OF MIST DROPS AND CAMOUFLAGE SPOTS: USING CHILDREN'S ARTMAKING CONVERSATIONS TO SUPPORT ORAL LANGUAGE SKILLS AND DEVELOPMENT

By

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ABSTRACT

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Oral language development, including the development of oral language skills, is paramount in the early childhood years. In many early childhood classrooms, teachers utilize interactive read aloud as the main instructional practice for helping children develop oral language and teaching oral language skills. Research related to oral language in early childhood largely focused on interactive read aloud and oral language skills such as vocabulary or semiotics. However, interactive read aloud is only one portion of the school day. Therefore, this study sought to answer a question related to learning opportunities related to oral language skills and development in other portions of the school day such as artmaking experiences. Specifically, this study examined (1) the characteristics of children's artmaking conversations including the use of sophisticated conversation and (2) teacher's preparation and actions, including discourse moves, which influenced artmaking conversations.

To answer these questions, I conducted an instrumental case study using discourse analysis to analyze children's artmaking conversations. I observed preschool students, recording their conversations during artmaking experiences. I analyzed their conversations using discourse analysis techniques to identify the characteristics of their conversations including when and how they engaged in conversation. I also examined when and how sophisticated vocabulary or language emerged. Additionally, I examined the actions and discourse the lead teacher engaged in which led to sophisticated conversation.

Students engaged in deep, meaningful conversations when discussing their art processes and products, as well as the academic or social/emotional content represented in their art. This study's findings contribute to the field of early childhood literacy by describing how children use oral language to learn and to build social relationships beyond the interactive read aloud. This study has significance for early childhood teacher practice in that it shows the importance of scaffolding children's oral language throughout the school day and by engaging them in meaningful conversations throughout the school day. Specifically, this study recommends that practitioners shift away from only teaching oral language during interactive read aloud, to viewing oral language skills and development as important in every portion of the school day.

This study has implications for teacher preparation as well. Findings from this study call for a shift in the way that young children are viewed, highlighting the importance of understanding that young children are capable and thoughtful people with abilities and interests of their own. In addition, the findings of this study call for a shift in the way teachers understand the teaching and scaffolding of oral language development and skills.

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CHAPTER 1: ORAL LANGUAGE AND ARTMAKING CONVERSATIONS

Oral language development [1]is a keystone of early childhood education (ECE). Especially in preschool classrooms, where most students have not yet learned to read fluently, and therefore are unable to depend on reading to self in order to learn, children must instead rely on oral language to gather, discuss, and learn academic content. Researchers agree that young children's oral language skills [2]at preschool are highly predictive of their later literacy abilities (Smith & Dickinson, 1994; NELP, 2009; Scarborough, 2001) and that scaffolding children's conversational abilities is one of the best ways to foster learning and improve understanding of academic content (Wasik & Jacobi-Vessels, 2017). Given the connections between ECE literacy and children's later literacy abilities, universal preschool was becoming a growing trend in the United States as early as the 2000s (Friedman-Krauss et al., 2019). However, this promising trend did not last through the decade (Friedman-Krauss et al, 2019).

Current research reported by the National Institute for Early Education Research (NIEER) shows that enrollment in preschools has been declining. This report states that the number of three- and four-year-old students enrolled in preschool programs began to drop in 2008 and has only slightly begun to recover in recent years (Friedman-Krauss et al, 2019). The Great Recession, which took place in the same year, is largely to blame for the decrease in preschool enrollment; indeed, NIEER (2019) reports that the numbers of children enrolled in

[1] Oral language development refers to when and how language is learned. Children learn receptive language, or the ability to understand spoken language, and expressive language, or the ability to use words to convey meaning.

[2] Oral language skills are comprised of phonological skills such as awareness of sounds, syllables and rhymes; syntax, or the grammatical rules of a language; morphological skills such as understanding meaning of word forms; pragmatics, the social rules of communication; and semantics or vocabulary, the understanding of word meanings and phrases.

state-funded preschool programs dropped to the lowest point since tracking began in 2002. This is in large part due to cuts in funding of these programs in response to the recession (NIEER, 2019).

Of equal importance is NIEER's (2019) finding that preschool program quality across the United States needs improvement. The report concludes only three states met all ten of the benchmarks for minimum state preschool quality standards (Alabama, Michigan and Rhode Island), and that twelve states failed to meet even half of the quality benchmarks. These states were reported to include "states with the largest numbers of children in state-funded preschool, and the largest numbers of children in poverty" (Friedman-Krauss et al., 2019, p.8). These findings emphasize the need to improve the quality of education provided in ECE classrooms.

My ECE Practitioner Experience

I believe that effective teaching is informed by current research and I find myself drawn to research that supports practice, and practice that is informed by research. As a researcher, then, I find myself invested in questions I first encountered in my own experiences as an early childhood educator. ECE literacy, and development of oral language specifically, was an area in my own practice where I felt there were great strides to be made. Like many ECE practitioners, my colleagues and I focused on interactive read aloud as the sole exercise for scaffolding children's oral language (Cabell, et al., 2019). Yet it was never far from my mind that my students were using oral language to communicate in a vast array of contexts beyond interactive read aloud.

Early childhood literacy instruction, which is concerned with helping students effectively read, write, and communicate, is at the heart of most ECE classrooms, and was the foundation of my own classroom teaching. I knew that children's oral language abilities at preschool directly

relate to later literacy abilities in elementary grades (Smith & Dickinson, 1994). In addition, oral language is especially important for children who have not yet learned to read fluently, as listening and speaking become the most important skills for their learning. Improving children's oral language has the potential to improve their later literacy abilities (Lonigan, Schatschneider, & Westberg, 2009). With this knowledge in hand, teaching and scaffolding these skills only during interactive read aloud began to feel insufficient. Questions about the ways my students were engaging with one another, and how my own practice shaped their interactions arose from these realizations. I wondered how my students used conversations to co-construct knowledge. I also wondered what characteristics of the learning activities I created prompted sophisticated conversation[3], and whether the conversations were improving student learning. The current study was designed to shed light on these problems of practice.

Broadly, this project examines issues related to ECE literacy development, but the specific focus of this work is on investigating students' oral language development during art-related learning activities. This study presents detailed descriptions of preschool students' oral language during artmaking experiences planned by their lead teachers with input from the co-teachers assigned to their classroom. These descriptions include the students' use of sophisticated conversation surrounding science and social studies curriculum and specifically examine the vocabulary and ideas that emerge or expand during talk that occurs while children are preparing for, or are engaged in, artmaking. The descriptions also include the discourse and actions of the lead teacher during each artmaking experience. Artmaking experiences include

[3] Sophisticated conversation refers to talk that meets two criteria: it contains vocabulary words that are not readily familiar to the student, and relates to complex ideas, for example, topics included in published preschool content standards.

instances when children are drawing, sketching, painting, and sculpting with modeling clay, and are also engaged in conversation related to one or more of the preschool curriculum areas.

Problem Statement

There remains a scarcity of research pertaining to methods of supporting young children's oral language development outside of the interactive read aloud. Numerous studies have examined the effects of interactive read aloud as a method for scaffolding children's language development, with many focused on using interactive read aloud to help children acquire vocabulary or to develop reading comprehension skills (Cabell, et al., 2019; Leung, 2018; Lennox, 2013). A gap in the research continues to exist for quality teaching practices beyond forms of book reading to help children develop oral language, which is a highly important element of early childhood education broadly, and ECE literacy education, specifically.

As shown by NIEER's *The State of Preschool 2018* report (Friedman-Krauss, et al., 2019), educational programs provided to young children are lacking quality as shown by adherence (or lack of) to benchmarks set out by the organization. Of the ten benchmarks with which NIEER assesses preschool programs, more than half speak to the importance of quality curriculum or to teacher preparedness. The elements of these benchmarks suggest that the curriculum content and the ways in which teachers present that content, are of vital importance. In terms of curriculum supports, including support of children's oral language, the NIEER report suggests that "a strong curriculum that is well-implemented increases support for learning and development" and that states must "provide guidance and training…to facilitate adequate implementation of the curriculum" (Friedman-Krauss et al., 2019, p. 14). This benchmark points to the need for a strong, research-based curriculum; in regard to supporting children's oral

language development, a strong curriculum would naturally give students plenty of opportunities to engage in conversation with teachers and peers, and to practice their emerging skills in a variety of settings, and with a range of subject matter. As such, this benchmark supports the idea that scaffolding students' development only through interactive read aloud is in fact, insufficient.

However, teachers in ECE settings report that they rely heavily on interactive read aloud as the main method through which they support children's developing oral language abilities (NAEYC, 2009). This makes sense, given that the National Early Literacy Panel [NELP] (2009) report showed that interactive read aloud and other forms of shared book reading "produce statistically significant…effects" on children's oral language (p. ix). Yet, the report went on to state that there were several other areas which showed promise in improving children's oral language skills. By employing measures such as code-focused instruction, implementing programs for parents, and language-enhancement instruction, teachers were able to improve children's oral language skills (Fischel & Landry, 2009).

Given the importance placed on oral language then, it seems prudent to look for other portions of the school day in which teachers can continue to support children's growth. While interactive read aloud is a useful conduit through which teachers can plan engaging learning activities that allow children to practice vital elements such as listening and speaking, relying exclusively on this practice is problematic because teachers then lose opportunities outside of book reading to promote oral language. Therefore, it is vital that researchers and practitioners examine other portions of the school day to determine other times and ways in which to support oral language development.

Purpose Statement

The purpose of this descriptive study was to explore through discourse analysis the conversations preschool students have during their artmaking experiences, and to determine the characteristics of these experiences which lead to sophisticated conversation. I chose these students because they were highly verbal and appeared frequently in the transcripts which comprise the body of data from which this study emerged. Although there is research to suggest that interactive read aloud as an instructional method is highly supportive of children's oral language development, it only addresses one small portion of the ECE school day. By identifying other portions of the day in which teachers can effectively support language development, improvement of ECE instructional methods might occur, which could begin to address the programmatical issues identified by NIEER. Exploring the characteristics of children's artmaking conversation may add to our understandings of the way's teachers can support language development because artmaking conversations have the potential to encourage similar conversational goals as interactive read aloud. By finding other portions of the ECE school day that are rich with meaningful conversational opportunities, researchers and practitioners could move closer to meeting the quality program benchmarks NIEER describes.

Research Questions

Given the state of the field today, in which researchers agree that improvements to early childhood programs are vital to student growth, studies which examine the ways in which ECE program quality can be improved are paramount. I designed this study with that need in mind. To guide my research, I have one overarching question: *what are the characteristics of young children's conversations during art-related experiences?* Specific, related questions include:

- How does sophisticated conversation emerge during art activities?

- What planning and actions, including discourse moves, are teachers engaging in which lead to high levels of art related conversations?
- In what ways do prior learning events inform or elevate children's learning during artmaking experiences?

Research Design Overview. This is an instrumental case study design which provides descriptions of the lived experiences of preschool students navigating the learning activities offered in their classroom with relation to conversations they participate in during artmaking. Given that artmaking centers are prevalent in most preschool and early childhood classrooms already, examining the characteristics of children's conversations during these experiments creates a place for researchers and practitioners to understand how children use art to learn. However, in doing so, there is a potential for art to be viewed as less important than the conversations children use to discuss their creations, and this potential is highly concerning. Early childhood stakeholders, such as parents, teachers and researchers, among others, point out that by taking an instrumental approach (i.e. viewing art as only an apparatus to accomplish something else) diminishes the inherent value of art and the processes of artmaking (Chappell & Cahnmann-Taylor, 2013). This becomes extremely concerning in an era where arts are disappearing from public schools. While this is true of schools in most areas, lack of funding for arts-related programs has disproportionally affected public schools that serve non-White communities (Garda, 2011; Nurenberg, 2011; Chappell & Cahnmann-Taylor, 2013). Limited access to arts in schools tend to have greater impacts on these schools because there is often "more limited budgets, less culturally and linguistically responsive practices, and highly controlled curriculum based on discrete skill development" (Chappell & Cahnmann-Taylor,

2013) which leads to a devaluing of arts-based instruction (Candara, 2012; Ladson-Billings, 2009).

Due to the impacts of the decline of arts-based instruction in schools, there are often temptations to justify the inclusion of such practices based on arguments that visual, dramatic and performance arts can increase academic achievement (Davis, 2008; Chappell & Cahnmann-Taylor, 2013). Davis (2008) points out that while many advocates quote statistics suggesting that arts-based learning can improve test scores or increase students' creative thinking abilities that transfer to other academic content areas, are only perpetuating the believe that those "other content areas" are in fact *more important content areas*.

I recognize and respect this concern regarding the lens through which art and artmaking has often been approached. In this study I do examine the characteristics of children's conversation while they are making art or while they are explaining their artmaking processes to others. In order to balance the desire to understand how children are using artmaking experiences to learn with the need to protect the importance of the arts for the sake of art, it is important to understand that the topic of the conversation could directly relate to the making of art itself. One example of this is a conversation between students who discuss how to mix colors when painting. In an artmaking episode in which students were painting, it was observed that a classmate had orange paint when orange was not a color available in the paints provided to them. The discussion that occurred when the student was asked how they had created orange paint was then directly related to the context of making art; the students were discussing art for the sake of making art, rather than using art to learn the so-called "more important disciplinary knowledge" (Chappell & Cahnmann-Taylor, 2013) that the early childhood community objects to. In this project, I suggest that artmaking conversations can do both things: they can celebrate the

importance of art for the sake of art, while at the same time helping teachers to scaffold students oral language development.

Nine three- and four-year-old preschool students participated in this study as focal students. To explore the oral language support of the focal students, the primary qualitative methods used to obtain data were participant observation (Barone, 2011), audio and video taped observations, and field notes in the classroom. Transcripts of conversations during artmaking episodes were further coded and analyzed through discourse analysis at the "utterance-token meaning" or situated meaning level (Gee, 2011a). I also collected informal interviews with the teacher participant and documented or collected artifacts in the form of student artwork, or photographs of their artwork, as secondary data sources. Further information regarding data sources, collection methods, and analysis procedures are reported in Chapter Three.

Summary

Young children's participation in early childhood education is highly predictive of their later learning outcomes (Lonigan, Schatschneider, & Westberg, 2009). However, current research suggests that the number of children participating in federally funded programs has dropped since the Great Recession of 2008. This is in part because federal funding for preschool programs was directly impacted by the recession. Regardless of the number of federal dollars spent on ECE programs in the United States, extensive research has shown that quality preschool programs, when staffed by highly competent teachers and guided by research-based curriculums, effectively prepare students for kindergarten.

Extensive studies have been conducted measuring the importance of oral language development in early childhood classrooms. Nationally recognized organizations such as the National Early Literacy Panel (2009) or the National Institution for Early Education Research

(2019) have shown that oral language plays a substantive role in children's later literacy learning. They have also shown that supporting children's oral language development during ECE is connected to all areas of oral language development including development of skills such as phonemic awareness and phonics skills, fluency and vocabulary development, and overall literacy comprehension.

However, a gap in the literature remains. Research has shown that oral language development in highly important, yet outside of interactive read aloud or other book reading structures, little is known about the effectiveness of other participation structures which teachers can employ to facilitate rich academic conversation with young children. This study begins to address that gap by examining the characteristics of conversation young children engage in during artmaking experiences. Discourse analysis is utilized to explore the ways in which sophisticated conversation emerges from children's artmaking conversations.

Rather than merely relying on interactive read aloud as the sole instructional activity for scaffolding oral language, qualitative data have provided examples of ways in which young children use artmaking experiences as a means for facilitating conversations about academic content as well as to build and maintain social relationships.

Overview of the Dissertation. The following chapters will begin by describing current research relevant to the topic then take a deeper look at the methodology I employed. Later chapters will delve into the analysis of specific conversations between focal students and their teacher. These analysis chapters also contain descriptions of the findings associated with those conversations. Finally, the dissertation ends with a chapter that describes the conclusions and implications of using artmaking experiences to help children learn language skills and academic content, and while building social relationships.

Specifically, *Chapter 2: A Review of Research Literature* reviews current research literature in the areas of oral language development. In this chapter, I discuss the importance of oral language in early childhood, then examine studies that have explored this across multiple contexts including interactive read aloud, dramatic play, and mealtimes. Subsequently, I report studies that have explored the ways in which teachers support children's language development, including scaffolding moves that are common in ECE classrooms. I point to the need to expand on the contexts in which oral language is taught, pointing specifically to artmaking as a ripe opportunity for language development. As part of the case for this, I point to researchers who have already explored the connections between literacy and artmaking, specifically, recent work on the connection between writing and drawing, as well as multimodal methods of communication.

Chapter 3: Methodology begins by revisiting the specific research questions this project addresses, then details the appropriateness of discourse analysis as a method for examining the data which informs this project. I also use Chapter 3 as an opportunity to discuss my role as a researcher, describing how I interacted with the students and the staff at my research site. This leads to a description of the research site itself and a detailed description of the curriculum used by the teacher, Reggio Emilia. This is especially important because it influences the kinds of lessons teachers plan and the way they interact with their students, both of which directly influenced the kinds of conversations that I was able to capture. In this chapter, I also provide biographies of the focal students featured in the conversations represented in Chapters 4 through 6. Finally, Chapter 3 concludes with an outline of the analysis process, including descriptions of the iterations of sorting and coding of data and the development of an analysis chart used to understand the data (see Chapter 3, Table 3.1).

