that the data revealed highlighted the presence of a powerful process and its related mechanisms and how these mechanisms facilitated the broad network of children's relationships. This process is globalization, and its associated mechanisms of technology and media. In this study, these mechanisms facilitated the expansion of children's worlds beyond their immediate environment. These are identified in this section to explain how they contributed to building the relational world of children.

Broadly speaking, globalization is a process through which, the integration of people, products, and ideas across space and time is facilitated by modern technology at a fast pace. The influence of commonly acknowledged elements associated with globalization (time, space, and mobility) was evident in various aspects and levels of this study site. These were visible in teaching practice, environment, teacher education, curriculum, teaching materials, and presence of technology (Cleghorn & Prochner, 2010).

At the study site, the element of mobility was reflected in the diversity of people (teachers, children, and families) that were part of the classroom. The presence of culturally and linguistically diverse children in the classroom provoked their curiosity. The casual hearing of

different languages and dialects by family members at the drop-off time were subtle reminders of the presence of global in a local preschool.

The presence of many classroom materials, such as the globe and the world map, represented the global in their local environment exemplifying the mobility of objects that connected children to distant places. Some items had been purchased by the teacher from a children's catalog whereas others were given to the classroom by families and student teachers. When the researcher went on a trip to an island, she brought back some seashells she found on the beach. These were placed on a tray for children in the science area of the classroom. Children would often stop by and pick up the shells, bring them closer to their ears, and remark that they liked listening to the ocean in the seashells. Another example was the presence of a Chinese calendar that one of the families had given to the classroom. A metal tiger sculpture was also displayed on a shelf, a gift that the researcher brought back from her trip to India. The classroom space was permeated by many objects from distant lands, a visible sign of mobility of products and a sign of a globalized world in which children were. These were all readily available options for global reach for children as part of their classroom environment. Some of these environmental triggers became the basis of relationships that the children expressed in this study.

Mobility was not only reflected in the material aspect of the classroom, but also through the travel experiences of children, and their families. These experiences expanded the children's understanding of places located outside their immediate locale. One of the children had travelled to Kenya to visit his father's family and this often came up during group conversation leading to further inquiry about Kenya's location on the world map that hung in the classroom. Omar referred to his plane ride to San Diego to visit his aunt, and his trip to the beach during this visit. Mobility was reflected in the ways children travelled to the school and around the Lehigh Valley

locally. Mobility was also reflected in the ways children were driven to preschool and from one program to another reflecting the full itinerary of their daily activities after school, often referred to as "full diary syndrome" (Walkerdine, 1999).

The mechanisms of globalization impacted the children's classroom space in a variety of ways by influencing its texture and composition. In many ways, the children's classroom space was a small local link in the wider global network that continuously reconstituted its everyday environment. Drawing on the scholarly work in the field of children's geographies, the classroom site/space could be viewed as a representative constellation of the global and the local intertwined together to contribute to the socio-spatial construction of children's daily lives (Holloway & Valentine, 2000).

Technology

Using technology to connect with people, places, animals, and other natural phenomena added to children's awareness of things beyond their local reach thereby compressing space and time. Use of technology in their daily lives was evident through the casual references to tools such as iPADs, computers, iPhones, YouTube. Children talked about using an iPAD for playing video games or watching their favorite shows at home or while traveling. This was reflected in their play in the classroom. In the block area, blocks were used symbolically as in their play.

The children's daily activities in the classroom demonstrated how they used technology as a tool to access information. The classroom space had two desktop computers. These were used as inquiry tools for the emerging interests of children and for playing educational games. Children requested to watch videos or photographs of volcanoes, tornadoes, and animals on the classroom computers. In these instances, children were working with technology to extend knowledge about the natural phenomena.

Scholars believe that exposure to technology influences learning and learning styles of children (as cited in Plowman et al., 2008). These are related to technological skills, expansion of knowledge about the world, and building dispositions through usage of technology. This view has also been endorsed by Prensky (2001). However, the field site had restrictions on the screen time each child could spend working with computers in the classroom. Classroom teachers implemented these rules consistently.

It appeared that the children had acquired the verbiage connected to technology. They referred to words like remote control, batteries for power, the mouse, and binoculars with comprehension. One of the children referred to a "time machine" to going back in time to see extinct species. Binoculars were also used regularly by children to see their "world." At times binoculars were used to look for something specific as Sarah, told other children one day while using binoculars that she was looking for "dinosaurs." Another child requested if he could have a turn to use the binoculars to explore his "world." Through practice, children had learned to use the binoculars appropriately and discovered its function. They laughed when they were able to magnify a friend's face through focusing the lens. Often children helped to take photographs of their work with the phone camera. It was apparent that many of them had acquired the basic skills in technology.

Zen, a four-year-old boy in the classroom, often made a television screen with rectangular blocks in the block area of the classroom to play his favorite game called Minecraft. He played this game with his older sibling at home regularly. Minecraft is a computer game which provides a digital space to build anything out of virtual blocks. Zen insisted that his world was in the Minecraft game that he created with his brother. He invited teachers and friends to play this game with him informing them about the content and the rules of the game. Zen understood that

a remote device with batteries was needed to play the game. This became evident during one of the conversations:

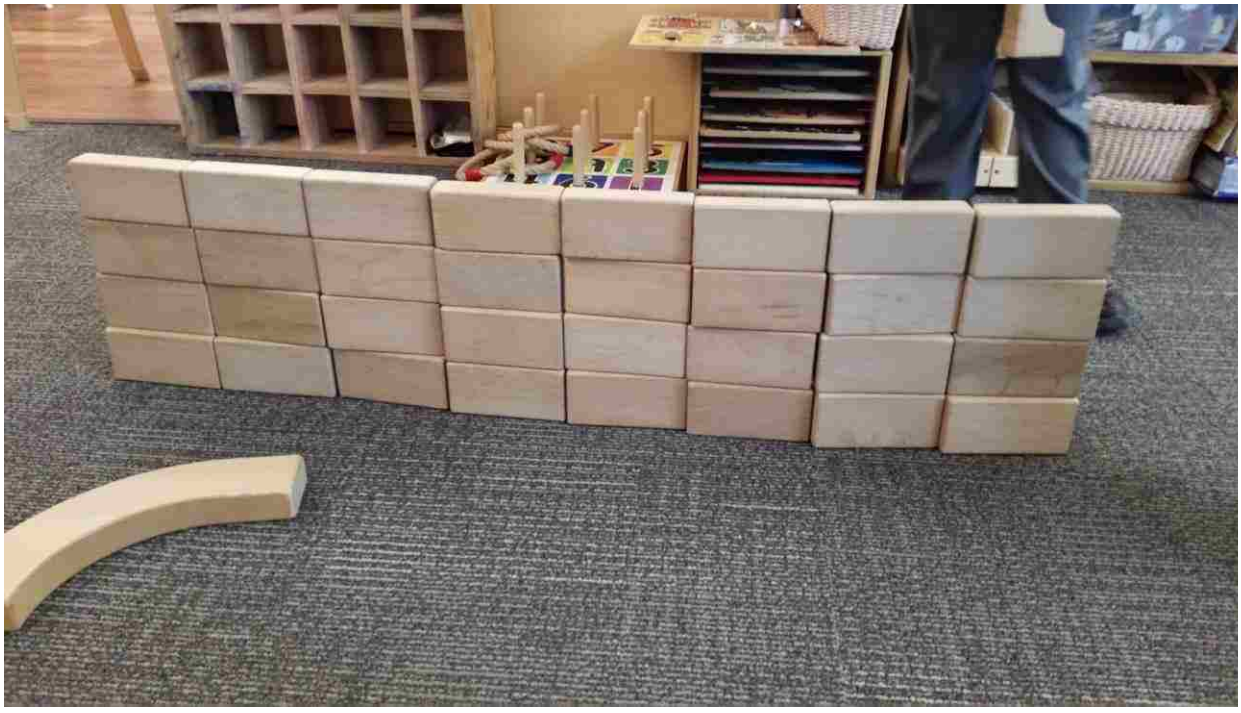

Figure 33. Zen playing Minecraft game on television with a remote control

> Zen, referring to a block he pretended to be using as a remote, says, "It works on batteries. You have to charge the battery when it shows red. Then it turns green." I asked, "What does charge mean? You mean food?" Zen replied, "No we plug it on and it turns green. Then it works with the game." I asked, "Do you play this game on a computer?" Zen replied, "No, I play Minecraft game on the television with Walter, my big brother." (field notes, 1.21. 16).

Zen's play in the block corner inspired by Minecraft game provided an example of how his digital play with Minecraft was extended to the block area where he would build block structures of television screen and other digital devices. It also demonstrated how Zen's world included a

virtual world, one that has emerged within the last two decades of the last century opening a new field of imagination and play for children.

Young and Elliot (as cited in Hunter & Sonter, 2011) explain how technology helps to apply scientific principles to develop tools and machinery to solve problems. Scholars also state that technologies not only serve as tools, but can also be viewed as processes that influence how one makes sense of the world and expresses views about it (Yellend as cited in Waller, 2011). Children at the site were aware that a special tool was required to see the space world. They asked for a telescope so that they could explore the space world as co-researchers. Technology was all around them and as digital natives to technology they worked with technological tools to make meaning.

Media

The children's lives were permeated with media. It was a source of knowledge as well as a trigger to seek more knowledge. Media not only included books and television shows, but the world of digital media which exposed children to objects, people, and places beyond the reach of their physical environment. Media, as Heinz (2009) states, "have revolutionized the pathways for knowledge acquisition, and the way children create images of themselves, of others and of the world in general" (p. 203). While media reflects the culture, it also provides the subject of what is spoken and thought about. The presence of action figures and other media characters in children's play and conversations pointed to the ubiquitous presence of media in children's lives. Parent interviews verified that the use of media and technology supported children's learning and play at home. Media was interwoven in the fabric of their daily lives ina myriad of ways at this location.

Nature of Relations

The children's worlds were characterized by a network of relationships. These relationships were associated with many aspects of their lives such as family, pets, friends, nature, animals, and places (both geographic, cosmic, and virtual). Relationships were associated with certain emotions that reflected the nature of the relationships. Informal conversations revealed some of these feelings that children expressed. For example, when Sarah missed her mom while she was on a business trip, she expressed sadness, but also her love for her mother (field note, 2.17.16). As the themes of relationships emerged during this study, emotions/feelings that appeared to connect more than one category of relationships related to children's fascination with power, mystery, and their expression of love for their family, friends and pets. This is explained further below.

Expression of love

Children expressed their love and affection in the context of many relationships. The most explicit and often expressed was the children's love for their families. It was expressed through their journals, world book and during casual conversations. Jack drew his mother each day in his journal. It was almost like a ritual for him. Gail drew her family in her journal and world book in different scenarios – under the rainbow or relaxing with her mom and dad on the grass. At other times, children's love was expressed through their acknowledged sadness because they missed their mothers. Sarah missed her mother because she travelled on business trips. David missed his mother because she was in the hospital with the baby. He drew her in his journal with a smiley face. Depending on the family structure, grandparents were referenced quite often. Alex drew pictures of his grandmother and grandfather as part of his family. Tammy talked about visiting her grandparents in Florida, while Paul described fondly about his trips to grandma's house.

Children also referred to their siblings with affection. Zen often talked about his older brother he played video games, while Jack would draw his brother in his journal or talk about playing with him at home.

Pets were viewed as part of the family and given special attention by children. Most children who had pets talked about them and drew their pictures in their journals and the world book. Emily who had 9 pets often talked about them fondly and drew numerous weighing scales often found at a veterinary doctor's office. When asked to draw a picture of their world, many children included their pets as part of their world. The relationship of love was expressed in different ways depending on the unique family context and the personality of the child. No negative emotions related to a child's family were ever expressed during the course of the study.

Fascination with "power"

A theme that emerged through the data analysis was the children's connection with characters, animals, and phenomena that had a common theme of "power/strength" associated with it. Power was demonstrated through size or agency explicitly. This was evidenced through the presence of a consistent theme of action figures, volcanoes, tornadoes, and animals such as dinosaurs, sharks, and crocodiles.

Some of the children's fixation on action figures could be explained by their possession of special powers that "destroyed bad guys." This was enacted with the use of classroom materials like blocks, Legos, or role play indoors and outdoors. This indicated that children were attracted to power/strength.

Dinosaurs, alligators, crocodiles, and sharks all fell into the same category of animals that symbolized power and their ability to control their prey. A similar trend was found in children's consistent interest in natural phenomena such as tornadoes, and volcanoes –each associated with

their power and force captured in each instance of their occurrence. Tornadoes demonstrate their power and strength by uprooting objects and destroying everything that comes in their way. Volcanoe eruptions spew hot lava that burns everything within its vicinity. The reaction of children at the sight of these natural phenomena watched on videos was one of awe and amazement at these wonders of the natural world. Robots were objects of interest among all children. Their presence was observed in children's block play, daily journals, Lego play, and other manipulative toys.

Children believed that robots were machines that do what they are told to. Owning a robot meant having control and power over something that children do not usually experience within the social hierarchy. Generally, children experience a status of vulnerability and protection within the social structure of the western society. Perhaps, it is this unequal and less powerful status that attracted children to robots. It allowed them to have power and control, something that they would not experience in the world of adults.