Chapters 4 through 6, *Chapter 4: Art and the Nature Walk, Chapter 5: Family and Community Interactions*, and *Chapter 6: Animals and Insects in Children's Artmaking*, contain the analysis of children's art-related conversations which form the data set for this dissertation. In these chapters, I use transcripts from conversations related to science and social studies concepts that the class studied across the data collection period. For each conversation and the resulting artwork, I describe how the children interact with one another and how they co-create knowledge. I also examine how vocabulary learning can occur and be deepened by the introduction of artmaking activities. These chapters examine how sophisticated conversation emerges and develops as children create art, investigates the steps Julie took before presenting the artmaking experiences to her students (including how she selects materials), then delves into the talk moves she engages in during the learning episode. This chapter concludes by outlining the findings associated with the transcribed conversations presented within.

Finally, *Chapter 7: Discussion, Conclusions, and Implications* offers a synthesis of Chapters 4 through 6. It offers conclusions, as well as possibilities for future research. Specifically, this chapter provides discussion of findings related to each of the three sub-questions related to the emergence of sophisticated conversation during artmaking conversations, examining the planning and actions Julie engages in which lead to high level art talk, and the ways in which children's prior learning elevates the learning which occurs during art-related conversations. Lastly, this chapter examines implications for teachers and pedagogy, and for teacher education.

CHAPTER 2: A REVIEW OF RESEARCH LITERATURE

For young children in ECE settings, oral language is the foundation of learning, not just literacy, but all academic content. Teachers' talk and student conversations, focusing on the connections between discussion-based learning and academic growth, foster all learning experiences that children participate in. Researchers frequently focus on the importance of using interactive read aloud as a method for vocabulary teaching and for the development of sophisticated academic language use (Cabell et al., 2019; Dickinson, 2001). These are the first set of studies examined here. Studies such as these are important to the current project because the underlying purpose of this dissertation is to identify characteristics during art making conversations in order to show that they are as rich and meaningful as conversations that occur during interactive read aloud. This is not a purpose that the current body of research has addressed in any great depth of detail. Much of the oral language research currently available is situated within the context of interactive read aloud.

Studies examining interactive read aloud alone, however, provide only one lens through which to examine oral language development and the supports that teachers provide. A second body of literature explores studies concerned with learning opportunities that take place in art-related settings. Artmaking, when used as a method for academic learning, can prompt observation and reflection, which could prompt meaningful and rich conversations between children, and with teachers. This chapter will conclude with a description of the pilot study I conducted which led to the current study. In the pilot study, I conducted observations to determine whether, and to what extent, academic conversations were taking place during artmaking experiences. The results of that study led directly to the questions explored in this dissertation.

The Importance of Oral Language

Oral language development is important in early childhood education for several reasons. One of the most important is that early language abilities are highly predictive of students' later literacy achievements because language skills such as phonological awareness are the foundation of literacy (Snowling & Hulme, 2012). Young children who have greater oral language abilities at preschool and kindergarten tend to score higher on standardized tests and to perform better in literacy related activities at fourth grade and beyond, than do students with lower oral language skills (i.e. vocabulary, phonological awareness skills, etc.) at preschool (Smith & Dickinson, 1994; Snow, Tabors & Dickinson, 2001). This suggests that creating nurturing oral language environments in preschool is vital for maximizing children's chances for later school literacy success.

In addition to its predictiveness regarding later literacy learning, ECE oral language is important in that engaging in conversation and discussion is one of the main ways in which young children learn (Wasik & Jacobi-Vessels, 2017). This is because most young children have not yet learned to read fluently or comprehend texts by themselves. In elementary grades and beyond, students can rely on independent reading as a method for learning; young children who cannot yet read independently do not have this method available to them. Consequently, discussions with teachers and peers are critical because asking questions, sharing thoughts and ideas, and engaging in debate with others are among the main methods through which children learn academic content. It is also how they build strong social relationships. Research compiled for Goodstart Early Learning (Law, 2015) concluded that "environmental factors" including such things as relationships and personal interactions with peers and adults, play a great role in ECE literacy development, particularly verbal comprehension, described as the ability of children to

understand the speech of others (Law, 2015). The report states "there is strong evidence that the amount that a child is spoken to and the way they are spoken to makes a difference alongside related factors, such as the type of positive language experiences to which the child is exposed" (Law, 2015, p. 28). This means that the kinds of conversations children engage with, as well as who they converse with, are highly influential on their oral language development and their language comprehension. Engaging children in meaningful talk improves their overall literacy development (Fischel & Landry, 2009).

Because children's preschool oral language skills are so predictive of later literacy learning, a trio of federally funded studies were conducted to examine methods for accelerating children's early literacy learning through the improvement of teacher instruction (Beecher et al., 2017). The studies (Abbott et al., 2011; Greenwood et al., 2012; Sheridan et al., 2011) shared a goal of identifying components of best practice, and predictive early literacy skills which children need in order to excel upon kindergarten entry (Beecher et al., 2017). The results of these three studies were compiled and a document titled "Quality of Literacy Implementation Checklist" was developed, which examines teachers' preparedness and classroom instruction (Beecher et al., 2017). Among the elements included on the checklist are items directly related to conversations with students. For example, item 3 states that the "teacher has a specific plan for developing Oral Language and uses specific strategies to increase opportunities to respond" during large and small group activities (Beecher et al., 2017, p. 598). Item 4 states that teachers should "use specific strategies that increase children's opportunities to respond to [or] extend the use of [oral language]" (Beecher et al., 2017, p. 598). These studies and the resulting checklist point to the importance of creating space for children to engage in conversations and to have thoughtful, purposeful activities in which to engage them. However, the research cited in this

section also points to a definite lack of quality conversation taking place in ECE classrooms. By shifting the view from one where interactive read aloud is the only place in which rich conversation could take place, to one of many places in the ECE classroom where it can take place, the lack of meaningful conversation could easily be changed.

Oral Language Development Across Contexts

There are many studies which have examined children's oral language development across ECE contexts. These studies focus on activities such as interactive read aloud, dramatic play, and mealtimes. Those contexts are the focus of this section.

Interactive Read Aloud. As previously stated, much research has been conducted which claims that interactive read aloud has long-term effects on oral language development. This is because interactive read aloud exposes children to large quantities of aural input, as well as introducing unique vocabulary words and complex ideas. In a longitudinal study conducted by Smith and Dicksinson (1994), researchers examined social and linguistic precursors to language and literacy development in children from low-income homes to determine whether the ways teachers read books to four-year-old's have effects on the students' literacy and language development one year later. They were also interested in whether there were identifiable characteristics of teacher-child interactions during book reading experiences. Two important outcomes emerged from this study. First, Smith and Dickinson (1994) concluded that interactive read aloud does have positive effects on later literacy learning. They found that interactive read aloud which is characterized with considerable talk before, during and after reading, improves children's recall and comprehension. They were, however, careful to point out that text selection was paramount, stating that using books with "limited vocabulary and minimal plot…may do little to nourish children's literacy-related language growth" (Smith & Dickinson, 1994, p. 117).

A second finding from this study shows that there are long-term effects on vocabulary learning when teachers engage children in conversation through interactive read aloud. Prior studies had already proven that preschool-aged children learn words from hearing them in incidental contexts (Dickinson, 1984; Rice & Woodsmall, 1988), and that classroom instruction such as discussion of new words improves children's vocabulary (Stahl & Fairbanks, 1986; Valdez-Menchaca & Whitehurst, 1992). This research went one step beyond those studies to show that commonly occurring variations in patterns of book reading have enduring and differential effects on literacy-related growth in children (Smith & Dickinson, 1994). That is, by engaging in interactive read aloud on multiple occasions across time, children are exposed to new words, as well as familiar words in new contexts. Frequent, wide reading of texts allows children to expand their understanding of how words can be used in multiple contexts.

Griffin et al. (2004) examined shared book experiences and their impacts on early oral language use, as well. Their results concluded that children who were able to identify significant narrated events at age five had higher reading comprehension abilities at age 8 (based on results from the Gray Oral Reading Test). Using tasks that were only somewhat structured, researchers engaged children in narrative play, as well as, in describing pictures. They discovered that oral play and description appeared to be highly predictive of later reading comprehension skills. One implication of this study is that teachers should consider using more expository texts with children, and engage them in conversation about those texts. Teachers should also engage children in writing related activities in order to aid in comprehension and vocabulary development. Familiarity with academic content helps improve children's vocabulary, which in turn improves their expressive language, leading to yet greater reading comprehension.

Later, Callaghan and Madeliene (2012) explored the significance of providing preschoolers with early literacy instruction through shared book reading, which is another focus that many researchers take in exploring the predictive abilities of oral language on reading comprehension. Callaghan and Madeliene (2012) were interested in the ways in which shared book reading scaffolds oral language. They believed that it aided in the development of phonological awareness which impacts later reading ability, particularly in regards to vocabulary and comprehension. Searching for evidence to support this claim, Callaghan and Madeliene (2012) conducted a meta-analysis of existing literature concerned with oral language and phonological awareness, and their impact on reading comprehension. The study found that oral language, specifically phonological awareness were affected by interactive as well as shared reading activities and that both play a role in the development of decoding skills, spelling, and reading comprehension. This is important for practicing teachers because the positive influence on vocabulary and oral language is scaffolded during interactive read aloud activities.

Interactive read aloud has been shown to have the potential to foster language development that is related to literacy because it is one of the times during the preschool day when words and language are central to the activity (Dickinson, 2001). Adults who engage children in conversation about texts usually do so in a way that is easy for the child to understand, but also pushes them to develop in terms of vocabulary comprehension and grammatical structures (Dickinson & Tabors, 2001).

Many researchers have shown that the most frequently used instructional activity teachers rely on to teach oral language is interactive read aloud. The importance of interactive read aloud to ECE literacy development cannot be overstated; however, NELP (2009) points out that there are important gaps in what is known about the effectiveness of shared reading, and that there are

too few studies to support the claim that interactive read aloud improves all areas of literacy development. NELP (2009) goes on to add that "it seems prudent to conclude that shared reading alone would not be a sufficient response to the literacy learning needs of young children" (p. 162). Accordingly, it is imperative that practitioners explore other options for teaching literacy skills in ECE classrooms. Though research does show that interactive read aloud is a highly effective method for scaffolding oral language, it is only one small portion of the ECE school day. Outside of interactive read aloud, the quantity and quality of conversation between teachers and children, and amongst children themselves, drops off considerably (Cabell et al., 2019; Smith & Dickinson, 1994).

Unfortunately, there is ample evidence to suggest that these highly nurturing oral language environments are not the norm in the majority of preschool classrooms in the United States. Smith & Dickinson (1994) point to teacher-child interactions as a staple element of nurturing oral language environments; however, their research indicates a "fairly bleak picture of the extent to which adults and children engage in extended discussion" (p. 348). Little has changed in this regard across the subsequent 26 years since their study was published. Dickinson, Darrow, and Tinubu (2008) found similar results in their examination of patterns of teacher-child conversations in Head Start classrooms. They found that the frequency of highly regarded strategies for scaffolding oral language development was quite limited in the classrooms they observed. NELP (2009) and several other researchers have come to similar conclusions in the subsequent years (for examples, see Callahan & Madeliene, 2012; Lake et al., 2019).

Symbolic Play. Symbolic play is characterized as language and gestures intended to transform the identity of objects and people (Pellegrini, 1985). Pellegrini (1985) defines it as "simulative and nonliterate behaviors children use to transform identities of objects, actions and

people" (p. 108). An example of simulative, nonliterate behavior is dramatic play in which young children simulate meal time by pretending to use crayons or pencils as eating utensils.

It is agreed that these kinds of symbolic behaviors are highly present in children's play during early childhood, reaching their peak around ages five or six (Pellegrini, 1985; Rubin, Watson, & Jambor, 1978) though there is less agreement regarding the specific ages at which symbolic play behaviors appear or wane. Regardless, preschool children are able to enact symbolic play and do so even without the presence of play props, such as with the mealtime example above. In the absence of actual tableware (or play tableware) children are content to transform unrelated random objects into the objects of their play.

The ability to make such abstract connections is of great importance as relates to children's budding literacy abilities, both in terms of reading comprehension and writing. To begin with reading comprehension, the ability to maintain symbolic play is dependent on the literate behaviors associated with narrative competence, or the ability to tell and comprehend narratives typically used in school-based literacy activities – or the social world of school, as Dyson described it (1993; Galda, 1984; Snow, 1982 as reported in Pellegrini, 1985). Such symbolic play episodes involve literate behaviors such as the ability to construct story schema, develop mental representations of story structure, and the ability to reconstruct a variety of stories in terms of setting, characters, feelings, and actions (Pellegrini, 1985).

Additionally, during the preschool years, symbolic play lays the groundwork for literacy expectations children will face in primary school, in terms of writing. Children's schooling with regards to connecting the written symbols of language, and to mathematics as well, requires the ability to perform "symbolic transformation" (Nourot & Van Hoorn, 1991). For example, a child's ability to understand that letter symbols represent sounds and when those sounds are

arranged in a specific order, they represent words, which can then be read, either silently or aloud, is an example of symbolic transformation. Symbolic play encourages the abstract patterns of thinking that are required to make connections between written symbols and the sounds that they represent (Nourot & Van Hoorn, 1991).

Symbolic play can take the form of visual arts, as well. Within this context, children often use isomorphisms, defined as "the aspects of resemblance which is perceived between two dissimilar things" (Smolucha & Smolucha, 1984, p. 114). Isomorphisms, then, are symbols which children include in their artwork to represent themes or ideas. An example of this might be a child including an image of the sun in their drawing to give an impression of how characters in the picture are feeling. While the sun itself is not a manifestation of happiness, it is often a symbol of positive emotions. This and other symbols children include in their artwork help young children to create drawings, paintings, or other forms of artwork that convey multiple levels of meaning, and are open to many interpretations (Smolucha & Smolucha, 1984). As children grow, they often add lettering to their drawings and other forms of artwork, making children's artwork a uniquely interesting connection between symbolic play and literacy knowledge and learning.

Classroom Mealtimes. Another context in which children frequently hear and participate in conversation is family-style mealtimes (FSM). FSM is a style of dining in classrooms in which the serving of food is used as a method for facilitating interactions between children at mealtimes. Often, it involves serving food in dishes and pitchers that children can serve themselves with assistance from teachers. The role of the teacher in FSM is to prompt conversation and to engage children in contextually appropriate talk. In this setting, the primary developmental task young children engage with is social competence. They learn how to interact

and react to teachers and peers within the classroom. Social development in young children is characterized by sustained positive relationships with adults and peers, turn taking, and regulating and expressing emotion (Locchetta et al., 2016; Barton, 2014). These skills directly impact a child's ability to successfully negotiate their social world. Children can learn a lot from listening, watching, and participating in FSM in their preschool classrooms as they navigate conversations and acquire information about a wide variety of topics, including the ways in which people converse about these topics (Beals, 2001).

Classroom meal and snack times might be overlooked as powerful contexts for cognitively challenging conversation. As with other portions of the day, having a stationary adult during mealtimes is an important element in creating meaningful conversation in the classroom. Children spend more time talking during mealtimes when an adult is seated at their table, compared to children who have no adult present (Massey, 2006). This can enhance vocabulary and encourage narrative talk. Vocabulary can be enhanced when the preschool teacher uses sophisticated words and works to help students develop concepts through their conversation (Massey, 2006). For example, teachers may remark that carrots are vegetables, in which vegetable is a rare word. Through explaining and questioning, this comment can extend to a conversation about where vegetables come from and how they help people to be healthy.

Narrative talk can encourage teachers to ask children to share personal experiences as well. They can pose questions, such as "what plans do you have for this weekend?" or "How did your family travel to the beach?" Teachers can use these opportunities to reference other activities the students have engaged in, such as prior lessons, dramatic play, interactive read aloud or field trips. This allows the students to take on the role of the expert because the conversation is focused on events and activities in which they themselves have participated

(Dickinson, 1994). The conversation can focus on their thoughts, feelings, or experiences, in which only the child themself can be the authority. Additionally, classroom mealtimes often provide opportunities for children to hear and participate in storytelling and explanations of everyday life. Often, this talk is about events that happen in either the past or the future, and rely on narrative elements such as people, place, and time. Unlike the example above regarding carrots and vegetables, these kinds of conversations are typically abstract, dealing with subject matter that is not represented by physical items presently in front of the children (i.e. the bowl of carrots).

Classroom mealtime conversations can engage children in many different kinds of talk. They can engage in concrete discussions of the people, places, and things around them. Such conversations frequently feature descriptive elements in which children are encouraged to express their thoughts. In contrast, other mealtime conversations engage children in more abstract thinking. These conversations are characterized by narrative elements in which speakers discuss events that have or will happen, and often enhance vocabulary development by introducing novel words in relation to the children who participate in the conversation. FSM conversations constitute an important place to study the connection between ways of talking to children during the preschool years and children's developing oral language abilities.

Supporting Language Development

A second set of studies explores the ways teachers support children's language development in the contexts described above – interactive read aloud, symbolic play, and meal and snack times – as well as other portions of the ECE school day. These studies largely look at the discourse moves teachers use to support children's oral language, including physical

prompting and cuing techniques that encourage and scaffold children's conversations. These studies follow.

Teachers' Discourse Moves. In classroom discussions, teachers use a series of talk moves with which they are able to scaffold conversations and students' attempts at talk in order to help students to successfully communicate their thoughts and ideas. In order for children's learning outcomes to improve, teacher-child interactions must be high-quality (Cohrssen et al., 2014). These interactions are often a product of the discourse moves that teachers employ as they engage in or guide conversations with students.

Cabell et al. (2011) conducted an intervention study in which they examined the results of a professional development program designed to increase teachers' conversational responsivity in the classroom. Teachers were provided with professional development related to the program Learning Language and Loving It (Weitzman & Greenberg, 2002) and were also provided with access to a consultant coach throughout the academic year. Results from this study were inconclusive regarding the effectiveness of the intervention itself but did show that the relationship between communication facilitation strategies and children's language development was positive and significant for both expressive and receptive vocabulary skills. By employing the interventions presented in the professional development program, teachers were able to show improvement in children's vocabulary and grammar. Students' fall vocabulary and grammar scores consistently and positively predicted their spring scores, suggesting stability in children's language skills over time (Cabell et al., 2011). This adds support to the importance of cultivating meaningful conversational opportunities for children in ECE classrooms.

Teachers can use several strategies for engaging children in such conversations. Often, teachers will use questioning techniques when they wish to encourage students to elaborate or

clarify their ideas. Such questions are intended to increase the length of a student's statement or response, which affords children the opportunity to demonstrate deeper or more extended knowledge about the subject. It also allows teachers to guide students to show where they found information or other methods for supporting answers and ideas (Justice et al., 2008). Similarly, teachers often support student conversation by asking clarifying questions, which are also intended to further expose children's knowledge and understanding of a topic. An example of this might be a student stating that an animal is mean when learning about creatures such as snakes or bats. The teacher might pose the question, "what makes you say that?" which indicates to the student that further clarification of their idea is required. The statement that snakes are mean may have originated from the child's prior experiences with the animal, or a schema built through reading of literature, viewing of nature videos, or prior conversations and background knowledge, or other kinds of experiences which others had not participated in. Thus, clarifying questions help the child to expand or elaborate on the thought process leading to their statement.

In a similar talk move, teachers frequently use prompting, or statements that "assist the student in focusing on the cognitive or metacognitive processes needed to complete a task" (Frey & Fisher, 2010). Unlike questioning, which is a method of checking for understanding, prompting is a technique intended to get students to think about the need to achieve a new level of understanding. Rather than just describing what they already know and understand, prompting encourages children to push their thinking, to attain greater levels of understanding. Frey and Fisher (2010) reported four categories of prompting that teachers frequently engage in. First, teachers prompt for background knowledge, probing to see what students already know about a topic or a subject. For example, in a conversation about frogs, teachers might prompt students to list facts they know about the habitat or feeding habits of frogs. A second method of prompting

Frey and Fisher (2010) identified was prompting for process or procedural knowledge. With this sort of prompting, teachers might ask students to explain how to complete a procedure. In the example of a conversation about frogs, teachers might ask students to describe how to feed frogs kept in their classroom. A third type of prompting focuses on models, templates, or frames. When prompting for this type of information, teachers often ask students to provide examples of their ideas through a frame that is provided for them. One example of prompting through models is the use of mentor texts for writing instruction. In the example of the frog conversation, teachers who employ read alouds about frogs may then use those texts to help students write their own stories emulating craft moves identified in that mentor text. Finally, teachers prompt for reflective knowledge. In these cases, they encourage children to "draw on their metacognitive awareness – to recognize when and how they are learning" (Frey & Fisher, 2010, p. 90). By asking students to think about their own learning, teachers can help students identify patterns in their learning, in order to build or revise schemas.

As this research suggests, adults who are conversationally responsive seek to promote reciprocal interactions with students in order to help children become active participants in the conversational exchanges (Landry et al., 1997; Cabell, et al., 2011). Many studies have shown a positive association between the responsiveness of adults in conversation and the complexity or sophistication of talk produced by young children (Girolametto, Hoaken, Weitzman, & van Lieshout, 2000; Girolametto, Weitzman, van Lieshout, & Duff, 2000; Girolametto & Weitzman, 2002). These studies show a positive and significant association with the number of responsive interactions teachers and students have during conversations. Cabell et al. (2011) reported that these associations held true both with typically developing students and with students exhibiting language delays.

In addition to verbal discourse moves, there are nonverbal moves that teachers frequently engage in as well. Cohrssen et al. (2014) point to the importance of silence and wait time in talk with students. They suggest refraining from talking for several seconds in order to allow students to think or respond before providing further input (Rowe, 1986; Tobin 1987; Stahl, 1990). Indeed, research has found that providing silence in which children are able to think and review what they know, or rehearse what they wish to say, is fundamental to supporting learning, and that teachers responses to children's statements after pauses had a tendency to elicit a more participatory and equitable talk experience, rather than a "rapid-fire question and answer discourse style" (Cohrrsen et al., 2014, p. 179).

A second style of non-verbal discourse involves teachers' gestures. Gestural cues involve a teacher moving his or her body in a way that is intended to focus student attention on a specific item or place (Frey & Fisher, 2010; Block, Parris, & Whiteley, 2008). Often, these gestures are combined with other types of dialogic scaffolding such as questioning or the wait time described above, and sometimes they are added for emphasis or effect (Fisher & Frey, 2010). Block, Parris and Whitely (2008) indicate that such gestural cues are effective because they assist in making "abstract, metacognitive aspects of comprehension processes visible, understandable, and accessible" to young children (p. 439). Other gestural cues include touching objects to direct students' attention or to encourage them to continue to participate in an activity or discussion.

Other Scaffolding Moves. In addition to the discourse scaffolding moves described above, there are other kinds of scaffolding moves teachers often make which improve student conversations and in return, improve learning. Quinn, Gerde, and Bingham (2016) describe two kinds of scaffolding: low level and high level scaffolds.

Low-level scaffolds are moves teachers can make that require the least amount of child effort and teachers must be highly supportive (Quinn, Gerde, & Bingham, 2016). These kinds of scaffolds offer much support for students. For example, *modeling* a skill is a low-level scaffold because it requires very little from the student. Teachers model, both verbally and visually, a skill or task they wish for students to engage in (Quinn, Gerde, & Bingham, 2016). Modeling oral language allows children to hear and see the ways in which competent speakers engage others in discourse, and also, how they share ideas and thoughts. It gives students an opportunity to listen to the kinds of language speakers use in certain circumstances, for example, signal words that indicate a question (Frey & Fisher, 2010). Modeling also allows teachers to demonstrate for students how speakers engage with one another when the message breaks down and their conversational partner does not understand a recent utterance.

A second low-level scaffold teachers often utilize is that of *reducing choices*. Limiting the amount of choices students can select from as they engage in conversation and in writing reduces the cognitive challenge when they are attempting to share what they think and what they have learned (Quinn, Gerde, Bingham, 2016; Pentimonti & Justice, 2010). For example, in a discussion about animals, teachers might ask "do you have ideas about what frogs need to live? Or do you have ideas about what birds need to live?" This narrows down the focus of the conversation by naming the topic (i.e. animal needs) and the subject (i.e. frogs or birds), reducing the amount of mental work students are required to do by giving them a specific animal to focus on, rather than engaging in a broader conversation that might emerge from a more generic question about the needs of all animals. Decreasing the number of outputs students need to engage with, frees up cognitive space for them to think and talk in ways that will improve their language development and their academic learning (Pentimonti & Justice, 2010).

A third method for low-level scaffolding, suggested by Quinn, Gerde, and Bingham (2016) is *guiding*, or offering direct cognitive or physical support, which allows a child to complete a task. Direct support is useful when students are beginning to develop autonomy in completing a task while not yet able to complete the activity independently. One way teachers accomplish this is by asking students to help generate ideas for discussion or by guiding them through the kinds of interactions that conversational partners engage in as they talk. For example, when a student has a question during a conversation, the teacher may offer supports such as asking "where might we find an answer to that?" or "who do you think we could ask about that?" These kinds of scaffolding moves place more responsibility on the child than does a scaffold such as modeling, while still offering the student some support as they begin to reach independence.

When children are given high levels of support, such as those described above, teachers often will try to let children make their own decisions and create their own solutions to problems or situations they encounter (van Kyuk, 2011). Allowing children some autonomy even in highly scaffolded learning engagements demonstrates a key feature of Reggio Emilia as well: it celebrates the abilities of the child by bringing to the forefront the child's thoughts and ideas. Teachers can model or guide students as they find or develop a solution, though the ideas are largely provided by the student. As students become more independent, teachers can reduce or remove the amount of strategic help (i.e. how to do an activity) and content support (i.e. what students need to know). While it is important that children develop a strong sense of autonomy, research also shows that scaffolding from others with more knowledge and skills helps children to expand and grow as learners as well (van Kyuk, 2011). Consequently, teachers must find a balance between fostering autonomy and providing scaffolding that will help students grow.

The scaffold moves discussed thus far are useful for teachers who are working with students who have low-levels of competency and are working toward independence. The next set of scaffolding moves teachers often make are typically employed with students who have higher-level competencies with the topic or information presented in the learning activity. To begin, Quinn, Gerde, and Bingham (2016) point to *extending*. When using this scaffold, the teacher is asking the student to consider what they have already learned and apply that knowledge to other contexts or in more complex ways (Quinn, Gerde, & Bingham, 2016). This could mean that children are asked to incorporate their own ideas into a discussion by talking about personal experiences or prior learning. It could also mean that children are encouraged to use sophisticated vocabulary to more precisely describe an idea or concept. Extending also allows teachers to introduce new ideas of their own in order to guide students' thinking and deepen their understanding of content.

In addition to extending conversations, teachers working with students who have high-level competencies often use the scaffold of *explaining* as they guide children's talk. Explaining, in this context, does not mean that the teacher uses their turns at talk to clarify information or describe material. Rather, the teacher prompts students to explain what, how, or why. By doing so, students externalize their thinking, which leads to deep understanding of content knowledge (McGee & Schickedanz, 2007). When students have opportunity to share their thinking or to explain why they came to a conclusion or made a decision, they solidify their understandings and achieve a higher level of sophisticated talk than might have been achieved without the request to make their thinking verbal.

Finally, Quinn, Gerde, and Bingham (2016) point to *comparing* as a method for scaffolding student learning when children are highly competent with the topic under discussion.

Asking students to make comparisons between objects, concepts, and ideas helps them to better comprehend the concepts, as well as to identify differences and similarities (Gonzalez, et al., 2014). By doing so, children's understandings of the nuances between objects and ideas is highlighted allowing them to analyze, discuss, and draw conclusions about the material with which they engage.

These studies show that teachers are already doing important work in scaffolding children's oral language development. Though Quinn, Gerde, and Bingham's (2016) work speaks specifically about writing instruction, it is easy to see how these same scaffolding moves are used in other areas of literacy instruction as well. Recognizing that students need different support methods based on their current knowledge, the strategies outlined in this section provide support for children with a wide range of literacy skills. However, evidence still suggests that there are limited opportunities for children to engage in meaningful conversation in ECE classrooms (NELP, 2009). Thus, it is important to investigate new opportunities in additional contexts where children are already engaged in conversation. One such context which meets the NELP definition of rich, meaningful conversation, is when children are engaged in artmaking experiences.

Artmaking as an Opportunity to Scaffold Language Development

There are a few studies which have specifically explored children's artmaking activities as an opportunity for scaffolding oral language development. One study examined the use of children's artmaking experiences as a catalyst for conversation with parents. Chang and Cress (2013) observed and recorded conversations with four parents and their preschool aged children as they discussed drawing and painting activities that took place in the home. These conversations were analyzed to determine which strategies, if any, parents employed in

conversations with their children. Chang and Cress (2013) reported that visual arts created by young children do serve as topics of conversation between adults and children, and that these conversations are interactive. The observed conversations centered on the art projects as well as the themes or ideas children encoded in their projects, thus expanding the kinds of conversation parents and their children could engage in. These conversations were meaningful to the children because the child had created the art, thus placing them in the role of expert. Chang and Cress (2013) were careful to point out that in order to sustain meaningful communication, in addition to the child having the role of expert, it was vital that the adult also be a true participant in the dialogue, attending to the child's ideas and expressions, asking questions as necessary, and offering the child assistance when communication broke down.

Other studies examine the ways young children react to, or engage with, the work of professional artists. Though this project is concerned with art created by children themselves, the findings of studies focused on professional art are still valid because children can, and do, apply the same skills to discussion of professional art as they do to art they create themselves. Young children are capable of observing and reflecting on artwork when they are engaged in rich, meaningful conversation with teachers and peers (Harris, 2000; Wright, 2010). These conversations encourage children to explore, analyze, describe, explain, interpret and synthesize ideas (Leinhard & Knutson, 2004), all of which are high-level skills tied to greater literacy achievement in later elementary school years (Weizman, & Snow, 2001). These are skills they can apply to conversations about both their own art and art created by professional artists. This makes art-related conversations a good method for promoting oral language in preschool classrooms. Meta analyses (Horowitz, 2004; Rabkin & Redmond, 2004; Stevenson & Deasy, 2005) indicate that arts-related activities are more effective in developing children's academic

skills when compared with more traditional literacy learning experiences (Burger & Winner, 2000). These meta analyses are careful to point out, however, that much current research is focused on school-aged children, rather than preschool. Additionally, this research is focused on art created by professionals, rather than art created by children. Despite this major difference, the findings regarding children's oral language is still relevant. Using art as a means of generating conversation, whether that art is created by the child or someone else, still creates space for talk which can help students develop oral language competence.

Interpreting and talking about art-related experiences which emerge from child-generated art or from conversations about professional art, can enhance oral language (Bell, 2011) and boost the development of children's critical thinking skills (Taylor, 2010; Burgess & Addison, 2007). Studies have indicated that when children participate in conversations regarding art reproductions, they engage beyond mere labeling or describing the pieces they viewed (Venable, 1998; Yu, et al., 2017). Instead, children can use their interpretations of art reproductions – and interpretations of their own artmaking products – to relate ideas back to their own personal connections, drawing on past experiences to synthesize new information with previous understandings. Though these studies do not examine conversations about children's own art, the actions students engage in are transferable to conversations about their own drawings, paintings, and sculptures. Additionally, facilitation of conversation by teachers through techniques such as paraphrasing children's comments and summarizing their observations, might motivate students to think about art more critically (Yu, et al., 2017). More importantly, when children participate in classroom discussions of art (their own, or reproductions by professional artists), they not only work together toward building an understanding of that reproduction, they also modify and

extend their own beliefs and understandings, enhancing their own learning (Wells & Arauz, 2006; Eckhoff, 2013).

The Early Childhood Arts Educators (ECAE) group, a subgroup of the National Arts Education Association, advocates for the inclusion of child-generated arts activities in preschool classrooms. Such activities invite "discovery, interaction, sensory and kinesthetic exploration, wonder, inquiry and imagination" (ECAE, 2006). The conversations which children can participate in during the creative processes inspired by these activities promote development of social and academic growth. Furthermore, ECAE encourages teachers to participate in these artistic processes with children, rather than merely supervise. When teachers model artistic engagement for children, it prompts students to use sophisticated language, inquire, problem solve and plan for their own works of art. It also encourages children to develop an "artist persona" which allows them to critique their work, further applying their knowledge and language skills (Bell, 2011).

Arts-related activities – both viewing of art reproductions and sharing in the creative process of their own artworks – involve children in representational, communicative and expressive actions that can stimulate changes in awareness, perception and beliefs, therefore advancing academic growth (Phillips, et al., 2010). By encouraging children to talk about their observations of art reproductions, including topics such as content and medium, teachers can engage children in similar conversations about their own artistic creative processes.

Given the findings of this group of studies, which show that artmaking experiences are ripe with opportunities for oral language scaffolding and for children to engage in meaningful conversations, examining artmaking experiences more closely is important. By examining the characteristics of artmaking conversations in which children are deeply engaged with content

matter and are asking their own questions as well as co-creating knowledge with peers and teachers, researchers as well as practitioners gain vital insight into the kinds of activities and experiences which promote sophisticated conversation.

An Historical Examination of Children's Early Writing Attempts

Preliminary ethnographic work in early childhood education, particularly ECE literacy, examined the development of children's language, especially communication attempts through drawing and sketching. These seminal studies delved into the ways in which children learned to communicate and how they used drawings–which are understood to be children's earliest attempts at writing–to express their knowledge and learning. Other studies also examined how children used multi-modal forms of writing and drawing to develop relationships and navigate social worlds.

Seminal Studies in Drawing as Writing. Early work in ECE literacy points to the ways that young children use different writing strategies to accomplish different tasks (Sulzby & Teale, 1985). Researchers such as Sulzby and Teale (1985) found that children's writing strategies are directly dependent on the difficulty of the task they set out to accomplish. For example, when writing in a simpler genre such as lists or directions, students might use strings of letters or letter-like symbols, but revert to scribbling or drawing when attempting to convey more complex ideas such as descriptions of events or narratives they wish to share (Martinez & Teale, 1987). Though these are all examples of writing in the pre-phonetic stage (i.e. writing characterized by scribbles or pictures), some genres of writing require fewer words and symbols, diminishing the cognitive demands and freeing students to attempt more attempt more letters and letter-like figures. When students have complex, highly detailed ideas to express, attempting to write with letters or letter-like figures detracts from their ability to compose, leading to drawing

and scribbling as their preferred method of writing. Oftentimes, students will even move back and forth between forms of writing in a single text, depending on what they wish to communicate (Sulzby, 1992). This suggests that different writing strategies develop at different paces and that students will select the strategy they are most comfortable with.

Other early studies examined the use of writing centers in ECE classrooms. Martinez and Teale (1987) described the ways writing centers were used to support young children's earliest attempts at writing. Teachers in this study used writing centers to model the different ways in which students could utilize writing materials to create and share messages. Frequently, teachers modeled drawing and scribbling as methods for conveying meaning. Along with this teacher modeling, examples of writing from prior students were available for children to study and emulate; teachers indicated to students that even if others could not read their writing, they could still compose and read or describe their texts – including drawings and scribbles – to others (Martinez & Teale, 1987). Such an emphasis allowed students, particularly those who are in the pre-phonetic stage of writing and who were insistent that they cannot read or write, to participate fully in writing activities. The pre-phonetic stage of writing is characterized by scribbles and drawing, as well as letter-like forms, all of which are intended to carry meaning (Hullinger-Sirken & Staley, 2017). By encouraging children to write at the pre-phonetic stage, the abilities of all students are accepted and celebrated, even before they are ready to produce recognizable texts, making students feel more like writers.