Fascination with mystery

The theme of mystery became evident during children's conversations related to space and rainbows. Both boys and girls made several drawings of rainbows in their journals. Most of them were attracted to the colors in the rainbow and often requested for the rainbow song to be sung during group times. Sarah often asked to view rainbow images on the computer. Children liked rainbows for their color and beauty, but also because of their mysterious appearance and disappearance in their world. Rainbows were discussed so frequently that the teachers felt a need to ask the visual artist to engage in a collective project with children. In the end, through a democratic process, children voted for a collective project on robots instead of rainbows. After reading a book one day on rainbows titled "If I had a Rainbow," a long conversation about

rainbows followed. Children unanimously agreed that rainbows were part of their world, but wondered how they travelled around. Some children had never seen a real rainbow while others had seen them on a snowy mountain or at their grandma's house. Some children thought that peacocks and flamingoes carried rainbows on their back. One child expressed his frustration by saying, "I never got to see a real rainbow. I waited 400 hundred hours and I did not see it" (field note, 5.20.16). Children also wondered about the size of the rainbows as they had seen them in both small and large sizes. Children's fascination with rainbows could be explained by its association with mysterious and random appearances as observed by children - sometimes after the rain and at other times just inside the homes of children as well as other elusive features connected to rainbows. Rainbows inspired a sense of wonder and mystery sparking their imagination to draw its image in their daily journals.

A similar association was noticed in children's conversations related to space. Both boys and girls talked about their travel to place. At times, the researcher was also invited on their space ship. Space was a distant space that children knew about through their exposure to media. It was an unknown faraway place that they visited on a rocket or a spaceship. Conversation about space being a faraway place occurred regularly in the class room. After building a structure with Legos, Paul came over to the researcher one day and said, "This is a space ship." When researcher asked where his space ship was going, Paul answered, "It is going to Mars." When questioned about the location of Mars, Paul responded, "It is far far away. Over there is the Earth" (points to the globe in the quiet corner) (field note, 2.5.16).

Space was also conceptualized as an unknown place that needed to be explored. Omar made a drawing of a spaceship in his journal. When asked if the space ship was parked or going somewhere, Omar replied it was going to the moon with mom, dad, baby sister and the

researcher. When asked the purpose for this trip, Omar responded “just to explore” (field note, 3.18.16).

Children’s expression of wonder and sustained interest in these two topics is consistent with some of the scholarly work in the field. Sebba (1991) found that children experience nature, "in a deep and direct manner, not as a background for events, but, rather, as a factor and stimulator" (p. 395). Experiences in nature have been positively associated with a sense of wonder (Cobb ,1977). Wonder, as Cobb (1977) explains, is not just an abstract idea or a feeling, but refers to an awareness that a child experiences with his developing perceptual abilities. However, this awareness gradually disappears as children transition into formal schooling where more emphasis is placed on objective and cognitive methods of teaching over the sensory ones. Children’s interest in rainbows and space could be explained as a reflection of their sense of wonder that was expressed through their drawings and other play activities.

How do children place themselves and others in the world? How do children make distinction between immediate and beyond (far)?

References to a physical place and the space world were made by children during their daily activities. Place and personal positioning were often talked about simultaneously, therefore the two questions are addressed in the analysis together.

Figure 32. It's a rocket. We are going to land in moon. When it's sunny, we come down. When it is dark, we go to the moon.

Children referred to places, objects, people, and animals both far and near during conversations, play, and in their journals in connection to self. These connections were through personal travel experiences, those of family members or friends at school, interest in objects, animals connected to specific places, or curiosity triggered through children's literature.

During the study, many examples of their understanding about distant places came to light. The following interaction illustrates how one of the television programs helped create a connection between a four-year-old to Madagascar, an island in the Indian Ocean:

A poster of a world map hung on the wall of the preschool classroom. It was placed at children's eye level so that they could see the map up close. Callie pointed to Madagascar on the map accurately (she does not read yet) and announced that she would like to go to Madagascar. When questioned about her reason for this visit to Madagascar, Callie said that she wanted to see the lemurs there. She further explained that Lemurs were like bunnies (field note, 2015). When she returned to school after two days, she walked over to the

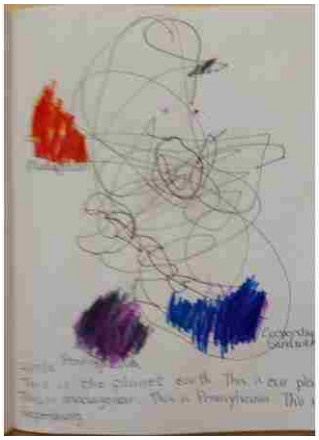

Figure 34. Map of Madagascar

> world map again. The researcher was with another child. She pointed to Madagascar again, and said that she wants to go there. When the researcher questioned how she planned to visit this place, Callie answered that she would have to take a plane as it was too far. Callie demonstrated that she was aware of her placement and the place she planned to visit was a distant land, Madagascar, a land requiring travel by plane. Her connection to Madagascar was due to her interest in lemurs and Madagascar was their place of habitat. In this case, Callie was connected to a place through her personal interest in an animal (field note, 2.15.16)

Children related to places through travels of their parents to distant places. The mother of one of the children, Sarah, occasionally travelled for business to Germany. Sarah expressed her awareness of its distant location from her home during a conversation with the researcher. She came to school one morning and expressed that she missed her mother because she had gone on to Germany for work on a plane. The researcher offered to show Sarah Germany on the world map. Sarah quickly said that she lived in Bethlehem and would like to be shown where Bethlehem was on the world map. After examining the two locations on the world map, she declared that Germany was very far (field note, 2.17.16). However, she expressed excitement about her mother bringing her a gift all the way from Germany. In May, towards end of the semester, the researcher took a trip to Germany; Sarah was quick to remark that her mother goes to Germany for work too. This interaction demonstrated that Sarah had made a connection with the place (Germany) and was aware that it was far away from where she lived. Her mother had taken a plane to travel to Germany. She placed herself in Bethlehem and her mother in Germany.

Discussion around personal travel revealed what children understood about their placement in the world too. During one of the group discussions, when children were asked if anyone had travelled on a plane, one of the children, David, said that he had gone to visit family in Kenya.

Sarah announced that her family was going to the “white house” in Florida for vacation. Another child asked if she was going to the “white house” where President Obama lived, the child seemed annoyed and corrected the other child stating that her white house was in Florida and not where the president lived. Another child shared that she had gone to the “Statue of Liberty” by car and it was far away (field note, 5.18.16).

Personal travels of adults with whom children interacted also provided opportunities to learn about the children’s understanding of their own placement in the world. A trip to visit family in India by the researcher during the study prompted one of the children, Tom, to draw a picture of “a road to India.” When he was asked about his reasons for drawing this road, he replied that he wanted to visit India and was going to drive a truck to India. When the child was asked how far was India and how long would it take him to drive the truck. The child responded that India was far away and it would take him a long time (field note, 5.4.16).

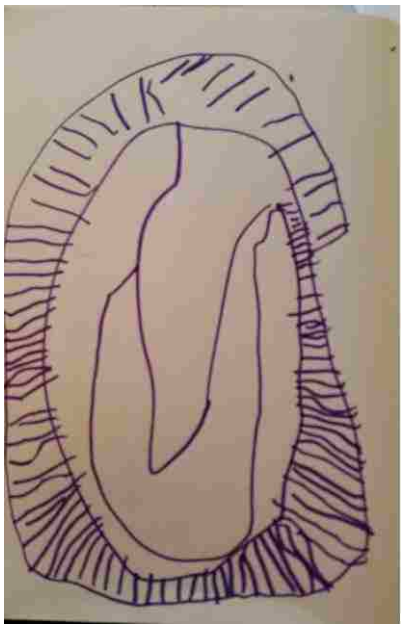

Figure 35. Road to India

Children demonstrated their understanding of their own placement in the world even when

they had limited travel experience to distant places as illustrated in the following example:

> Alex was asked if he had travelled with his family anywhere. He responded that he only travelled with his family to the zoo, the Da Vince Center (a science museum in the area) and the Crayola Factory. When he was asked if these places were far, Alex said, "No, not too far. We go by car." The child associated travelling by car to less distance in travel. He also recognized that these places were near home and not located in a distant land (field note, 5.13.16).