Drawing and sketching, including children's scribbles and letter like figures, are just one area that researchers historically examined in regard to recognizing drawing as writing attempts. Further research examined the usefulness of talk and drawing together. Oken-Wright (1998) examined the ways in which teachers use conversation as a way to keep students focused on the

message they are trying to convey with their drawing (Oken-Wright, 1998). When children are encouraged to talk about the elements within their drawings on a regular basis, their artwork becomes richer and more likely to tell a story, which in turn makes storytelling easier for the child (Oken-Wright, 1998). This becomes a cyclical process in which students begin with a drawing, which they talk about with an adult or peers. Those conversational partners help the child to visualize extended elements they could add to the drawing, which the child then adds to their work. This allows teachers to develop a sense of what the child wishes to convey through their drawing, and to help the student to think about what more they might wish to communicate and how the drawing can support this communication (Oken-Wright, 1998).

Multi-Modal Writing. Much of the early research on young children's writing tended to ignore any composing children did in forms other than conventional writing. This is because researchers and practitioners in the 1980s and 1990s approached literacy education from a "readiness perspective" and the preschool years were seen as an important time for developing prerequisite skills for reading, which was thought to be necessary before a child could learn to write (Rowe, 2018). As researchers learned more about how literacy develops, particularly the connections between reading and writing, readers and writers, the readiness perspective was reevaluated, reconfigured, and eventually replaced.

This shift began in the early 1990s with Dyson's (1993) ethnographic work in early childhood classrooms. She explored the varied kinds of language art forms and traditions children use as they construct and participate in the world of school. Her studies (Dyson, 1993, 2003, 2013) provide detailed, in-depth explorations of young children as they learn to write together. Many of the examples she utilizes in her studies feature children negotiating understandings of artwork they have created as part of their written texts. She defines literacy not

simply as children's writing, spelling, and reading, but their use of print to represent ideas and to interact with others. Dyson further defines written texts as "multimedia affairs, interweaving…written words, spoken ones and pictures," (Dyson, 1993, p. 4). She uses case studies of kindergarten children to examine their repertoire of narratives and other genres, and the social actions of building and managing relationships as they co-create knowledge, which the children accomplish through those genres. She also focuses on the literacy histories of individual children, illustrating their successes and frustrations as they navigate learning experiences through classroom interactions.

In a later study, Dyson continues her exploration of how children learn to write by documenting the nature of "shared childhood and the textual toys it entails" (2003, p. 7). In this study, Dyson describes how a group of first graders produce cultural, social, and expressive practices as they learn to read and write. She returns to her definition of written texts as including written and spoken language as well as children's drawings as evidence of both learning academic content and the development of social skills and relationship building. She adds that it is her desire to broaden the way teachers and researchers view literacy, in a way that "normalizes variations in…children's literacy resources and learning pathway" (Dyson, 2003, p. 5). This study, and others like it, help to lay the foundation for my own work, in which I will examine the drawings, paintings, and sculptures children create, along with their conversations as they navigate the academic and social setting of their preschool classroom. These studies lay the foundation for the idea that literacy is more than just reading and writing. In Dyson's 1993 study she makes a case for the value of literacy modes outside of the typically valued formats, giving worth to children's drawings and conversations. Not only does she give worth to those modes of

literacy, but she shows them to be equally valuable to what was seen at the time as more traditional writing, a sentiment that she reiterates in her later works, (Dyson, 2013).

What Dyson's work shows is the importance of accepting a definition of literacy that foregrounds drawing and conversation in addition to more traditional forms of writing. In order to do this, Dyson displays the importance of having teachers construct a particular sort of shared experiences for students, experiences that allow children to draw on knowledge from all of their social worlds (though she places more emphasis on home and school) in order to co-create knowledge as children learn together. Through these shared experiences, children can convey their individual expertise and learn from one another.

Many current researchers observing young children's writing make note of their tendencies to combine print writing with other modes of communication such as drawing, talk, and play, among others (Siegel, 2006; Rowe, 2009). While older students and adults are more likely to have "adopted dominant view[s] of writing as separate from other forms of communication, very young children have less cultural experience and so are less constrained by boundaries between sign systems" (Rowe, 2009, p. 7). To young children, writing is not just letters or words on paper; rather, they view writing as just one form of composing, and will frequently use written and verbal language, as well as actions, gaze, and drawing or other modes of artistic expression to communicate their thoughts (Lancaster, 2006; Wright, 2007; Rowe, 2009). Acknowledging these multimodal methods of communication that children employ, and using them as a means of instruction, improves the learning outcomes of students with weak language skills; it may also be useful for teaching students who are learning English as another language (Genishi et al., 2001; Rowe et al., 2001; Rowe 2009).

Today, writing is viewed as a socio-cognitive activity in which writers and readers interact in a variety of ways using multi-modal methods of writing and communicating (Rowe, 2009). It is well-established that children merge multimodal representational systems such as talking, drawing, and role-playing long before their communication needs require written marks in order to convey meaning (Kress & Bezemer, 2008; Siegel, 2006; Mills, 2011).

Why Artmaking? Though there are many studies that examine the connection between drawing and early writing attempts, there is little research that focuses on the uses of child-generated artmaking experiences as a catalyst for producing conversation and for scaffolding oral language. This is an important area to explore because artmaking opportunities typically take place in small groups, which encourage children to talk to each other and to their teachers, when they are stationary at the art center. Thus, they are a natural medium for promoting talk. In addition, the kinds of themes and topics that children engage with during their artmaking experiences frequently relate to the academic content which they are learning during other portions of the school day. Given this, it is likely that conversation that emerges during artmaking experiences has the potential to meet the NELP (2009) requirement of "deep, meaningful" content. Conversations children engage in as they create drawings, paintings, sculptures, or other kinds of art mediums also have the added benefit of putting the child into the role of the expert, given that they have created the project being discussed.

Teachers and their young students are already engaging in deep, meaningful conversations during interactive read aloud, and making great strides in oral language development during those lessons. However, interactive read aloud is only one small portion of the preschool day. Such a small fraction of the day is not enough to provide the complete instruction and practice that students require in order to fully develop their abilities to

communicate with others and share their thoughts and ideas. By adding another portion of the day when teachers focus on oral language development to the same extent they do during interactive read aloud, student progress could drastically improve. The great news is that most teachers already have artmaking as a daily activity in their ECE classrooms. Hence, only small changes would be required in order to take advantage of the oral language opportunities such an activity offers. Though there are other portions of the school day in which children engage in conversation with peers and teachers, none appear to be as rich, or able to accommodate academic content, as does artmaking. For example, during mealtimes, conversation is likely to revolve solely around foods, their production, and consumption.

Consequently, examining the characteristics of conversations that take place during children's artmaking has the potential to improve the kinds of experiences that teachers plan for students. When teachers are thoughtful about the kinds of experiences that students are offered, and they pay attention to the kinds of questions and interests students bring into the classroom with them, there is potential for students to make great advancements in oral language abilities and in academic content areas.

My Preliminary Study: Artmaking as Inspiration for Conversation

In the fall and winter months of 2017 I conducted a series of observations in a preschool classroom. This classroom, which serves students ages three to five years, is located in a middle-class, predominantly Caucasian neighborhood in mid-Michigan. Led by a pair of lead teachers and a rotation of assistant teachers, the class explored a variety of topics of study, ranging from occurrences in the natural world, to businesses and services in the local community, to reading comprehension strategies such as finding information in pictures or comparing characters across texts. These formal units were filled with high-quality, interesting educational experiences in

which children were encouraged to manipulate building materials, converse with peers and teachers, engage in dramatic play episodes and create artwork from a host of available creative materials and artistic genres.

My interest was in this last area, that of child-generated artwork. I observed and recorded children's conversations as they planned what to include in their works of art through conversations and sketching, engaged in artmaking activities, and as they debriefed or discussed their products with teachers and peers. The goal of this study was to determine if, and to what extent, conversations during artmaking experiences were taking place.

Through the course of this work, three major themes began to emerge. First, not only are art conversations taking place, but they are providing valuable oral language practice for young children. Conversations about their own work placed children in the role of the expert, allowing them to take a leading role in conversations. Children were highly familiar with the content of their artwork and could use their work to practice talk moves such as providing details or asking questions, both of which are important language practices and would advance their conversational competence.

A second theme to emerge from this study was that meaningful artmaking opportunities lead to rich learning and language experiences. This theme pointed to the importance of providing children with engaging activities both before and during the artmaking experiences. Providing learning opportunities from which children can generate insightful ideas about academic content supports the sophistication and complexity of talk. The focal children in this study worked for mutual meaning-making as they planned their artwork, discussed their intent to create specific scenes or include desired information in their compositions, and also as they discussed past experiences which served as the inspiration for their artwork.

Finally, a third theme to emerge from my research was the importance and purpose of speech which arises from spontaneous artmaking experiences. I defined spontaneous artmaking as an experience in which there was no teacher planning or prior preparation before drawing, painting, or sculpting began. In those instances, children elected to make art with the express purpose of exploring the materials, or having been invited by the teacher to explore artmaking materials without prior planning to connect their projects to academic content. Within this theme, it became clear that the purpose for conversation does matter in the sophistication or elaboration of talk which occurs. Talk that occurred during spontaneous artmaking tended to have fewer turns, fewer instances of elaboration on ideas, and little or no sophisticated language. However, this talk was still important because it allowed children to accomplish tasks. Conversations which illustrated this theme were characterized by direct requests for materials ("I need scissors."), questions about procedures ("How did they do that?"), and simple statements of intent ("I'm going to use yarn.").

My preliminary study offered the conclusion that high-quality conversations are taking place in preschool classrooms during artmaking experiences, and lead to the question of what precisely the characteristics of these conversations are. Specifically, it creates space to discover what children are using artmaking conversations to learn, both socially and academically, as they engage in symbolic play with language and their drawings and paintings.

Adding to the Existing Body of Research. This project adds to the existing research in that it examines the characteristics of children's artmaking conversations in order to expand the usefulness of an activity that is already taking place in many classrooms. By shifting the view of what artmaking can accomplish in terms of increasing or improving student learning, artmaking conversations can be structured in a way that forefronts content knowledge or social interactions.

This project shows that children's talk during artmaking experiences can help them to make sense of academic content knowledge by asking questions of one another, as well as sharing their thoughts and insights. Furthermore, this project will show that such conversations can emerge even when children are engaged in artmaking without an adult present to mediate their conversation and their learning.

In addition to the benefits for student learning, this project highlights benefits for teacher learning as well. My work shows that examining the characteristics of children's artmaking conversations can improve teacher education by highlighting the importance of the kinds of talk that can occur when artmaking experiences are planned with the goal of stimulating deep, meaningful conversation. When teachers plan such experiences with the understanding that students will be encouraged not only to share their thoughts and questions about academic content, but will also be invited to facilitate the talk themselves, they place the onus of learning in the hands of their students., The kinds of art-based learning experiences offered to students need to be focused on topics that are deeply meaningful and that children have shown interest in. In relation to that, this project will provide examples of elements of conversation facilitation that will be important for teachers to consider as they plan artmaking experiences for young children. Most importantly, I offer new insights into the ways in which practitioners can engage young students in conversations designed to improve instruction, promote learning, and engage children with academic content.

Summary

Research concerning oral language and conversational skills in early childhood education create a foundation for understanding the importance of ECE literacy instruction. The uses of multimodal methods for communication, specifically children's artmaking, inform understanding

of the ways in which children use signs and symbols in their efforts at communication and writing. Studies from these areas indicate that students benefit in their academic learning from multiple opportunities to converse with teachers and peers. Some of the studies also imply that when students are given opportunities to think about and discuss their ideas through their artwork, comprehension of academic content improves. Further, teachers can use these conversations as a means for introducing new, highly sophisticated vocabulary, and to provide students with practice at turn-taking and other skills necessary for successful conversation to take place.

This review also suggests that multimodal methods of communication have become the norm, not just outside of academic settings, but within them as well, making it vital that students learn to use modes such as visual and auditory communication in addition to writing. Studies of older students indicate that children are using multiple forms of communication to build deeper understandings and communicate their ideas in more creative ways than writing alone allows them to do. This, in turn, might suggest that children's artmaking is not just an early form of writing, but a component of communication that will allow them to share their thoughts and co-create knowledge, while at the same time building stronger social relationships than writing alone allows. Moreover, in settings where multimodal forms of literacy were valued, students came to see themselves as competent and capable of greater learning than in classrooms where writing remained the privileged form of communication.

Finally, there are very few studies that address how early childhood classrooms are supporting the youngest students in their oral language development outside of interactive read aloud settings. This study attempts to provide a picture of how teachers can use other portions of

the school day to support young children as they acquire oral language communication skills through activities such as drawing, painting, sculpting, and other artmaking related activities.

CHAPTER 3: METHODOLOGY

The primary goal of this study was to identify and examine the characteristics of young children's conversations during artmaking experiences in preschool. To accomplish this goal, a qualitative research design of instrumental case study and participant observation was used. Discourse analysis at the "utterance-token meaning" or situated meaning level (Gee, 2008, 2011a) was applied to critical incidents of oral language samples from audio and video transcriptions of children's conversations, field notes, and teacher interviews.

Case Study

There are three types of case study classifications: intrinsic, or exploratory case studies; instrumental, or phenomenological case studies, and collective, or an examination of multiple cases (Stake, 1994). This study adopts an instrumental case study design in that the case itself is less important than understanding a phenomenon which occurs within the case, that of the artmaking conversations children engage in. Instrumental case studies often provide rich description of a particular phenomenon within the site, which yield fruitful findings pertaining to the specific research questions (Grandy, 2012). Additionally, qualitative casework such as this project, triangulation of data (e.g. drawing upon multiple sources of data) is common as it increases the trustworthiness of claims based on that data (Grandy, 2012). It is important to note that instrumental case study design does not permit generalization (Stake, 1994); however it does attempt to identify patterns and themes which can be compared with other cases (Grandy, 2012). The resulting comparisons then show transferability of the case findings.

Discourse Analysis

Discourse analysis is an appropriate method for transcribing and analyzing language which the students and teachers involved in this study used as they co-created knowledge and

understandings during the learning experiences represented in later chapters. By analyzing transcripts of talk, I am able to discover how the children used conversational moves to construct knowledge, build relationships, and deepen or expand their understanding of academic content. Additionally, transcripts of teacher interviews allow me to delve into the instructional decisions that the participant teachers were making before and during learning episodes.

Discourse analysis is the examination of language in use (Gee, 2014). For the purposes of this study, discourse analysis will concern the interpretation of conversation and communicative events, namely speech and turns at talk, primarily related to young children's play-based learning activities. Discourse analysis lends itself as a model for understanding the current research aims: examining the characteristics of children's art conversations in various contexts.

For young children, discourse is the primary method through which learning occurs, so mastering these communicative competence components is vital (Lonigan et al., 2009). In analyzing the conversations, it is often useful to identify the purpose of each utterance or turn at talk in order to discern which components of communicative competence children are attending to and which they have not yet mastered. Purpose, then, refers to the speech action students are attempting to accomplish, such as sharing ideas or asking questions (Boyd & Markarian, 2011). Labels suggested by Boyd and Markarian (2011) provide purposes for utterances which include revoicing utterances from a partner, authentic or probing questions, and feedback. In addition, utterances could be labeled as: clarifying statements; responding; identifying; and extending or describing information, actions, items or ideas. These are all actions which conversational partners are expected to be able to perform as doing so ensures continuity of topic (Erickson, 2004), the teaching of which is frequently the main purpose of oral language practice in

preschool classrooms. Additionally, identifying purposes of utterances is useful in discerning how young children are using the communicative components they have mastered to express their understanding of their role, or how they view themselves as learners and participants within the classroom community, and in comparison to their classmates and teachers.

Communicative competence can also be measured by examining children's attendance to components of language: grammatical competence, in which speakers must be aware of vocabulary, word meaning and sentence structure; sociolinguistic competences which are concerned with social and cultural norms of conversation (Canale, 1983). Discourse analysis provides opportunities to identify instances in which children struggle with components of language interactions to determine how best to scaffold the learning of markers of communicative competence.

Preschool aged children must learn how to use language appropriately in a variety of contexts. One such way teachers attempt to teach these communicative competence skills is by providing space for students to talk about a variety of concepts in multiple contexts. As such, preschool classrooms often provide time and space for children to work and play in small groups at various guided and self-directed tasks. The conversations allow for the development of communicative competence and take place during small group times which often revolve around two things: developing children's academic content knowledge; and understanding and expanding their social-emotional growth through fostering friendships with peers (Yelinek & Grady, 2019). Fostering communicative competence, the ability to know who one is speaking with and to understand the setting in which the conversation is taking place, as well as understanding the appropriate usage for language in that setting, is one of the main purposes of

learning in early childhood (Diaz-Rico & Weed, 2010; Florio-Ruane & Morrell, 2011). Discourse analysis can provide evidence of children's understanding of these competences.

Another crucial element to examine in preschoolers' speech events is their use of narrative, in which they tell stories. The narratives children tell in the conversations transcribed and presented in the current project are all directly related to prior learning experiences. Often, as children use narration to help them make sense of the world, their perceptions and understandings grow and change. In early childhood education, most narratives children tell are about themselves or people who are close to them (Ochs & Capps, 2001). This is typical because most stories children tell are accounts which are based on experiences they've had. Bamberg and Georgakopoulou (2008) refer to these as small stories because they tend to be brief and capture fleeting aspects of lived experiences. The stories are rarely entirely accurate depictions of real life events. However, narrative analysis focuses more on how the story is told, rather than the accuracy of the account (Bamberg & Georgakopoulou, 2008). In all cases, to be considered a narrative event, there must be a beginning, middle and end, which logically link to one another.

Wortham and Reyes (2015) describe three key features which identify children's speech as a narrative event. First, the discourse represents temporality, or the sequencing of events. Children use vocabulary which marks time or orders events so as to make sense of the details in the narration. For preschoolers, typical temporality markers include terms such as first, next, then, and last. A second feature which identifies a speech event as narration is meaningfulness. The narration must signify events and their relationship to each other. There must be a clear logic between events that occur in the narration and those events must have a meaningful connection to the events that come before and after. Finally, for speech to be considered narrative, it must have sociality. That is, the narration must be produced in relation to, and for, a specific audience.

In addition, discourse analysis encourages scrutiny of the unspoken elements of conversation, such as facial expressions or gestures (Gee, 2014). This type of analysis prompts researchers to examine conversation transcripts for information which needs to be inferred based on both speech, and actions, as well as the surrounding environment in which conversation takes place. Being able to fill in unspoken information provides crucial knowledge in order to make conversation clear, understandable, and received in the way the speaker intended (Gee, 2014; Jaworski & Coupland, 2014). Researchers can use this tool to note facial expressions, body language and actions, as well as environmental considerations such as the presence of other people, activities happening nearby, or other actions which may be influencing the conversation taking place.

Theoretical Framework

The theories that support this project largely draw on three bodies of language development research. First, I draw on theories of teacher-student interactions. These theories explain the ways in which teachers view young children and the kinds of interactions they cultivate with students in their classrooms. Secondly, I draw on theories of vocabulary learning and instruction in part to help define sophisticated conversation and differentiate it from sophisticated vocabulary. Finally, I utilize theories of semiotics in order to shed light on how children's artwork conveys messages that support their conversation in multimodal ways.

Teacher-Student Interactions. One of the main theories of teacher-student interactions that supports this project comes from the Reggio Emilia approach to early childhood education (described in detail below). According to the Reggio approach, teachers and children are partners in learning who guide or facilitate explorations of children's interests as they work. Teachers are expected to aid in discovery and problem solving (Wurm, 2005). Often, teachers and children

collaborate on both short and long-term projects which emerge based on the interests of the children. This means that careful planning for learning experiences occurs, but is fluid and changes based on the learning and questions children ask. Most importantly, children are viewed as competent and capable people and their thoughts and desires are respected.

Teacher-student interactions are considered so important to developing highly successful ECE programs, that organizations such as the Early Childhood Learning and Knowledge Center (ECLKC) have designed classroom assessments in order to help programs identify the kinds of relationships and interactions that take place in their classrooms. Effective teacher-child interactions are characterized by positive emotional climates and teacher sensitivity to students needs by creating an environment that children feel safe to explore and learn (Hamre, Goffin & Kraft-Sayre, 2013).

Both the Reggio theory of teacher-child interactions, and the nature of interactions promoted by ECLKC point to the importance of respecting children's needs and desires as well as viewing children as equal partners in the learning process. These characteristics are among the foundational ideas that support my theoretical framework which supports this study.

Vocabulary. Young children learn new vocabulary with great agility and speed, but their learning is dependent on the range of words they are exposed to. Teachers can facilitate children's vocabulary learning using a variety of strategies including making conversations and posing thoughtful questions, and through direct instruction (Neuman & Kaefer, 2018). Research suggests that children learn vocabulary best when adults engage them in conversation and give them meaningful feedback on their remarks (Hirsh-Pasek & Burchinal, 2006). Feedback could include probing questions, requests for further information, or advancing the conversation by adding more details or introducing new ideas, among other things. Children learn words through

multiple exposures, supported by child-friendly definitions of words new to the student, followed by meaningful language interactions in which those words are embedded (Wasik & Jacobi-Vessels, 2017).

Meaningful language interactions are often characterized by sophisticated vocabulary, or novel words that the child has unlikely encountered in the past, but will encounter with increasing frequency in the future (Piasta et al., 2012). Often sophisticated vocabulary consists of academic language (i.e. observe or compare) or content area knowledge (i.e. addition or subtraction). Sophisticated vocabulary terms evolve as children are exposed to and learn more words. For example, a term that would be considered sophisticated for a preschool student is unlikely to be sophisticated for an older child.

Semiotics. Semiotics is a study of signs, or images that stand for something else. There are three kinds of signs which can be used in communication. First, symbols, which bear an arbitrary relationship to that which they stand for (Kress, 1997). For example, letters and words can represent objects or ideas in writing. The relationship between the written word and the object it represents is arbitrary. A second type of sign, icons, resemble the object or idea which they stand for (Kress, 199). These are typically drawings or paintings of objects. A third type of sign are indexes, or signs that indicate facts or conditions related an idea (Kress, 1997). For example, smoke is an indicator of fire, and can thus act as a sign for fire. Semiotics in classrooms then, is concerned with the meaning and form of symbols children use to communicate ideas (Kress, 1997).

In classrooms, children use a variety of forms – artwork, letters and numbers, block creations – to communicate meaning. Kress (1993) states that the relationship between form, for example a child's artwork, and meaning, is not arbitrary, but motivated by a desire to

communicate specific information. Therefore, the signs or symbols children include in their artwork (or writing, or block creations, etc.) are selected because they are likely to have similar meaning to others who will encounter their work. It is also thought that children frequently communicate in multiple modes, or methods, at the same time (Kress, 1997). Multimodal communication allows children to express themselves in the way they find easiest. Therefore, children's drawings and other artwork may contain meaning that allows them to better describe their understandings of the world around them. Combining verbal communication, drawing or other kinds of artwork, writing, and other methods of communicating, allow students to express themselves in ways that a single mode alone may not afford them.

My Theoretical Framework. The theoretical framework underpinning this study is based on theories of teacher-child interactions, the use of sophisticated vocabulary, and sign systems through which discussion can take place. I borrow from each of these areas in order to build a theory that explains how children use their own artwork in order to engage in meaningful conversations with teachers and peers regarding topics that interest them. Young children use talk as one of their primary methods for learning, and the interactions they have with their teachers provide them with feedback regarding the success of their attempts at communicating. Carefully considered responses from teachers can tell a child that their message was received and understood, or it can alert the child to the fact that communication has broken down in some way. When teachers and students communicate effectively, higher levels of sophisticated vocabulary, and in turn sophisticated conversation, could occur. I understand sophisticated conversation as talk in which speakers use or attempt to learn sophisticated vocabulary and discuss topics with depth. This conversation could be characterized with unique ideas or perspectives on a topic, and it typically highlights the child's understanding or questions about

the content of the discussion. Sophisticated conversation could be a path toward a child's deeper appreciation of content area knowledge

I also borrow heavily from the theory of semiotics to build a theory of oral language development which is the foundation of this study. Semiotics, the use of signs and symbols as forms of communication, explains the importance and significance of children's artwork in their language development. When students engage in artmaking conversation, the images create, whether through drawing, painting, or with other media, become another voice through which they can express themselves. Multimodal conversations[4], in which children express meaning not just through their verbal statements, but also through images and movement, allow them to share ideas and understanding through the mode that the child decides best suits their needs. Artwork supports their ability to demonstrate their understanding and their thinking processes; the Reggio Emilia philosophy of education names artmaking one of the hundred languages through which children communicate, and I take this view as well. Together with verbal speech and other forms of communication, children's artwork expands their capabilities for sharing thoughts, ideas, and questions.

My Role as a Researcher

During the nine months of this study, I positioned myself as a participant observer in a preschool classroom serving students ages three and four. As a participant observer, I observed small and whole group mini-lessons and student led conversations which took place during artmaking activities. When invited into the conversation by the students, I was also a participant. Additionally, I participated in transition activities such as supervising bathroom breaks,

[4] Multimodal communication is communication through more than one mode, for example speech, movement and gestures, or signs and symbols.

preparing and distributing snacks, conversing with children during snack time and supervising nature walks. As I became an accepted member of the classroom community, I also found myself answering student questions about learning activities and occasionally conferring with students about the artwork they created.

My own background placed me in a unique position in the classroom. As a former preschool teacher in the building where my research took place, I was well known to the teaching staff. Additionally, some of the older preschoolers in the focal classroom had been in my infant/toddler class in prior years, making me familiar to their parents as well. Consequently, I was sometimes consulted about the literacy practices that took place within the classroom and was occasionally invited to join the teachers for their co-planning sessions.

During the observations of small group mini-lessons and student led conversations which took place outdoors, I usually sat to the side of the group on the edge of the blankets that were provided for students' and teachers' comfort. Whenever possible, I attempted to stay outside of the children's conversations, though as they grew more comfortable with my presence, they would frequently turn to me to ask questions or share observations. These kinds of interactions increased when the children observed me writing in my field notebook and wanted to know if I was recording a nature journal as well, and if so, what I had observed. Often, showing the students the pages of my field notebook quelled their curiosity and they returned to their own interests.

Other observations took place indoors, and during these observations I typically sat at the table with the teacher and students. My participation in conversations increased when we were indoors due to proximity. Outdoors, children had much more space to disperse, while inside, we were all confined to the same classroom space. This made me much more visible to all students

and resulted in more questions from children, as well as requests to read books or join in play. After several weeks of observations, the students began to view me as just another teacher.

Research Setting

Location. Kensington Pines is a privately-owned preschool in a middle-class suburban city. The current owner and director purchased the business in the early 2000's and has grown the school to accommodate infants and toddlers as well as half-day and full day preschool programs, all of which boasted waiting lists for enrollment at the time of data collection. While most families self-identified as White on their enrollment forms, two identified as African-American and one as Asian. Most families enrolled in the school reflect the middle-class status of the surrounding area. However, four children in the focal classroom are from families that self-identified as low SES based on family income.

At the time of data collection, there were twenty-eight three- and four-year old students enrolled full time. There were an additional nine students enrolled part time in the preschool class.

Kensington Pines is housed on multiple acres of land which are owned by the school's director. They have four large playgrounds which are utilized year-round. One playground is specifically designed for infants and young toddlers, while another is designated for toddlers aged 16-36 months. In addition to the main school building and playgrounds, Kensington Pines also boasts two additional buildings which are used during warm weather (they are unheated and therefore not used during the coldest months), one of which is used as a science lab and another which is a dedicated studio space for large group art projects, including painting, sculpting, and photography. These additional spaces are often used for other small group lessons as well.

Reggio Emilia Inspired Schools

Kensington Pines Early Learning Center has adopted the Reggio Emilia Approach (also called "Reggio") as the foundation for their program, using the principles of the approach to guide their curriculum. There are several tenants that guide the Reggio approach to early childhood education.

The Hundred Languages of Children. Educators who subscribe to the Reggio approach believe that children have the ability to represent ideas in unlimited varieties of symbolic, oral, and graphic modes. Children use these modes of communication to develop the skills required to investigate and make sense of the objects and ideas which they are curious about. Teachers place great emphasis on visual and expressive arts as symbolic tools or languages of children which can be cultivated to help students achieve goals. The approach emphasizes the importance of children's symbolic language. The hundred "languages" are the many modes of expression, such as speech, writing, movement, drawing, painting, sculpture, shadow play, collage and music, through which children communicate and learn about their world (Edwards, Gindini, & Forman, 2012). Teachers who employ the Reggio approach in their classrooms learn to listen to the "hundred languages" that children use to express themselves as individual learners and as "teachers" in their own right (Wurm, 2005).

The Image of the Child. The second major tenant of the Reggio approach is that educators first and foremost always consider the image they have of the child. Adults are encouraged to see children as competent and full of potential, active in constructing knowledge through interactions with others. Teachers try to understand as fully as possible a child's point of view, what interests them and drives them to learn. They understand that children have their own abilities, potentials and curiosities (Edwards, Gindini & Forman, 2012). It is important that teachers are deeply

aware of the children's potential as they construct all of their learning activities, as well as develop an environment that will appropriately respond to the students' needs. During these planned learning activities, it is important that children are allowed to explore, make their own choices – and mistakes – and make decisions or correct errors based on their own understandings. This requires that teachers respect students enough to allow the processes of learning to occur at the child's direction. Reggio teachers rarely provide solutions when children struggle with activities, nor do they leave the child to their own resources (Wurm, 2005). This requires teachers to fully understand what their students are capable of achieving and what supports will allow them to move forward. The Reggio approach to early education is based on this image of the child as "full of life, power, and confidence, rather than full of need" (Biermeier, 2015).

The Role of the Environment. Reggio Emilia inspired classrooms are constructed with an understanding that the environment is a second teacher. As such, conscious use of space, color, natural light, displays of student work, attention to nature and detail, all serve as teaching tools. Teachers strive to create an environment that is inviting, making students comfortable and encouraging them to participate. By creating spaces where children are invited to work and play, teachers can inspire creativity as well as encourage children to pay attention to detail and design in their work. The layout of the physical space, in addition to welcoming all children and adults who enter, fosters encounters, communication, and relationship building. This could mean that classrooms are highlighted by the use of color, light, mirrors, natural artifacts such as plants, sand, and wood, as well as creating spaces that highlight and celebrate the school's history and the identity of the children who attend (Biermeier, 2015). In addition, teachers strive to create an

environment that supports real collaboration among children and teachers, family, and the surrounding community (Wurm, 2005).

The Role of the Teacher. In schools that have adopted the Reggio approach to early childhood education, teachers play a prominent role in the child-centered classroom. They facilitate children's capabilities to represent what they know and imagine, as well as what they are curious about. Teachers mediate between children's immediate comprehension and what they are ready to learn next. They accomplish this in several ways by: reviewing and supporting children in telling the story of their own learning; arranging new learning activities to help children's understandings grow; furnishing them with challenges and problems to solve; equipping them with suitable resources; and facilitating group discussions and social interactions (Edwards, Gindini & Forman, 2012). Frequently, teachers will converse with students for the purpose of discovering their ideas, theories, and current understandings of topics of study. Then using their own notes and audio/video recordings, teachers will make flexible plans and preparations for future learning activities based on the children's interests and needs. Teachers are ready to hold conversations with children for the purpose of offering them vocabulary to discuss topics, insights that might help them to find solutions to difficulties they have encountered, or to answer questions they may be interested in. Teachers frequently observe, reflect, and listen to children together with colleagues in order to create learning activities that are most likely to be of value to the students in their care (Wurm, 2005).

The Importance of Time. Children's learning does not take place in a "one-and-done" sort of manner, rather, learning builds upon experiences over time. Giving children plenty of experiences to investigate a concept, build and revise their understandings, and develop concepts is essential. Children are given multiple opportunities to explore a concept in a variety of

different ways in order to arrive at results that please them (Biermeier, 2015). In Reggio inspired classrooms, children's work is valued; teachers and students understand the value of being able to stop a project with the understanding that it will be there waiting for the child to resume work the next day; students are encouraged to use the same materials repeatedly until they are pleased with the outcome and have satisfied their questions and curiosities (Biermeier, 2015). Teachers take the time to get to know the learning characteristics of each student in their class, allowing them to plan their days and weeks in a way that will allow each child suitable time to accomplish their goals. In this way, teachers do not feel rushed to "cover" material, and students are deeply engaged in solving problems and finding answers to meaningful questions.

The Value of Relationships and Interaction of Children in Small Groups. Teachers who subscribe to the Reggio approach typically prepare their classroom spaces to encourage interaction between children. They understand that children will work in different configurations throughout the day and the week, thus creating spaces where large and small groups of students can gather, or where teachers can meet individually with just one or two students (Biermeier, 2015). Teachers who subscribe to the Reggio approach believe that children learn a great deal in exchanges with their peers, especially when they can interact in small groups. Therefore, the majority of the classroom space is designed to promote these small groupings where children can pay attention, speak and listen to one another, develop curiosities and interests, then respond to those curiosities and interests. Materials are placed in locations that are easy for children to access and use together. Creating such a space highlights the importance of teamwork and conflict resolution, allowing children to work together to co-create knowledge as they learn and develop together (Biermeier, 2015).

Teacher History. Julie is the co-lead teacher of the preschool class and has four teacher assistants on a rotating schedule through the week. Two to three assistant teachers are always in the classroom with Julie, as state law requires a ratio of one teacher to every eight children in the age range served in this classroom. Julie has earned a bachelor's degree in early childhood education. She has taught preschool for more than fifteen years, nine in her current position. Her own child is presently enrolled in her classroom while one of her other children recently graduated from the program. Julie and her family are White, middle class and reside in the same town where Kensington Pines is located. One reason Julie and her classroom are interesting to study is her expressed belief that preschoolers are capable of much more academically and socially than they are often given credit for. Julie believes that her young students are capable of solving simple problems, compiling their own information, and working together to explore new ideas; beliefs she expressed frequently in our interactions during the observation period, particularly during the follow-up interviews. These beliefs are evident in her interactions with her students and coworkers, and in the autonomy children have in her classroom.

Another important reason I selected Julie's classroom was my own familiarity with her work, as we were previously co-workers at Kensington Pines. During my time as a lead teacher in the toddler program, Julie and I frequently worked in close proximity, particularly as we prepared children for the transition from my toddler classroom to her preschool classroom. This transition process often began with her visiting my classroom and spending time with the child in transition, then moved to the child and I both visiting Julie in her classroom to participate in preschool activities. From my own experience as a member of the school faculty, I viewed Julie as a warm, caring, and extremely capable preschool teacher. I understood her to be a highly competent early childhood practitioner, eager to improve her practice and the curriculum she

presented to her students. I viewed this as an important quality for a participating teacher to embody because of my own belief that preschool teacher preparation often lacks depth, leaving teachers to find learning opportunities on their own. Julie's apparent dedication to her own continuing education and improvement of the curriculum she presented to her students was not directly related to her willingness to participate in this study. However, Julie's eagerness to grow as a professional aligns with my own belief that preschool teachers must cultivate skills to allow them to evaluate their own practice and seek out experiences to improve those practices. I hypothesized then, that since she continually looks for ways to improve her practice, there might be innovative and interesting observation opportunities in her classroom.