Conversation around travel was at times followed by book reading activity in the classroom. Reading a book titled, "Travelling Butterflies," in class one day sparked a group discussion about travelling to different places. This book was about monarch butterflies that travel to South America during the winter months. Children were asked after the book reading if they were butterflies, where would they like to travel. The response to this question varied from flying to the moon, in the sky, through the clouds, to Mexico, and Florida. All of them acknowledged that these were faraway places. One of the children whose family lived in Kenya wondered if butterflies could fly all the way to Kenya too (field note, 5.4.16). The responses of children demonstrated that they placed themselves at the preschool and could imagine going to places that they acknowledged were far away. The connections to various places that were mentioned reflected their personal interest and experiences through media or travel.

Space was viewed as a faraway place to travel to on a space ship or a rocket ship. One day Omar drew a space ship in his journal and announced that he was going to visit the "bad guy land" in space. When asked for his reason to visit this land, he replied that if one was bad, they got sent to the bad guy land and could only return when they got better. Omar further clarified that if one was a little "gooder," then they had to stay but if one turned good, they got sent back

to Earth. When Omar was further probed about who lived up in space in the bad guy land, he said that Darth Vader, lasers, and other bad guys lived up in space (field note, 5.18.16).

The mode of transportation selected for traveling indicated the distance children envisioned traveling to the place of their choice. This also reflected their understanding of their personal placement and the point where they wished to travel. Travel by car was associated with less distance in travel than travel by plane which denoted faraway places. One child suggested walking to a place as it was close to her house or she could go in a car. In the same conversation, the child said that she would take a plane to India and North Pole. One of the children while doing his passport activity shared that he wanted to visit Antarctica to see the penguins and to visit the North Pole. He planned to take a "choo-choo train" because Antarctica was far away (field note, 4.28.16). These conversations demonstrated that children could distinguish between near and far and the appropriate transportation they would want to take based on the distance they planned to travel.

Children's understanding of their placement was also reflected through the maps they drew to show the location of a place in relation to their own placement. During these conversations, the discussion often included distance to a given place from where the child was positioned such as going to a store, a place of interest locally, within the country, or faraway lands. In most cases, the children's familiarization about these places were through personal experience, media, or children's literature. During this study, there were many instances when children drew maps to show their location. This is further illustrated in the following examples given below:

> Drawing in the daily journal, Cody drew a map of his travel in the car each day to the school. He also added a parking lot where his mother had to find a parking spot each day. The map this child drew showed his understanding of his own placement spatially. He recognized that

when he travelled through space to go to his school, his location/placement changed from home to school, due to travel to school by car each day (field note, 4.14.16).

Figure 36. Road map to school

Another child, Omar drew a map to his friend's house showing location of his house and that of his friend in another daily journal entry. The child acknowledged that his friend, "Kunan," did not live very faraway and that he could walk to his house as he described his drawn map and direction to the researcher (field note, 2.5.16).

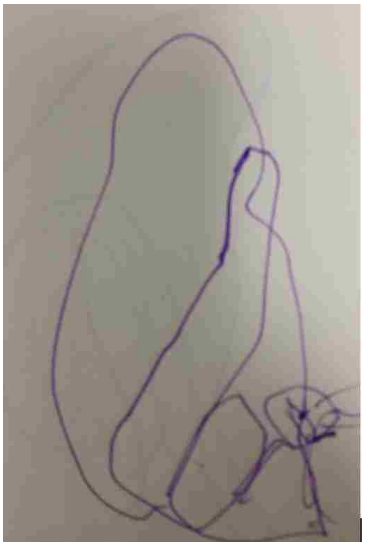

Figure 37. Road to Kunan's house

Another example occurred when two children Sarah, and Tammy were playing at the sand table making cookies for Santa. They planned to take these to North Pole for him. One of them Tammy asked the researcher for help saying, "Can you help me find directions? My mom can

find directions." The researcher asked if they had an address for Santa. The children suggested looking it up on the map. The researcher commented that a map to the North Pole needed to be made. The two girls quickly sat down and drew a map to go to the North Pole on a large sheet of paper while verbally giving directions. Both the children said that the North Pole was far and they would need to take a plane and then a sleigh to reach Santa's home (field note, 1.21.16). In this example, both children showed an understanding of their placement in relation to the North Pole, the role of transportation, the mode of transportation to travel the distance, and tools required to cover the distance to the North Pole. In verifying with Omar's mother, she confirmed that Omar had a friend who lived walking distance from home and they occasionally visited his house. One of the mothers of the girls also informed the researcher that they often used GPS on the phone to visit places. Tammy may have been asking to use GPS to find Santa's home.

Figure 38. Map to North Pole

Figure 39. Map to North Pole

Desired places to visit were revealed by children through the passport activity. In this activity, children named the place they wished to travel to with the passport. Places named were associated with television shows such as laser land or pirate ships, nature places such as mountains and volcanoes, distant lands such as Kenya or the North Pole. Children also named places to visit that were local such as Wegmans, a local grocery store, or an ice cream store.

Children's expressed preference for specific places demonstrated their special connection to these places.

Children demonstrated their understanding of places, modes of transportation, and their understanding of distance. Most could tell if a place was far or close. Travel by plane was the preferred mode when places were deemed far. Submarine was also mentioned as a mode of transportation, as were animals. Space was another place within children's reach to travel. Personal experiences and connection through media informed their understanding, their own positioning, and those of others in various locations.

Looking through the developmental lens, the several maps that children drew reflected their spatial reasoning and how they placed themselves. Some scholars maintain that children's maps reflect their mental reconstruction of space in two dimensions and generally do not reflect objective reality during the preschool years (Geist, 2016). However, children can represent the relationship between objects and places. The developmental approach, therefore offers curriculum suggestions to promote skills related to space in children. Common worlds perspective on the other hand, views map making activity of children as a step that builds and fosters the awareness about the interconnectedness and the interdependence of the world that children cohabit with others. The two paradigms use different lenses to interpret children's daily lives. While developmental psychology is focused on the "individual becoming" of children, the common worlds approach emphasizes the connectedness to the larger world acknowledging the intra-activity between the material, discursive, and the child.

Using spatial lens offers another way to understand the multiple ways children made sense of the world through their engagement in the space and place they live (Hackett, Procter, & Seymour, 2015, p. 3). The engagement with space and place can be through embodiment,

emotion, and agency (Sakr & Kucirkova, 2015). When children drew maps to physical places, they were engaged in an embodied experience with the place even though they were not physically there. The act of drawing a map or building a place with blocks facilitated an embodied experience and evoked associated emotions with the place.