Other staff who frequently work in Julie's classroom include her co-lead teacher, Alexandra. Though Julie and Alexandra are equally responsible for all areas of instruction and childcare in the classroom, Alexandra appears in very few of the conversations that were collected. Of teaching assistants assigned to this classroom, at least one has experience equal to Julie's, having taught in preschool classrooms for ten years at the time the data was collected, while a second teaching assistant had slightly less experience. The remaining assistant teacher was a recent graduate from a nearby community college program in Early Childhood Education and had less than two years of classroom experience.

Student Participants

There were 28 three- and four-year-old preschoolers who served as participants during the data collection period. Nine of these children feature prominently in the seven conversations transcribed and presented for analysis in Chapters 4 through 6. These children are described now.

Amanda. At the time of data collection Amanda was four years old. She began attending Kensington Pines in the toddler classroom when she was approximately 18 months old. Her

family identified as White and middle class, and Amanda was the only child in her household. Her parents both worked outside of the home as engineers in the automotive industry. Julie reported that Amanda often enjoyed coloring and painting, exploring books and being read to, and playing in the outdoor kitchen on the playground. I selected Amanda as a focal student because she attended school five days a week for more than four hours per day. She appeared to enjoy artmaking and frequently told stories both related to her artmaking and in relation to other activities she engaged in during the school day. Amanda was a very verbal child, which was a characteristic that I considered favorable for the current project for fear that shy or quiet children would not provide me with adequate data to study my original research questions regarding how conversations take place in the classroom.

Shemar. The second focal student, Shemar, was also four years old at the time of the study. Shemar began attending Kensington Pines in August of the year this study began when he was placed with a foster parent who lived nearby. Shemar is an African-American male living with a White single mother who recently began proceedings to adopt him. Julie shared that Shemar had lived with several foster families since his birth, and had been living in his current home for approximately eight months. Both his social worker and his foster mother gave permission for Shemar to participate in this research study. Shemar's foster mother worked part time outside of the home, and ran a business part time from a home office. As with Amanda, Shemar attended school five days a week for at least four hours per day. In addition to artmaking, Shemar appeared to enjoy building with blocks, and climbing trees and playground equipment. Often, he narrated his own play, telling detailed stories with multiple events as he worked with art or building materials and during his imaginative experiences on the playground.

Liam. Liam, a three-year-old male, was the most recent child to join the class, having just transitioned to the preschool program from the toddler class. (Rather than being forced to adhere to traditional school calendar years to advance to the next class, children at this school transition between classrooms when they reach the appropriate age and maturity to do so, a decision that is based on the recommendations of the toddler teachers and the preschool teachers, together, as well as the recommendations of the child's parents/caregivers. Therefore, Liam joined the preschool class in mid-October, 2017, just after data collection had begun). Liam is the youngest of four children, many of whom are in middle school or late elementary. Liam's parents are divorced; he and his siblings live with their mother in a mid-SES neighborhood and spend weekends with their father. Though neither of Liam's parents live near the school, they selected it because of its reputation and because it serves as a half-way point between their two residences. I chose Liam for this project because of his enthusiasm for everything he encountered. Each new experience Julie provided excited him, though he was not always enthusiastic about discussing his projects with her. Liam and Shemar were often found together and appeared to enjoy one another's company. Finally, like Amanda and Shemar, Liam regularly attends school five days a week for more than four hours per day.

Charlotte. In the fall of the year this study began Charlotte was three years old. She turned four within weeks of the first day of my formal observations. Charlotte's first experiences at Kensington Pines were in the infant classroom when she was around six months old. Her older brother also attended, and her family elected to continue to use the school for their early childhood care needs. Charlotte's family self-identified as White and middle class. Her parents both worked outside of the home as teachers. Julie described Charlotte as a precocious child who enjoys being active and exploring. I selected Charlotte as a participant for this study because of

her eagerness to engage in conversation with her peers and her apparent joy at creating art with any materials that were available to the students. Early in my field notes, I commented that she seemed quick to adopt sophisticated words used by Julie and the other adults during interactive read alouds. This continued to play out in the remainder of my observation period, meaning that Charlotte appeared frequently in the conversations I was able to record.

Alice. Four-year-old Alice was another student I quickly realized had much to say. Alice is a middle child with sisters older and younger than herself; her older sister attends a local elementary school and her younger sister is a student in the toddler's class at Kensington Pines. Alice's family had immigrated from Japan, though it was unclear to me when that move had taken place. However, Julie mentioned that the family had only one child when she first met them, suggesting that they had lived in the area for more than four years at the time of data collection. Alice's selection as a focal student in this study was due to the frequency with which she participated in conversations selected as representative of the themes discussed in future chapters. In my field notes, I described Alice as inquisitive, thoughtful, and "mothering" toward her classmates, particularly when they were sad or frustrated. Alice appeared to have positive relationships with many of her classmates, making it natural that she would take part in many of the conversations collected as data.

Daniel. Similar to many of the students in Julie's class, and representative of the surrounding community, four-year-old Daniel's family self-reported as White and middle class on their enrollment forms. Unlike some of the other students described in this section however, his selection as a focal student was not an obvious choice at the outset. My arrival in the classroom did not appear to interest him in any way. He did not seem intrigued by the recording devices the way other children did, and he was uninterested in joining learning activities when I

was observing. It took several weeks for Daniel to warm up to me as a regular figure in the classroom. However, once he did, Daniel proved to be a funny, smart child with an interest in anything that he could build or create. I described Daniel as "shy, but watchful" in my field notes, adding that he seemed to be observing the classroom and his peers as much as I was. Daniel had been a student at Kensington Pines for about six months at the time data collection began, his family having recently moved from a nearby suburb. Daniel has one older brother who attended a local elementary school.

Eli. Like Charlotte, Eli was three years old when observations for this project began. He turned four less than half way through the data collection period. Eli's first experiences at Kensington Pines were in the toddler classroom and he had around a year's experience in that classroom before transitioning to Julie's preschool class. Eli was an only child at the time of data collection, though his mother was expecting twins throughout the observation period, and Eli had two baby sisters just before data collection ended. The family had already made arrangements with the school's director for the infants to attend daycare in the early infants' classroom when Eli's mother returned to work several months after their birth. The family self-identified as White and middle class, consistent with the surrounding community in which Kensington Pines was located. Eli's parents both worked outside of the home in the automotive industry though for the majority of the data collection period his mother had taken elective early maternity leave in preparation for the impending arrival of twins. Eli's selection as a focal student in this project stemmed from the fact that he was initially highly interested in my recording devices. He was eager to explore them, listening to his own voice on the recorder whenever possible. During the introductory period when I came to school to acclimate the children to my presence and the distraction of the recording devices, he frequently chose to work at the centers where my

recording devices were located or where I sat making field notes. Thus, Eli and I were often conversational partners and we built a productive working relationship during the course of the study.

Louise. "Louise is the housekeeper," I wrote in my field notes on one of the first occasions I observed the class. Having turned four in the summer months before the data collection period began, Louise was obviously comfortable in her surroundings. She appreciated order and had a tendency to be helpful to both teachers and students. This extended to cleaning up after her peers and assisting adults with tasks in the classroom. An only child from a family identifying as White and middle class, Louise had attended Kensington Pines from the time she was young enough to qualify for the early infants classroom. Her parents were both active in the school, volunteering to help with a field trip and with a Halloween party, both of which occurred during the data collection period. Louise's selection as a focal student was due to the number of times she participated in conversations that were selected as representative of the themes described in chapters four through six.

Henry. At the time of data collection, Henry was four years old, the oldest of the focal students, except for Shemar, who was approximately three weeks older. He began attending Kensington Pines in the toddler classroom when he was approximately 15 months old. His family identified as White and middle class, and Henry was the oldest child in his family, with a younger sibling also in Julie's class. Henry's sibling, however, did not appear in enough conversations to warrant inclusion as a focal student. His parents both worked outside of the home, owning a landscaping and construction business in the local area. In my initial observations, I noted that Henry appeared to be friendly with many of his peers, playing easily with anyone who joined a game, and sharing ideas with peers during lessons and discussions

with ease. Henry was a very social child, which led to him taking part in several of the conversations transcribed for inclusion in this project, making him a natural choice for a focal student.

Data Collection and Analysis

The following sections describe how, and for what purpose, data to be used in this project was originally collected and how it is appropriate for this project. I will explain the kinds of data that will be used, and how I transcribed and analyzed the conversations in each of the three contexts – artmaking during nature walks, artmaking related to family and community, and artmaking related to animals.

Instruments for Data Collection. Due to the nature of the questions posed, data consists of recorded conversations and photographs of artwork created by the focal students. I captured spontaneous narrations which occurred during children's free play, meal and snack times, nature walks and outdoor play, and any other times when children naturally engage in conversation without prompting. I also collected conversations which occurred during structured lessons such as interactive read aloud times, large group meetings, small group lessons, and at centers. Finally, I recorded conversations during both spontaneous and structured activities designed specifically to elicit conversation directly related to the ways in which children used artmaking as a way to understand lessons and concepts. These artmaking conversations were the majority of the conversations recorded during the data collection period and serve as the basis for the analyses provided in Chapters 4 through 6. A total of 63 artmaking conversations were observed and recorded, a chart of which can be found in Appendix A. Of these, 19 were considered substantive enough for transcription and eight served as examples for analysis.

Audio and video recording devices were used to capture the data, as well as still photography. The first video recording device was a stationary camera which was placed in a location most likely to capture children's conversations and actions in relation to the planned activities for the day. I considered what space the students were utilizing and placed this camera in locations that seemed likely to have a high frequency of student interaction. Since preschoolers frequently move within the classroom and between centers or activities, I found it necessary to have a second camera on my person, which I moved around the space as necessary into order to capture other interactions between students which looked as if they might offer useful data. As I did this, I made conscious decisions regarding whether to remain outside of the children's interactions, or to ask permission to join the group. When I chose to remain outside of the interactions, I used the camera's long-range zoom lens to capture actions and speech whenever possible, supplementing with my own field notes. The scenario just described was an infrequent occurrence, however, and the majority of the conversations captured took place while I was an observer or observer participant next to or within the interaction.

In addition, at the beginning of my data collection period, multiple voice recorders were placed throughout the learning environment, the locations of which varied based on the lessons that were planned and students' interests and actions. At minimum, I placed voice recorders in the block area, the art center, and the dramatic play area when the class was indoors. When the class was outdoors, these voice recorders were placed in the outdoor play kitchen and the "loose parts" area (i.e. an outdoor block area where children have access to wood scraps and other building materials). I also attached one to the garden fence where children frequently spend time tending to plants and listening to stories. I had access to four voice recording devices, so the fourth one was placed in various parts of the indoor or outdoor learning space as was appropriate

on a day to day basis. All locations of voice and video recorders shifted on a daily basis as well, depending on the students' actions and activities. As the focus of my observations narrowed, however, I eliminated the voice recorders in the dramatic play and block centers indoors, and the loose parts area outdoors. Instead, I elected to utilize those voice recorders in instances where multiple conversations were simultaneously occurring in artmaking situations.

In addition to recordings, a second type of data that was highly informative was participant interviews, which I tried to conduct after as many observation periods as was feasible. Interviews are particularly useful for getting the story behind a participant's experiences, as well as to provide follow-up opportunities allowing participants to reflect on experiences (Yin, 2018). I conducted post observation interviews with Julie and any assistant teachers who might have observed or led the children's discussions. These interviews were informal with few predetermined questions in order to allow the participants to set the priorities of the conversation (Yin, 2018). During these observations I took hand-written field notes. I attempted to create analytic memos that captured my thinking and impressions of the day's events after each day of observation, however time restraints required that I limited these analytic memos to weekly, rather than daily exercises. These memos served as a map of the activities observed and allowed patterns to emerge from the data which guided later observations and data collection.

Transcription Processes

This project generated a large amount of data, only a small fraction of which was eventually transcribed for analysis. The transcription process was iterative and underwent several revisions as the project evolved.

Phase 1: Initial Viewing of Data. A preliminary analysis of the data began immediately after I had collected it. I entered the events of the recordings into a table that acted as the table of

contents for a series of folders where the data collected each day was transferred and stored (see Appendix A). Immediately following an observation period in Julie's classroom, I scheduled a period of between two and three hours to review the files. I checked that the files were clear and audible, deleting any that were unintelligible or that contained only instances of children playing with the recording devices themselves. As I listened to or viewed each file I made an entry into the table regarding which teachers and students participated in the conversation, the topic, and the length of the recording. I also made note of which children in the conversation had allowed me to take photographs of their completed art, and which I would need to search for screen captures within the videos, a process which only sometimes yielded results.

Phase 2: Organizing the Data and Reviewing Events. I used the software program Transcribe to convert my data from audio and video files into text. This process was typically completed within two to seven days of when the conversation took place. Daily files had been created during phase one to hold the audio and video clips that were collected, as well as photographs or video stills of children's artwork; the text transcriptions were added to these daily files as well as to a master transcript document. I used this master transcript document to initially sort the conversations, using many different configurations to look at the data in several different ways (i.e. by theme of conversation; by art medium; by participants). During this process I also made notes to myself in my field log regarding questions or wonderings that I had, as well as themes that seemed to emerge. Having all of these files sorted into daily folders allowed me to keep large quantities of material on my desktop where it was easily accessible. Further, although the quality of some of the audio and video data is poor, it was much easier to navigate through the files to locate and review specific events or episodes as I identified a need to view or listen to them more closely.

At this point I divided the data into three distinct groups: conversations which took place in art-related settings, conversations during interactive read aloud, and conversations which took place elsewhere. The first set of conversations became the body of data relevant to this project, while the other two groups were set aside.

The texts of these conversations were collected into a single document, which I then reread several times. The first reading was to familiarize myself with the content of each conversation. My goal was to narrow the number of transcripts that would potentially inform the analysis of this study, and to further classify or sort them into groups.

Phase 3: Iterations of Coding and Creating a Unique Analytic Framework. First, I coded the transcripts based on groupings of students, looking at the conversations through a lens of group organization. I divided the conversations into whole group, small group, and one-on-one conversations, looking for themes or patterns within the groups, hoping to identify characteristics that shifted or changed across groups. I used turn at talk as the unit of analysis, and coded the conversations using Halliday's Model of Language Functions (1990) and Otto's Model of Linguistic Scaffolding (2008). I looked for instances of children asking questions, expressing creative ideas or giving information, searching for patterns within and across the whole group, small group, and one-on-one settings. The results of this initial coding did not shed light on the overarching question of interest related to the characteristics of children's artmaking conversations.

A second iteration of sorting and coding the conversations focused on examining the kinds of artmaking that children were engaged in. I sorted the conversations based on whether children were using drawing and sketching, painting, sculpture, or other kinds of art mediums, and attempted to code these conversations again. Using the same codes as in the first iteration, I

discovered that this iteration of sorting was no more successful than the first. However, my notes as I worked through these first two iterations shed some light on areas of interest that kept coming to the surface. Rather than just looking at the interactions between children, I noticed that teacher planning, teacher actions and teachers' speech during learning episodes seemed to hold some significance. Also of note, children's prior learning experiences were influencing the kinds of language they used in their conversations. Between the second and third iterations of sorting and coding, I created an analytic framework aimed at allowing me to better identify the features of conversation that would better help me to answer my research questions. This analytic framework is represented in Table 3.1.

I selected one conversation at random with which to test the functionality of the new analytic framework. It was designed with my specific questions in mind, looking at children's talk moves, and also at their vocabulary and language use. It allowed for examination of the lesson plans associated with the conversation in question, and the actions or inactions of the teacher during the learning episode. It also looked at the teacher's turns at talk, examining the kinds of language she used and the vocabulary terms she introduced. My initial trial of the new analytic framework illustrated that I was not only interested in the sophisticated vocabulary terms children were using in their conversations, but also, or perhaps more, interested in the sophisticated language patterns they employed and the sophisticated ideas they expressed. Consequently, in the final draft of the analytic framework expressed in Table 3.1, Sophisticated Vocabulary was replaced with Sophisticated Language in order to be more encompassing of the elements which were of value. This analytic framework was then applied to the conversations selected to serve as examples. A sample excerpt of the analysis applied to a transcript appears in Appendix B.

Each of the headings in the table represented by Table 3.1 helped me to answer my research questions in several ways. The first column lists the participant's utterance, the speech which the remaining columns would analyze. The second column, labeled "Student's Interactional Moves," analyzed the talk moves students were making in each utterance. When possible, I described these moves in short phrases of one or two words. This was intended to help me see in concise terms what the most important elements of the utterance might be. Often during analysis, I found myself using phrases such as "explaining" or "prompting question" to describe the kind of interactional move the student was making. This was important for answering questions such as how sophisticated conversation emerged during the children's artmaking related talk. Talk moves, such as explaining or questioning, are elements of sophisticated conversation because they typically add depth to an otherwise surface level discussion. Questioning requires conversational partners to more completely describe their ideas or to consider alternate perspectives, while explaining can prompt the speaker to elaborate on their ideas, offering more nuanced understandings of the topic in question.

The next heading on the table, "Sophisticated Language," allowed me to examine the student's utterances for unique vocabulary terms, those words that are rarely found in typical conversations held by preschoolers. I considered language to be "sophisticated" if it met one of two criteria. First, if students used vocabulary that met the definition of sophisticated. Sophisticated vocabulary has been defined by Wasik and Jacobi-Vessels (2017) as words that are not readily familiar to the student, but that they are likely to encounter again in the future. This is the definition of sophisticated vocabulary that I have adopted as well. Teachers can provide students with sophisticated vocabulary by offering synonyms or antonyms for ideas that are of interest to the student.

In addition to sophisticated vocabulary, I considered students' language to be sophisticated based on the ideas they engaged with in their conversation. The Michigan Department of Education has published standards for preschool education in which they list concepts and ideas that should be taught in preschool classrooms. These include concepts from all four core subject areas: literacy, math, science, and social studies (MSBE, 2013). If students' language interactions met or exceeded the depth of content required by the standards, then I considered it to be sophisticated language.

Importantly, sophisticated vocabulary and sophisticated language can vary by child. What might be considered sophisticated language for a preschooler would not be sophisticated language or vocabulary for an older student. Life experiences and educational experiences provide students with more content knowledge and increasing opportunities to learn. Consequently, vocabulary that students are "not readily familiar with" will change with time as learning occurs.

It is important to note that what might be a unique term for a preschooler might not be considered unique by other populations with more world experience and greater education. In addition to allowing me to identify specific vocabulary terms, this heading also helped me to understand that children's ideas can also be sophisticated. Indeed, students in this study frequently conveyed sophisticated thoughts and ideas without employing high level vocabulary terms. It could be argued that conveying a sophisticated idea in simple language suggests that the child has greater comprehension of that idea because they are able to explain it in ways that are easy for their listener to grasp. Therefore, the "Sophisticated Language" column provided space for me to note the ways in which children were stating ideas and how those utterances comprised

sophisticated conversation, and to provide evidence to answer the research question, "How does sophisticated conversation emerge during art activities?"

The remaining columns explored the talk moves and actions of Julie or other adults who briefly appear in the transcripts. The column headed "Teacher Talk and Actions" looks specifically at the content of Julie's utterances in the conversation. I analyzed the kinds of vocabulary that she used when she spoke to the students as well as her physical gestures, such as hand and arm movements, her placement in relation to the students, and noted any impacts those actions or words had on the child or children with whom she conversed. Teacher's interactions with students have potential to greatly influence the learning outcomes, so it was imperative to understand how her interactions with the students were influencing the words they used (or didn't use) and the threads their conversations followed. I noted when Julie attempted to introduce new ideas to the students, as well as when she prompted or questioned their thoughts in an effort to get them to clarify or expand on their ideas. This analysis work was imperative in helping me to mine examples which spoke to the second sub-question, "What planning and actions, including discourse moves, are teachers engaging in which lead to high levels of conversation?" Specifically, the examples which emerged from analysis of Julie's speech and actions provided evidence which speaks to the elements of this question about discourse moves and physical actions. This required multiple viewings of the video recordings in order to accurately understand the physical actions and gestures teachers made during teaching episodes, as well as analysis of the transcripts of her/their speech.

In order to completely answer sub-question two, however, it was imperative that I understand Julie's planning methods as well. The next column, "Prior Planning," provided me an opportunity to closely examine Julie's lesson plans, when they were available, and to reflect on

my experiences and field notes of the planning sessions Julie and her co-teachers allowed me to observe. I suspected that the lesson plans Julie created, and the thought and consideration she and her co-teachers put into them, was going to be influential on the kinds of conversations that emerged from students' artmaking experiences, however, I could not anticipate what those influences were merely by examining the students' speech alone. Therefore, understanding Julie's thought process, her reliance on curriculum, standards, and the Reggio Emilia philosophy of early childhood education, was paramount to answering the question of how her prior planning led to the learning which was occurring in her classroom. The analysis of her planning helped to give a more detailed understanding of, and answer to, sub-question two, "What planning and actions, including discourse moves, are teachers engaging in which lead to high levels of conversation?"

The final column, "Connections to Other Learning Events," emerged from an interest in understanding how prior knowledge and prior experience with a topic impacted the children's current learning and improved the sophistication of their understanding of a topic. By examining known lessons and activities in which the children had grappled with similar kinds of ideas, I could then compare their current conversations and understandings with those prior activities or learning events, to see if and how that prior knowledge allowed for greater understanding, evolving ideas, and/or revision of schema. I anticipated that prior experiences and background knowledge would prove to have greater importance in some of the transcribed conversations than in others. For example, I anticipated that due to the sheer number of times that the class had visited and observed the pond and surrounding areas, that the children's knowledge and understanding of how the environment changed would influence their current thoughts and conversation (see Table 4.1). Similarly, I suspected that a highly engaging visit from the local

fire department would have impact on the vocabulary and ideas expressed by students as they drew pictures and told stories on a directly related topic. Thus, the "Connections to Other Learning Events" column required that I analyze the ways in which prior experiences could improve the level of understanding, and in turn, the sophistication of conversation that emerges from current learning experiences.

Table 3.1: Analytic Framework

Participant's Utterance	Student's Interactional Moves and Artmaking Moves	Sophisticated Language	Teacher Talk and Actions	Prior Planning	Connections to Other Learning Events
Transcription of participant talk.	Describe student's interactions in phrases. Student talk moves include discourse moves like explaining, questioning, agreeing or disagreeing... Artmaking moves include additions or revisions which are directly related to the talk taking place.	What sophisticated vocabulary is the child using? Why is it considered sophisticated for this student? What sophisticated ideas emerge?	What is the teacher doing? What does she say? Does it have an impact on the children's conversation or actions?	Examine lesson plans when available for content and purpose.	What have the students already done in regard to this event? How does this conversation connect to previous conversation related to the same topic?

Of the initial 63 art related conversations that were transcribed to text form, 19 were deemed to have enough substantive content to be considered as narrative examples, by which I mean, conversations which I could relate in narrative form, then present transcripts for analysis.

These narrative examples, followed by their transcripts, are presented in chapters four through six. These conversations were coded once more by theme, of which three distinct themes emerged: art conversations during nature walks; art conversations regarding family and community; and art conversations regarding insects and animals. These different art-related themes were important because within them students engaged in different kinds of talk, using different strategies to express themselves. From among these 19 conversations, I selected two or three of each theme which showcased students' grappling with content knowledge, expressing their understandings and using new vocabulary or conversation in unique ways.

A total of eight conversations were selected for inclusion in the analysis chapters. Within the transcripts for each of these conversations, I initially divided the utterances by turns at talk. Given the idea-level pertinence of the utterances in each conversation, parsing the utterances in this way, rather than parsing them in smaller units such as parts of speech or by clauses, allowed me to attend to the children's intentions. This method of parsing speech provided units of talk which were easy to work with and was the method I used throughout the project.

After transcribing the selected conversations to study the students' interactional moves and their use of sophisticated language, including identifying sophisticated vocabulary terms, and studying the conversations to understand the implications of Julie's actions and discourse, I selected excerpts of some conversations to transcribe intonation such as emphasis of words or phrases, pauses in speech, tone of voice including enthusiasm and questioning, and rate of speech. I used transcription symbols borrowed from Jefferson (2004), a widely used set of symbols for indicating aural characteristics of speech converted to print. I selected the excerpts to be transcribed in this manner based on their importance in the learning event. For example, if Julie's purpose in a conversation was to encourage students to learn new vocabulary, I reviewed

audio recordings and selected excerpts in which she made multiple attempts at drawing children's attention to a word. If the student's purpose appeared to be to share information with peers, I listened to the audio recordings to determine which utterances were most closely aligned with this purpose.

Summary

I collected and analyzed data using discourse analysis in order to discover the characteristics of young children's art related conversations. This allowed me to highlight the interactions of a number of students as they used their artmaking opportunities to co-create knowledge, deepen or enhance their understandings of academic content, and build social relationships with peers and adults. It also led to the possibility of examining the ways in which teacher planning, as well as interactions during learning experiences, influence children's language and vocabulary use as well as the choices children make in relation to their artwork.

Using the Analytic Framework to Answer Research Questions. By using the analytic framework presented in Table 3.1, I was able to tease out examples of when students were engaged in sophisticated conversation. The framework helped me to locate the best examples with which to illuminate the learning that was taking place and to describe or illustrate what that learning entailed. Each column on the framework examines a different aspect of the conversational interactions students engaged in as they talked together while taking part in various kinds of artmaking processes. One highly useful feature of the analytic framework is that it is versatile enough to successfully analyze all types of conversations and artmaking experiences. That is, the topic of conversation does not hinder use of the framework in any way, nor does the medium of art in which the children are creating. This is especially evident in

Chapters 4 through 6 in that the findings that emerge from each chapter do not overlap in any way.

Once the analytic tables were completed, I used them first as an outline to write the narrative descriptions of each conversation. These narrative descriptions explain what each conversation is about, including information from the transcripts, my observations as recorded in my field notes, and from interviews and informal conversations with Julie, her co-teacher, Alexandra, and the assistant teachers assigned to the classroom. These narratives, followed by the transcripts themselves, appear at the beginning of Chapters 4 through 6.

Following the narrative descriptions, I used the information contained in the tables as a means for illustrating the ways in which sophisticated conversation developed within each of the artmaking experiences. Since the chart begins by examining the sophisticated language that children used, I looked for patterns across conversations and weaved together the children's own ideas and utterances to demonstrate the importance and significance of their speech actions. Subsequently, I used a similar method to examine the discourse moves and physical actions, as well as prior planning that Julie and other adults engaged in, which directly or indirectly influenced the children's conversations and artmaking results. These examples were then used as evidence to highlight the value of teachers' instructional plans and pedagogical moves during a teaching episode. These discussions follow the narrative descriptions presented in Chapters 4 through 6.

CHAPTER 4: ART AND THE NATURE WALK

"I wonder what makes the little wave." The preschoolers in Julie's classroom are naturally curious and inquisitive. They have questions and thoughts about everything they see, touch, hear, or experience. In this chapter, I will explore the rich, sophisticated conversations that the preschoolers have while on nature walks to the pond. I will discuss Julie's planning process and her instructional moves during the learning experience, and connect the children's actions and reactions to prior learning events, examining how these lessons connect to and build on one another as they shape the preschoolers' literacy and language development.

Overview of the Lessons

In this chapter, I use transcripts from two conversations that the children had while they were making sketches at the pond. In the first, Charlotte, Amanda, Shemar, and Henry are engaged in sketching changes that they notice in the area. They have made sketches of the pond on several prior visits and they are noticing changes that have occurred since the last time they visited. Of particular interest in their conversation are the ways in which children offer and take up ideas as they build understanding together. This conversation provides some insights into sub-question number one, "how does sophisticated conversation emerge during art activities?" To examine this, I employ a narrative description of the talk that occurred during the children's artmaking where Amanda attempts to convince the other students to help her make sense of the phenomena she sees.

A second conversation illustrates the ways in which artmaking enhances the students' understanding of academic content related to changes in nature, and emphasizes new vocabulary terms that help them to think about and discuss what they know about nature in sophisticated

ways. Again, I employ narrative description of the talk that occurred during the children's artmaking experiences to illustrate the learning that took place.

Learning During Artmaking: Narrative Descriptions of Children's Conversations

Since Julie teaches in a Reggio-inspired school, one of the staples of her classroom practice is to allow students the autonomy to explore the topics that interest them (Cadwell, 1997). She adheres to the idea that children should explore the natural world around them. Because of this, the students spend significant time outdoors. The lessons and conversations below are two such examples. Following a narrative description of each, I will provide an analysis of the patterns of sophisticated conversation that emerge.

Narrative Description of Ripples on the Pond. During a nature walk, Julie's class is divided into several groups, the number of which depends on daily attendance and the number of assistant teachers assigned to her room. During this artmaking conversation, Julie has four students: Amanda (age 4), Charlotte (age 3), Shemar (age 4) and Henry (age 4). She begins the lesson by gathering the students on blankets on the bank of the pond, a prime location for observing the area. From the blankets, they can observe the pond and the trees on the opposite bank; the bridge over the dam and the waterfall it creates; the stream leading away from the dam; and the goldenrod path that leads into the meadow beyond. After making sure that all of the children have enough space to be comfortable on the blankets, Julie first distributes a clipboard with blank paper to each child, then asks which drawing utensils they prefer. "Both," is the unanimous response to her question of "Do you want crayons or markers?"

As they settle in to draw and sketch, the children make themselves comfortable on the blanket. Some stretch out on their stomachs, feet kicked out behind them. Henry sits "crisscross applesauce," a phrase he sings to himself as he claims his share of the blanket. Before Julie even

considers posing a question to the students, caps have come off the markers and negotiations begin for who gets the "pointy blue" crayon first. By the time Julie asks, "What do you notice about the pond this morning?" Amanda already has several marks on her page in yellow crayon. The question though, prompts conversation, and within just a few seconds the children are making comments about the bright sun and the breezy day. This leads to Charlotte's first observation of the morning. "Miss Julie, I notice the pond has little waves." 'I notice' statements are something the children are trained to make, as it encourages them to use complete sentences in their speech and to take ownership of their learning. In this episode, the students began with a general understanding that bodies of water can have waves, and that such phenomena are typical. This understanding had been constructed through past observations of the very same area multiple times throughout the spring and summer. Students had come to understand that the water flowed into the pond and that the movement of water sometimes resulted in waves, especially after the water spilled over the dam and into the stream. Thus, it is Charlotte's qualification that the waves are "little" that is of importance in her noticing. In an interview, Julie described what she observed happen during this lesson:

> Charlotte brought up the waves and I wanted to see if we could get to the idea that the water was flowing toward the bridge. They've had that conversation before, that one of the changes that is always happening at the pond is that the water is moving and flowing. And I thought, too, that I might be able to get them to think about how the breeze was affecting how the water moves, too. But they weren't ready to think about that today.
>
> They were satisfied with their own ideas. And that was fine, their ideas were reasonable.

In my field notes from this same time, I noticed that the students were much more interested in their own ideas for how ripples were made on the pond than what Julie wanted to draw their attention to. While she tried to guide their attention to the breeze that had been mentioned as they settled down to observe and sketch, the children had moved past that noticing. They engaged in

creative thinking as they tried to build knowledge together. Mentions of frogs and fish, both animals that they were certain lived in or near the pond, were brought up as possible causes for the waves they saw in the water. I indicated in my field notes as well that Julie's attempt to get the students to think about the difference in size between waves and the ripples they were currently observing did not interest the students. As she pointed out in our interview, the students had co-created an explanation for the ripples that was both reasonable and satisfying to them.

As the conversation deepened, students' drawings and sketches evolved. With the introduction of fish and frogs into the conversation, the animals began to appear in the sketches as well. Amanda's drawing began with yellow marks on her page, which eventually became an image of the sun, and prompted her comment that it was very bright outside. One thing that remained constant throughout the children's artmaking was that they were curious and asking questions to gather more information or to deepen their understanding of what they already knew. A great example of this is when Charlotte asks the other students, "Friends, do you have ideas about where the little waves come from?" (Table 4.1, Line 18). She is curious enough about the ripples on the pond that, with Julie's guidance, she draws her peers into a conversation designed to help her make sense of what she has observed and included in her drawing. The conversation concludes with the children listing all the examples they can remember of times when animals have been near the water.

Table 4.1: Ripples on the Pond

Line #	Speaker	Utterance
1	Charlotte	I notice the pond has little waves.
2	Julie	Waves?
3	Charlotte	Little ones. See, look. It has little baby waves.

Table 4.1 (cont'd)

4	Julie	Do they look like waves to you? When I think of waves I think of something that splashes against the shore and is a lot bigger. Is that what those little waves are doing?
5	Choral Response	No!
6	Julie	I wonder if there's a better name that we could call them?
7	Amanda	Look! Fish!
8	Julie	There are fish, Amanda, you're right. They're tiny little fish. I'm curious still. Do you think there's a better name we could call the little waves?
9	Shemar	Maybe.
10	Julie	Maybe. Have you heard the word ripples?
11	Choral Response	Nope. I have.
12	Charlotte	Miss Julie, where do they come from?
13	Julie	That's an excellent question. Do you have any ideas?
14	Charlotte	No.
15	Julie	Maybe you could ask your friends if they have ideas.
16	Charlotte	Friends, do you have ideas?
17	Julie	Ideas…ideas about what?
18	Charlotte	Friends, do you have ideas about where the little waves come from?
19	Henry	I think it's the fish.
20	Julie	The fish.
21	Henry	They swim and they make the water move. So you know where to put your fishing pole to catch them.
22	Shemar	And so you know where to put the fish food to feed them.
23	Julie	Are there other things that could be making the ripples in the water?
24	Charlotte	Frogs could be.
25	Julie	You think frogs are making ripples in the water.
26	Charlotte	Yeah. When they jump in water they make ripples
27	Amanda	And birds do. When they land on the water.
28	Julie	Birds. Like ducks?
29	Amanda	Like…like…like the big one we saw.
30	Julie	Oh, with Miss Rachel. What was that bird she saw with you? Was it a crane?
31	Amanda	No, it was a bird.
32	Henry	It could be a bird. They fly so fast they make little waves and then they fly away so fast you can't even see them no more.