The common worlds conceptualized by Taylor and Giugni (2012) view place as both inclusive and dynamic in nature (Taylor & Giugni, 2012). Children's place making though their everyday activities with peers, the support of technology, and the politics of the classroom space afforded them opportunities to connect to places with personal connections as well as venture out to spaces unknown sparked by their interests and imagination.

V. Conclusion

"We shall walk together on this path of life, for all things are part of the universe and are connected with each other to form one whole"

Maria Montessori

"The highest education is that which does not merely give us information but makes our lives in harmony with all existence"

Rabindranath Tagore

This ethnographic study examined preschool children's understanding of their world. Specifically, it examined the ways that preschool children describe and explain their world, and how they place themselves and others in their world. The case study was conducted in a preschool classroom at an early childhood program located in Bethlehem, Pennsylvania. Spending two semesters with a group of preschool children provided time and opportunity to examine the research questions with children as co-researchers. The results of the study, its contribution to the field, and implications for the field and related future studies are discussed below.

The study demonstrates that children's worlds is a relational world. It represents a world without any boundaries spanning over the physical, spatial, and the virtual worlds. The multitude of relationships are focused on family, friends, pets, animals, places, and objects both far and near, representing the human and more-than-human constituents. These relationships are formed through their active engagement in the world fostered by their interest, curiosity, and a sense of wonder. Children display a sense of common belonging with non-human inhabitants, without any notion of a superior human status or hierarchy in these relationships. Technology and media expand children's reach to cross boundaries and connect to human and more than human cohabitants in their world. Children represent a connecting point in the endless web of

connections that the universe consists of like rhizomes (Deleuze & Guattari,1987). Their world is a common world shared by all, without boundaries, and open to all in its current form and all its future imaginings. Children traverse their world of humans, nature, space, and media seamlessly as nomads driven by their interests and curiosity.

Along the same trajectory, recent scholarly work on childhood and nation (Millei & Imre, 2015) has questioned the bounded territorial nature of the nation- state and its relationship to children and childhood especially in the context of emerging "views that conceptualize the contemporary world more in terms of flows and connectivity" (Hakli as cited in Millei &Jones, 2015, p.7). Current research problematizes the long-held views on development of national belonging/identity in young children in a world where border crossing of people, goods, and ideas has become common place.

Children's world is characterized by its collective nature, moving away from the binary thinking of nature/culture and other divisions, towards a commonly shared world with all the species, nature and things. Historically, nature has been viewed as separate from human/culture, a characteristic of western thinking (Taylor, 2013). Children however, did not exhibit this through their behavior or conversations. Their common worlds implied a sense of belonging and shared responsibility for other co-inhabitants. Some of their play sequences and conversations reflected their concerns for their more-than human co-habitants in the world. For example, in the enactment of saving the animals from their predators during one of the play activities, children were demonstrating kinship by warding off danger while building responsive relationships. Their expressed concern for "Frogeesha," the classroom pet demonstrated their sense of responsibility for, and connectedness to their co-inhabitant in the classroom space. Children's actions expressed a relational ontology that conveyed a sense of connection and openness to explore the

world with all its diverse and complex relationships. The common worlds of children decentered from the human to include the "more-than-human" others, natural forces, and other existents (Taylor & Giugni, 2012).

Children's world is an inclusionary world that expands the boundary of human society to remain open to all its current and future constituents. The more-than-human constituents of children's common worlds include plants, animals, space, and other natural phenomena. Their relations with other species forms a network of kinship that is open and ever growing, referred to as "queer kin" in the terminology of common worlds (Taylor & Giugni, 2012). As an example, when Alex encountered a snapping turtle, a new connection developed and the turtle became part of his world. When Callie became aware of the presence of a spider plant in the classroom and she realized that she shared her classroom world with the plant, it became part of her world. Children's open and inclusive approach was remarkable exemplifying the ethics of the common worlds that looks out for the well-being of all its constituents.

During early childhood years, while the children are in the process of becoming socialized, and have not yet developed an anthropocentric approach to the world - a dominant feature of the adult world - their world expands holistically. This does not mean that the children's world is an ideal, symmetrical world of harmonious relationships, or a utopian space of idealized nature child. On the contrary, children's relationships are colored with shades of fear, mystery, love, curiosity, and wonder. In this study, children expressed their fear of loud thunder, fire, crocodiles, and dinosaurs, whereas rainbows generated a sense of joyful mystery. However, it did not influence their ceaseless engagement with the world and the expansion of their network of relations. In daily encounters, all intertwined in the material world and the discursive world,

children's subjectivities were continually getting shaped within their common worlds (Lenz-Taguchi, 2010, p. 39).

It is important to recognize that not all societies locate children in the context of human development. For example, in Australian Aboriginal society, growing up is connected to the growing sense of "relatedness" with people, plant world, animal world, and nature. No references are made to developmental milestones of growth (Taylor, 2013, p. 121). Early childhood educators need to understand the enmeshed relationship of children with the world around them so that teaching and learning can be intentionally designed to nurture and support these heterogeneous relationships (Taylor, 2013). The pedagogical shift from learning "about" to learning "with" those who are part of the relational world offers promising opportunities for researchers and educators to explore this area further. Some initiatives are already underway, such as the urban Australian early childhood program entitled "Companion Species Curriculum" (Taylor, p. 120). Taylor and Giugni (2012) suggest, "For it is only when we exercise curiosity to find out more about where we are, and who and what is there with us, that we find hitherto unknown dimensions to our common worlds." (p. 110)

This offers an opportunity for policy makers to provide support, and for educators to develop pedagogy that nurture children's awareness about the interconnected and interdependent nature of their relationships with people, other species, places, and things in world. Commenting on the Australian Early Years Learning Framework, Millei and Jones (2014) propose applying pedagogical principles that include:

> An unconstrained dialogue between equals; a shared aversion of pain and sympathy for the suffering of the others; significant detachment from the standpoint of particular social groups; advanced skills in thinking from the perspectives of others; and children's participation in the

world. (p. 17)

In the increasingly globalized world of the twenty first century, fraught with many emerging challenges to the planet and its well-being in the coming years, this activism is timely and much needed. There are some examples where policy is supporting cultivation and nurturance of children's responsive approach. Recognizing the importance of nurturing the awareness about the relatedness of the common worlds of children, the Ministry of Education in New Zealand has integrated these elements into the early childhood curriculum (Duhn, 2010, p. 315).

The developmental discourse infused with human-centric ideas are well-intentioned in teaching young children in nature, about nature, and with nature, to develop environmental stewardship for the future generations. As Taylor (2013) states, however, it does not develop what children really need: "twenty first century children need relational and collective disposition not individualistic ones, to equip them… they will need a firm sense of shared belonging and shared responsibility within the nature culture collective of their immediate common world" (p. 117). Pedagogy for the 21st century needs to integrate strategies that nurture and cultivate a sense of common belonging and interdependence demonstrated by children in this case study.

Children today live in a world saturated with consumer products supported by marketing campaigns of big business. The absence of any reference to money or need to own a specific toy is noteworthy. Ownership of material objects did not emerge as a theme during the study. There was also a time allocated for children to show and tell about their "prized possession" to their peers each day but this did not spill over into the free play time, children's conversations, or journal entries. These "possessions" did not appear to occupy a central place in children's worlds. This subject deserves further study to inform the field about the possible determinant factors that contributed towards the lack of consumerism observed in this group of children.

Equally important is the lack of reference to basic needs for sustenance such as food and shelter in children's world. This could be attributed to the fact that most children came from families whose income level was enough to support their daily living. While some of the families received funds for their child to attend the program, they were reasonably secure financially to provide basic needs for themselves. Similar research studies in other locales may inform the field further about this aspect of the research findings.

Today, many children live in an "e-society" where technology permeates their lived experience (Plowman, McPake, & Steven, 2008; Verenikina, Herrington, Peterson, & Mantei, 2008). Technological tools such as phones, internet, cameras and other devices are routine in their social and cultural contexts. This suggests that a significant number of children are growing up with a strong connection to technology from an early age (Beanstall as cited in Waller, 2011, p. 140). Parents also report that children "just pick up" technology naturally without any formal teaching and do not perceive it to have a negative impact on their children (Plowman et al., 2008; Plowman et al., 2010). Using technology in play is natural for these "digital natives," a term coined by Marc Prensky (2001). This study confirms similar findings. Children used technology to expand their knowledge about the world or to pursue specific topic of their interest. For example, Paul's persistent use of YouTube serves as an example of how technology may be used to build on the emerging interest of young children. Building on children's natural inclination with technology, pedagogical strategies for practitioners can be explored further to support and advance children's open and inclusionary to the world. Similar recommendations advocating for professional development on effective use of digital technologies with young children have been made by other scholars (Aubrey & Dahl, 2008; Beanstalk as cited in Waller, 2011).

Technology has extended the boundaries of children's world to include the virtual world with endless space and no boundaries. Children at a very young age, experience virtual space using computers and other technological tools - virtual space, characterized by its flow and energy and not "fixed, solid or geographical" (Walkerdine,1999). The children in the study made several references to using technology tools such as iPads and computers that give them experiences in the cyber space. This does not align with the long held developmental model of children acquiring spatial concepts though manipulation of concrete solid objects, before developing abstract concepts in space or learning two dimensions of objects before moving to the three-dimensional objects (Walkerdine, 1999). In the study, children used computer games at home and in their early childhood setting. In the current landscape of changing socio-cultural contexts infused by technology, acquisition of spatial concepts by young children require re-examination and further study.

Research on digital technology has mostly focused on the impact of computer usage on school age children. Use of digital technology by children younger than five years of age has not received as much attention by scholars (Waller, 2011, p. 141). Available research provides evidence to support four important ways that technology has influenced young children (Waller, 2011). First, many young children come to early education settings with varying competencies and experiences in technology (Marsh et al as cited in Waller, 2011, p. 141). Second, children's use of technology in play influences the social, cultural, and literacy practices (Marsh as cited in Waller, 2011, p. 141). Third, children have been targeted as consumers by companies of digital software and games (Verenikina et al, 2008); And finally, having early experiences with technology influences the way children approach learning and thinking as well as their play (Prensky, 2001; Zevenbergen as cited in Waller, 2011, p.141; Plowman et al., 2008). This study

reaffirms that children used technology naturally in their environment. They seemed to use it as one of the tools for learning just like other materials in the environment. Most of the limitations around the usage of technology were imposed by adults and state regulations concerned about the excessive use of technology or so called "screen time" for young children. Some variations in usage may have been related to their family contexts as well as their unique personal dispositions (Plowman et al., 2008).

The role of technology as a tool for learning and knowledge, as demonstrated by this study raises questions about equity and social justice for all children. While an increasing number of children grow up with technology around them in their homes, there are many children who continue to be excluded from this experience based on gender, class, race and geographical location (Waller, 2011, p. 143). Further research is needed on how to address the impact of the digital divide created due to access or lack of technology in the lives of many children around the world. This has implications for pedagogical training of teachers as well as policy that creates an infrastructure for the implementation these policies.

Technology today mediates the connection between humans and the physical world facilitating new ways to understand and engage with it (Dourish, 2006, p. 304). It provides unique embodied experiences of physical places both far and near in virtual spaces through popular media and television programs for children. As Valentine and Holloway (2002) state, "Children's use of ICT is embedded in their lives. Their online identities, relationships and spaces are no less real than those encountered off-line" (p. 304). This was the experience of Callie who wished to travel to Madagascar or Tammy who wished to visit North Pole or Jack who wanted to go to Antarctica to see penguins. The meaning making process about place and

their own placement appeared to be like the rhizomatic structures of experience, which have multiple nodes sparking curiosity, but no one central point of origin.

In recent years, the application of Deleuzian concept of "rhizome" to understanding children's meaning making process has been used by scholars. This problematizes the linear developmental explanations that use schematic representation in children's work to interpret their experiences and understanding about the world (Sakr & Kucirkiva, 2016). The linear narratives (also referred as "common sense" perspective), view children's representations of ideas through drawings or play as overt expressions of their internal schemata. The concept of a "rhizome" as proposed by Deleuze and Guattari (1987) offers an alternative explanation to explain children's meaning making process and its structure related to their understanding of the world. A rhizome is like crabgrass or a ginger root plant that spreads horizontally making connections without a defined central point of origination or an endpoint or destination. Like a rhizome has no beginning or end but an endless web of connections, children's sense-making process about their world represents a web of relations that are formed and re-formed through their lived experiences in the world supported by technology and media. Children's conceptualizations about their world are always in a state of 'making' as well as evolving and expanding their web of relationships (Sakr & Kucirkova, 2016). Furthermore, Hackett et al. (2015) concur that "Deleuzian concepts of sense making and rhezomatic structures of experience (rather than linearity), can challenge modern, developmental approaches to interpreting children's experiences of the world" (p. 10). This alternative approach to interpreting children's meaning making process requires further examination by scholars in the field through more studies in the future.

Media plays an important role in the lives of young children today. It is visible in how media technologies are developed and integrated to deliver marketing messages, educational content

and entertainment for young children (Rubenzahl, Lavallee, & Rich, 2016, p. 91). While technology has provided the tools to expand children's world, media provides the content of what kind of world children can access using those tools. In the last few decades, media has evolved as a powerful force in society. Children today have access to a vast variety of media with the help of technology. This access is not bound by any temporal constraints, being available "on demand" through various digital formats such as YouTube and other platforms. This study demonstrates how media expanded the world of children beyond their immediate environment through various programs and games.

Research on media has focused attention on the negative effects of media on children, with little attention given to learn about its positive effects. An examination of the issue from the stance of a child as a passive recipient as well as an active consumer of media has added to the current knowledge base (Buckingham, 2009). However, most of the research has explored media effects on the child from either behavioral or cognitive perspective, in isolation from other variables such as emotion and socio-cultural contexts (Buckingham, 2009, p.255). Moving beyond the developmental model in examining not what media does to the child, or what the child does "with" the media, there is a need for studies to examine how media can be used to develop and foster responsive relationships that nurture and sustain children's open and inclusionary approach to the world. Many of the relationships that children expressed with animals, places, and objects were through their exposure to media. Professional development for educators will also be helpful in learning effective uses of media to support children's emerging inquiries (Rubenzahl, Lavallee & Rich, 2016) as well as fostering responsible and inclusionary approaches to living in common worlds.

Children's common worlds are representative of a specific place as is the case in this study. The idea of place has been studied by scholars uncovering its various dimensions and layers. Traditionally place has been understood only in its physical dimension, as a specific location on the map; others view it as layered legacy of political, social, cultural, and spiritual history of generations from the past and present. Using the common worlds lens, a place is theorized as a relational field of humans and more-than-human others (Taylor & Giugni, 2012, p. 114) and infused by "geometries of power" (Massey, 1993). Expanding further, Massey (1993) explains that "what gives a place its specificity is not some long-internalized history, but the fact that it is constructed out of a particular constellation of relations articulated together at a particular locus" (p. 66). Growing up in a globalized and technologically advanced world, children in the study had opportunities to connect to faraway places like Madagascar, various planets in space as well as media generated imaginary spaces like Lazer land and Zombie land. Having easy access to technology at home and at school facilitated these connections. Enactment of "geometries of power" (Massey as cited in Taylor & Giugni, 2012) was evident in the travel experiences that many children had already had in their short young lives or having those around them who traveled abroad frequently providing relational links to many physical locations both locally and internationally. These opportunities may not be afforded to children in other locations of the world. The children's demonstrated connection to place and space signals the beginning of relational entanglement that requires nurturance through pedagogical support.

The "raison d'etre" of the field of early childhood education is the child. For decades, the discipline of early childhood education has studied the child through the lens of an object-subject-other, a tri-dimensional approach. As an object of study, all aspects of a child's growth and development have been studied by scholars and a large body of knowledge base has been

created for current and future professionals. The child has also been approached as the subject who should be provided with opportunities to learn and grow inspired by pedagogical approaches anchored in theories of child development advocating for developmentally appropriate practice and child-centered learning. The child is also referred to as the "other" in the western based binary thinking of adult/child relationships. The child and early childhood education are so closely linked that current understanding about the child and childhood education, regardless of the theoretical stance binds the field to one way of knowing and practicing early childhood education. In recent years, while recognizing the contribution of developmental theories, scholars have advocated for re-visiting the dominant narrative and opening horizons for other possibilities that might currently be unavailable (Grieshaber & Cannella, 2001; Cannella, 1997; Ashton, 2015). The common worlds theoretical framework offers one example of such an approach to early childhood education which expands the field to explore other possibilities.

The child has been "othered" regarding the adult in the binary mode of western thinking (Hultman & Lenz-Taguchi, 2010; Ashton, 2015). This mode of thinking is commonplace in daily conversations where references are made to the "other" as the opposite of whatever is mentioned such as nature/culture or teacher/student highlighting the differences that exist. Ashton (2015) suggests that educators move beyond the "other" to the "otherwise" explaining that the field of "otherwise" offers possibilities beyond "what is" or "what was" towards "what is not' and "what could be" (Povenelli as cited in Ashton, 2015). "Otherwise" is the field of possibilities. As Ashton (2015) states, "The otherwise is not a goal or an endpoint that we can reach or ultimately achieve because to grasp and otherwise would be to turn it into another other. The otherwise is unrelenting and multiple not yet" (p. 15). Children's approach to the world demonstrated a

similar openness to the world with all its possibilities. The common worlds framework offers opportunities to educators to explore the world of "otherwise" to add new dimensions to the current narratives thereby moving the field forward towards new horizons of knowing and doing in early childhood education.

Children are the central focus of study in the field of early childhood education. However, for decades, their voice has not been heard in any policy debates or discourses. The mainstream research methodologies which are used to create the knowledge base that guide the work done with young children have not facilitated or fostered methods that include children's voices and perspectives. As Cannella (1997) states, "As we have constructed what we 'know' in the field, there are voices that have not been heard…the most critical voices that are silent in our constructions of early childhood education are the children with whom we work" (p. 10). This denies the field the multiple views that are important and would expand the field of knowledge.

The convention on the rights of the child guarantees children to express their views on matters affecting them as stated:

> "States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child" (UN Convention on the Rights of the Child, 1989, Article 12)

Children's participation in the study as co-researchers provided the opportunity for children to share their perspectives about the world and their own place in it in their own words. This is significant on two accounts. First, participation as co-researchers gave voice to children by giving input on the design of the study, generating data, and its interpretation in their own words.

Understanding children's views of their world in the context of globalization informs the field to obtain an insight into what the world consists of through the eyes of the child and what aspects of globalization can be identified in this process. Second, this study exemplifies the application of the intent of the children's rights convention in practice. It provides an example of how children can participate in research projects as equal partners providing insights on topics that are studied in ways that give voice to their perspectives.

In summary, this study demonstrates that children's world extends well beyond human relationships into nature, animals, space and inanimate objects. These relationships are formed not only through direct interactions, that are within their immediate environment but also through media and technology. While importance of early relationships has been acknowledged by scholars (Shankoff & Phillips, 2000), these relationships have mostly been focused around human relationships. This ethnographic study shows that while children have close relationships with family, friends, and pets, their relationships expand beyond the human to the other aspects of the universe, such as the animals, nature, space and material world, hence expanding the sphere of experience of young children.

Cognitive research informs us that children engage in inquiry within the context of their concrete environment (Piaget as cited in Wardle, 2008; Worth, 2000). Children should be able to explore these objects and phenomena concretely with their senses. This study demonstrates that children's world is not limited to their immediate surrounding but expands to distant lands, space and the virtual world supported by media and technology. This has pedagogical and curriculum implications for early childhood educators. Curriculum focus for young children need not be confined to their immediate environment such as their family and neighborhood, but could include topics that are beyond their immediate environment. Children's social and cultural

contexts, as well as their emergent interests can guide the curricular themes in early childhood settings.

Research about the influence of technology and media on young children has predominantly been focused on its negative impact on children (Buckingham, 2009). This case study illustrates some of the positive influences of media and technology which expands their world to people, places and objects beyond their immediate surroundings. More research focused on effective use of technology and media with young children will help educators to maximize its potential in supporting children's growth and development.

In view of these findings, educators need to shift their pedagogical practice and develop curriculum that is responsive and supportive to children's expanding world, and emergent interests influenced by not only their social and cultural context, but also by media and technology. Educators need to understand the growing influence of media and technology in children's lives and ways to use it to best promote learning and growth in children.

Children today live in a globalized world where media and technology play a central role in their daily lives. Their world is a world of change, mobility, and connectivity that is challenged by the rising ecological concerns due to the human footprint everywhere. It is imperative that educators build and nurture sensibilities towards other non-human co-habitants in the world. The common worlds approach encourages engagement of children in the life worlds as equals with other non -human species, a shift away from the idealized western version of nature and childhood. Inspired by Donna Haraway's work (2008), the common worlds approach urges educators to "learn how to inherit and co-inhabit our entangled multispecies worlds and to respond and act in these worlds in ways that allow all to flourish" (Pacini-Ketchibaw et al., 2015, p.5). The common worlds are the collective inheritance, our shared resources, and our insurance

for future. Children view their world through such a lens in early childhood. The challenge for the field is to nurture and sustain this collective approach through intentional practice and policy enactment for future generations.

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Appendix A

World through the Eyes of Children Protocol

Introduction and Outline

This protocol comprises of semi structured activities to examine children's perceptions of the world in addition to the participatory observation conducted by the researcher. Activities are designed to prompt discussion about themes related to children's world. All children are invited to participate. Children may choose to decline to participate in any or all the activities. Children may also initiate other activities to explore the research questions as co-researchers.

Activities are designed for individual, small group, or large group format. These activities were developed with input from the teaching staff at the site in Bethlehem, USA. Activities are adapted to align with the interests, ability, and current preference of the preschool group. The pace of activities is modified to be consistent with the interests of the preschool group at the research site.

Activities are integrated within the daily routines of the preschool programs at each site in collaboration with the teaching staff. Some of the activities are designed for a group setting to encourage interaction and discussion. Book reading is a good example. Group discussion offers opportunities for children who are not comfortable with one on one discussion with adults. For some children, a large group format offers a safe place to voice opinions. Conversations during group time are recorded for documenting children's perspectives accurately as well as noting their behavior during the activities. The teaching staff provides support to the researcher during group times as needed.

The effectiveness and success of the activities are somewhat dependent on the experience of the researcher. A balanced approach to engage children is required, which gently seeks the input from children while accepting their final choice to engage or not. The researcher must be transparent about personal bias to demonstrate reflexivity. Conversations with children are audio recorded as evidence of children's thoughts and ideas about the world if it does not present a distraction or make any child uncomfortable.

Experience suggests that spending time to build relationships with children upfront usually results in more willing input from children. Activities are suspended if children seem distracted or uninterested in participation. Activities may be reintroduced at a later date or modified to be better aligned with the interest of the children or initiated by children.

Activity 1: My World Book

Invites children to express their thoughts and ideas about the world through drawing, pasting pictures, photographs, and words (narrated by the child, but written by an adult). Writing journals is part of the daily routine for children at the Bethlehem center. Integrating "my world book" will not present any disruption in the daily schedule for the classroom.

Activity 2: Draw the World

Invites children to draw pictures of the world. They tell about things, people and places that are special in their world.

Activity 3: Make Passport

Invites children to make a passport. Children decide where they would like to go with the passport.

Activity 4: Imaginary Travel

Children are invited to choose the mode of transportation by which they will travel.

Children are invited to travel any place of their choice. Children choose where they travel to and give their reason for their choice.

Activity 5: Books

Book reading is part of the daily activities. Books are read individually and in small and large group formats. Books will be read every day to prompt discussion about the world around them.

Activity 6: Photography

Children are invited to take photographs of their world. There are cameras in the classroom for the children to use. Pictures taken may be printed to add to the world book if the child requests. Children tell about the photograph and it should be recorded. The photographs will be artifacts to be used. Children's interpretations will be used for text analysis.

Activity 7: What if?

Invites children to make choices about their world. For example, "if there is one thing you can change in your world, what would it be? Why?" Questions may be prompted by the books read to the children or during a group conversation.

Appendix B

Project Summary

Duration: January 4, 2016 through May 20, 2016

Case site: Preschool classroom, Reibman Children's Center, Bethlehem, PA, USA

Timeline: January 4th through May 20, 2016

5 days per week.

This timeline may be extended if necessary to gather more data.

Research Methods: Ethnographic Case Study

Participant observation with some semi-structured activities

Data Sources: Field notes, observations, interviews, impromptu conversations with children,

Child generated artifacts, interpretation of data by children, document review.

Appendix C

Sources of Data Collection

Data method	Individual Child	Group Of children	Teachers	Parents	Administrator	Program
Field notes	x	x	x		x	x
Observation	x	x	x			
Informal Interview	x	x				
Formal Interview			x	x	x	
Impromptu Conversation (with audio-Recording)	x		x			
Artifacts (drawings & photographs)	x					
Documents						x
Children's Daily Journal	x					
"My World" Book	x					

Appendix D

Project Schedule: Sequence of Project Activities

The proposed sequence of activities is developed to organize the course of the study and to ensure the planned activities are introduced to children in a systematic manner based on the unique characteristics of the individual children and the collective dynamics of the preschool group. The timeline can be expanded as needed with guidance from the teachers.

	Timeline	**Activities**
1	Week 1	Get family consent, familiarize with the routines of the site, meet with site administrator, meet with the teachers, researcher meets families. Interview lead and assistant teacher.
2	Week 2	Present the research idea to children, children sign assent forms, discuss research activities and integrate children's ideas if feasible.
3	Week 2	Introduce "world book." Children make entries every day.
4	Week 3	Invite children to draw/paint/build what is in their world. Invite entries in the world book. This is ongoing until the end of the study.
	Week 5 and ongoing	Ask children about their research. Guide discussion by asking leading questions such as: What would you change in your world? Are there things you want to add or take away?
5	Week 8	Make passports for children to travel anywhere they want "Where would you like to go in your world?"
6	Ongoing	Photographs that children will take to add to their world journal, cut out pictures children may bring to add to their world book.
7	Ongoing	Read books every day to facilitate discussion about children's world.
8	Ongoing	Introduce artifacts from other cultures and geographical area.
9	Ongoing	Introduce songs from other languages, world music, puppets.

Note: Parent interviews scheduled on a day and time according to their convenience.

Appendix E

Researcher's Schedule for the day

8.30-9.00	Morning greetings of children, families and staff
9.00-10.00	Journal/world book writing (assist in writing the words for journals) This is ongoing throughout the morning as children arrive at the center.
10.00-10.40	This will be the block time to do special activities with children such as the passport activity.
	Free interaction with children allowing time for one-on-one conversations and impromptu interviews.
10.45-11.00	Book reading and songs to facilitate discussion about children's
	perspectives about their world
11.00–11.30	Outdoors/playground/walks/quick wrap up with the teacher about the day.

Note: Researcher talks to the lead teacher daily for updates about children and families as they emerge. There will be regular meetings with the lead teacher for debriefing and for the exchange of ideas, and observations that will inform the research process. Field notes are given to the teachers for comments and suggestions.

Parents will be interviewed as needed to gather contextual data for the child.

Appendix F

Preschool Classroom Schedule of the Day

7.30-9.00	Greetings, arrival, handwashing
9.00-10.30	Activities/Projects, Snack time
10.30-10.45	Clean up
10.45-11.00	Group time/stories/ music
11.00-11.30	Outside
11.30-12.00	Handwashing, Show and Tell, Story, lunch

Appendix G

Passport Activity