Figure 4.1: Charlotte's Pond Artwork

Figure 4.2: Amanda's Pond Artwork

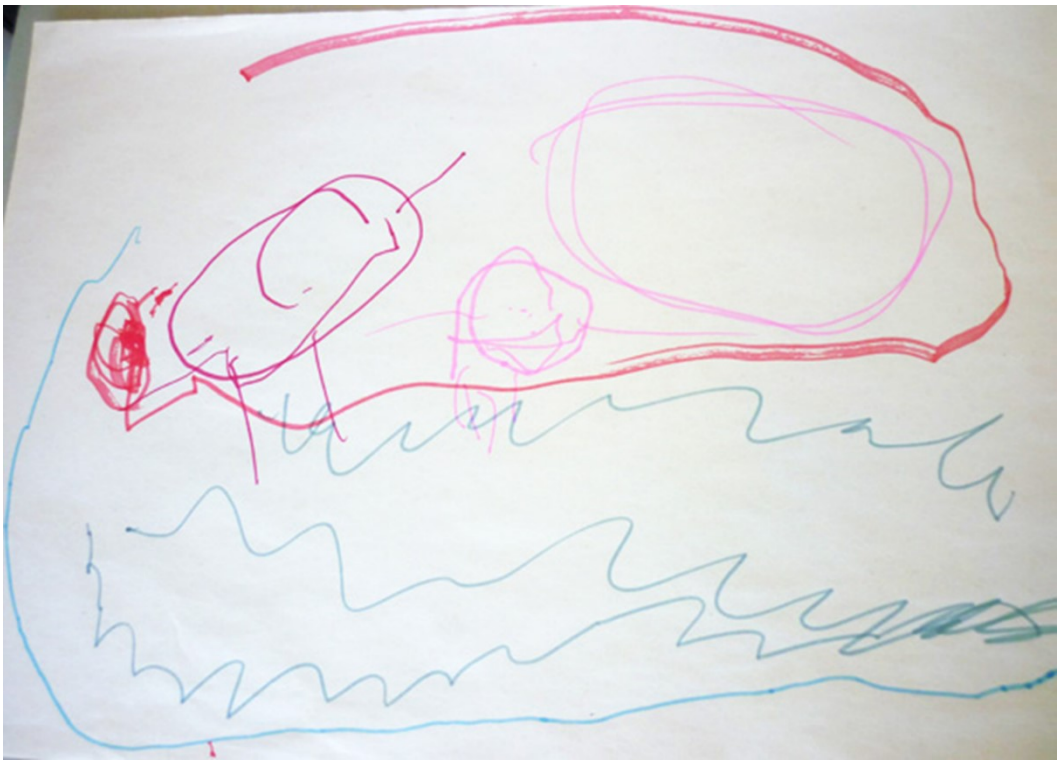
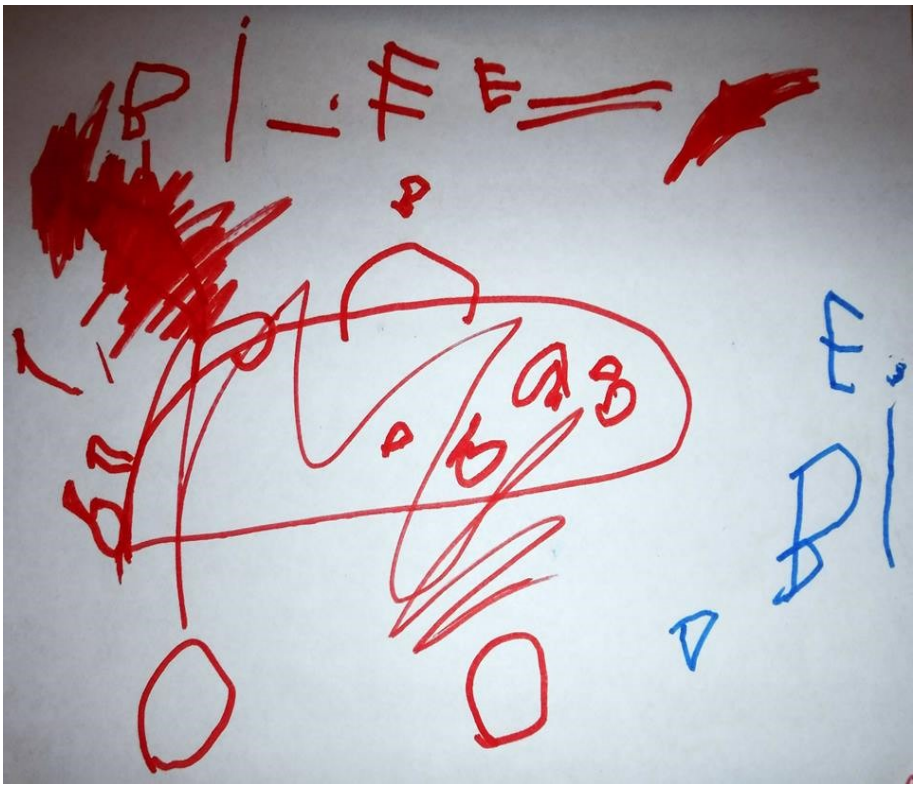


Figure 4.3: Shemar's Pond Artwork

Figure 4.4: Henry's Pond Artwork



Narrative Description of Mist or Raindrops. In the same way that students were divided into small groups in the previous artmaking activity, Julie had divided the students amongst herself and her co-teachers during a subsequent visit to the pond. For this visit, Louise (age 4)

and Eli (age 3) had decided to draw sketches of the pond and the stream which they could then use as "notes" for projects they would later create using more sophisticated art materials which were only available in Julie's classroom. As Julie is locating the nature journal clipboards and markers for them to do their sketching, Louise and Eli begin a friendly conversation. "I'm cold," Louise comments to Eli, whose response is that she's cold because of the rain. In my field notes for this episode, I observed that Julie appears confused by this statement, and with good reason: it had not rained in the area for weeks. When Julie attempts to point this out to the children, they disagree, insisting that it is raining "over there," a statement which Louise emphasizes by pointing to the bridge and the waterfall.

Julie's class has spent significant time in previous visits thinking about where water comes from and where it goes in relation to the pond. They've made drawings of the way water flows into and out of the pond, how it reacts to the dam, and where the stream at the bottom of the dam goes. They've discussed the influence of rain on the water level in the pond as well. Because of this, it is not surprising that the students would connect rain to their pond experiences, though the lack of rainy weather leads to confusion and a breakdown of understanding between Eli, Louise and Julie. In order to clarify, Julie questions them further. Lines four through eight depict their conversation:

Line 4: Louise	It's raining over there. [Points to the bridge and waterfall.]
Line 5: Julie	Were you down by the stream?
Line 6: Eli	We were playing…Miss Alex has the nets down there. We were playing in the butterflies.
Line 7: Julie	Playing in the butterflies? You were trying to catch them?
Line 8: Louise	Yeah. And it's cold down there because of the rain.

Though Louise and Eli clearly have a shared understanding of where the supposed rain is located, they are unable to successfully communicate their understanding to Julie. It is only due to the arrival of another teacher that the conversation can move forward. Natalie, an assistant teacher assigned to Julie's classroom, arrives looking for teaching supplies and is able to clear up the confusion. She explains, "It's misty down where Alex was. There's a lot of mist coming off of the waterfall today. She ended up having to move the butterfly activity into the meadow because they were getting wet down by the stream."

This conversation takes place before any of the artmaking begins. However, it has a direct impact on the drawings that Eli and Louise eventually compose. Without Natalie's intervention, it is likely that what followed might not have occurred. Natalie had only one turn at talk in this conversation, but it was an important one. To begin, she provided context for Julie, which helped her to understand Louise and Eli's insistence that it was "raining over there" when clearly there was no rain and hadn't been for days. More important to the students' literacy development, Natalie's comment provided Julie with an opening to teach a new vocabulary term that would help Louise and Eli to better communicate their experience and to build new knowledge of types of precipitation. The adults introduced the term *mist*, and its variant, *misty*, which the children seized onto almost immediately. Therefore, when Julie asks the children what they might draw today, Eli has a well-developed idea. "I'm going to draw that we got wet from the mist when we played in the butterflies," (Table 4.2, Line 15) he informed Julie. After a bit of debate and consideration about how best to represent mist in his drawing, Eli concludes that he doesn't know how to draw mist.

"Why?" Julie asks him. "How is mist different from rain, Eli? When you try to draw it?" (Table 4.2, Line 18). Eli's response is that it is different, and when Julie again asks how, it is

clear he does not have an answer. Eli understands that raindrops and mist are not the same thing and does not want to misrepresent the mist in his drawing, but he does not have the language to describe the differences. With prompting from Julie, Louise and Eli are able to determine that mist is smaller than raindrops, and by the conclusion of the conversation, Eli has elected to draw blue dots in his drawing. “It’s mist drops,” he announces.

Table 4.2: Mist or Raindrops

Line #	Speaker	Utterance
1	Louise	I’m cold.
2	Eli	It’s because of the rain.
3	Julie	It’s not raining.
4	Louise	It’s raining over there. [Points to the bridge and waterfall]
5	Julie	Were you down by the stream?
6	Eli	We were playing…Miss Alex has the nets down there. We were playing in the butterflies.
7	Julie	Playing in the butterflies? You were trying to catch them?
8	Louise	Yeah. And it’s cold down there because of the rain.
9	Natalie [assistant teacher]	It’s misty down where Alex was. She ended up having to move, they were getting wet.
10	Julie	Ahh, misty. Yeah, mist is kind of like rain. Except that it’s coming from the waterfall instead of from clouds in the sky.
11	Natalie	[retrieves materials from teacher pack and leaves]
12	Julie	What are you going to draw in your nature journal, Louise?
13	Louise	I don’t know.
14	Julie	Hm. Think about it. Eli, what are, what are you going to draw in your nature journal?
15	Eli	I’m going to draw that we got wet from the mist when we played in the butter…butterflies.
16	Louise	You need blue for the mist? [offers crayon]
17	Eli	[Takes crayon] Yeah, but it might be too big. You can draw rain, but I don’t know how to draw mist.
19	Eli	It’s different.
20	Julie	Yeah, but how?
21	Eli	Mist is different.
22	Julie	But how? Is that a hard question? [laughter]

Table 4.2 (cont'd)

23	Eli	[laughter] Yeah.
24	Julie	Maybe it's the size of the drops? Are raindrops bigger or smaller than mist?
25	Louise	Rain is smaller. I mean. I mean. Mist is smaller.
26	Eli	Mist is smaller than rain because you can't see it.
27	Louise	I think it is.
28	Eli	Me too.
29	Louise	And it's wet and now I'm cold.
30	Eli	[draws dots in blue]
31	Louise	Eli, those look like raindrops!
32	Eli	It's mist drops

Figure 4.5: Eli's Mist Drawing

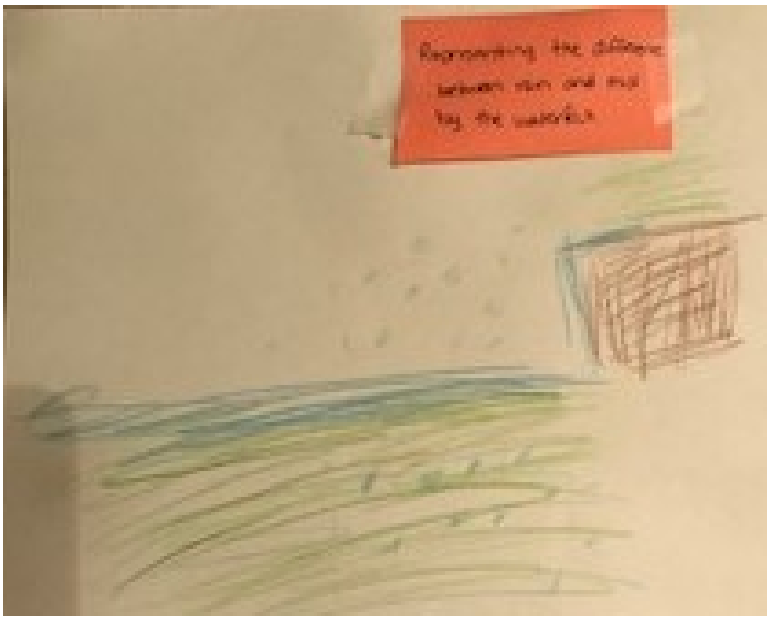


Figure 4.6: Louise's Nature Journal

The Emergence of Sophisticated Conversation During Artmaking

Sophisticated conversation can look different depending on context. In early childhood classrooms, science conversations such as the ones described above are considered sophisticated because of the substance (i.e. patterns in nature; water cycle), the vocabulary children use and are exposed to (i.e. mist, waves, ripples, etc.), or the conversational moves that speakers make (i.e. classifying, clarifying, compare and contrasting, etc.) (NELP, 2009). NAEYC (2009) points to the importance of "rich" and "meaningful" vocabulary as a key feature of sophisticated language. By exposing children to words that are typically not encountered in casual conversations, early childhood teachers can help children expand the ways in which they can talk about what they know and learn, which in turn may help children to understand academic content more deeply than they would without the influence of sophisticated vocabulary. As such, language that allows children to expand their knowledge, thoughts, and understanding of a topic is thought to be another key feature of sophisticated language (Early et al., 2010). These key features form the

foundation of my definition of sophisticated language as conversations in which children use or are exposed to vocabulary and substance beyond casual talk.

Sophisticated Vocabulary Use During Artmaking Experiences. One crucial fact that the two conversations detailed above shed light on is that young children are capable of employing sophisticated vocabulary in their conversations, a skill which is supported by their drawings and the objects they represent in their pictures. This is exceedingly evident in Eli's drawing of his "mist drops."

Mist is a term which Eli has only just been exposed to and while neither Julie nor her assistant, Natalie, overtly define the term, Eli has enough background knowledge of rain to understand that it is different from what he experienced at the base of the waterfall. Until Julie and Natalie provide language to name the differences however, Eli has no choice but to refer to the two phenomena with the same term. Once the teachers provide him with a new word to name the new phenomenon – mist – Eli is eager to explore and solidify his understanding of the difference between it and rain. By attempting to focus on mist in his sketch, Eli is forced to refine his understanding of its characteristics. Mantei and Kervin (2016) point out that the capacity to capture and manipulate images and ideas can help young children express their understanding of concepts that may be beyond their ability to represent with their current language knowledge. Eli's attempt to represent the difference between mist and raindrops in his drawing is his way of solidifying his understanding of the idea of mist. He understands that mist is made of water, and therefore accepts the blue crayon that Louise offers him, a color which they both agree can represent water in their drawings. However, he is uncertain how to visually and verbally represent mist so that it is different from his understanding of rain.

"It's different," Eli tells Julie when she asks him why he can't draw mist in his picture (lines 18 and 19). They spend several turns at talk attempting to decipher how mist and rain are different before determining that the question is difficult, and Julie makes suggestions prompting Eli to think about the size of mist and raindrops. With Louise's assistance, Eli concludes that mist is smaller than raindrops, and therefore he needs to make smaller marks on his page to represent the mist.

In order to have a firm understanding of the new vocabulary term that Julie and Natalie introduced, Eli must go through several steps. First, he has to draw a conclusion that mist and raindrops are in fact different and that what he experienced on the nature walk near the waterfall was not rain. Line 15 shows Eli's eagerness and willingness to adopt this new understanding when he states that he is going to "draw that we got wet from the mist." These steps directly relate to Cobb and Blachowicz's (2014) essential understandings about word learning. They claim that children need to have a reason to learn new words, that a child's motivation for language learning is directly related to their engagement with the concept. Additionally, Cobb and Blachowicz (2014) point out that children must develop the understanding that words can represent concepts which relate to other words, can have multiple meanings, and can deepen their knowledge of the concept. Eli is clearly working to make connections between the concepts represented by the word he already knows (raindrop) and the new term Julie and Natalie introduced (mist; misty).

Charlotte makes a similar connection when she talks about "baby waves" in the conversation represented in Table 4.1. In line 12, Charlotte classifies the ripples she notices as "baby waves." This is a significant and purposeful choice of phrasing on her part. Kensington Pines has classrooms that accommodate children ages six weeks through kindergarten entry.

Often, children will hear teachers talk about the "tiny babies" in the infant rooms. Charlotte, and others in her class, often refer to small objects as "tiny" or "baby" objects. In this case, using the phrase "baby waves" is Charlotte's way of making connections between the size of the waves and her understanding of the nuances of the definition of the term 'baby'. Based on the way teachers use the phrase 'tiny babies' in her school, Charlotte has come to understand that the objects to which that phrase is attached are small people; by applying the same concept to the ripples on the pond, Charlotte has expanded her understanding to explain the difference between a ripple and a wave: she sees a ripple as a small wave. Though Julie attempts on more than one occasion to introduce the term *ripple* the students are content with their understanding and are unwilling or uninterested in adopting Julie's new word in that moment.

Instead, the children appear fascinated by the idea that an animal might be responsible for the ripples on the pond, and this leads them to brainstorm a list of animals that logically might live in or near the pond. Their excitement is compounded by the spotting of a fish in the water, which leads to a discussion of how to catch fish. Though the animals that the children name (e.g. fish, birds and frogs) are related to science content that the class associates with the pond, they are fairly common terms, and do not fit the definition of rich vocabulary established by NAEYC (2009). It does, however, lead to a conversation that meets the second key feature of sophisticated language, talk that allows children to expand their knowledge, thoughts and understanding of a topic (NAEYC, 2009).

Sophistication of Knowledge and Thought During Artmaking Experiences. The second key feature of sophisticated language requires that children's conversations allow them space to think and grow as learners. This type of talk typically features academic content in which children grapple with new ideas, or new understandings of concepts (Early et al., 2010). This is

just what Henry does in the conversation featured in Table 4.1. The children have been brainstorming ideas about what might be causing the ripples on the pond, or as they refer to them, the "baby waves." Charlotte's interest in knowing where the waves come from prompts Henry to state in Line 19 "I think it's the fish." He continues, "They swim and they make the water move" (Line 21). There are two interesting things that come from Henry's statement in Lines 19 and 21. To begin, he shares an idea with his peers regarding how the ripples are formed. Like the other children, Henry believes that the most likely cause of the ripples is an animal that lives in the pond. Since the fish had recently been spotted, Henry made a logical connection between the presence of the fish and the ripples they were observing.

Then, Henry is able to take what he knows about fish and their characteristics, and apply it to the question the group is currently interested in. He knows that fish swim and that as they swim, they move water. Henry's conclusion is that the movement of the water as the fish swim results in ripples which the group has observed on the surface of the water. The sophistication of this response lies in the connections Henry makes between action and reaction. He notes the action of the fish (i.e. swimming) and the reaction of the water (i.e. the ripples) and concludes that the two are directly related: the ripples are created by the momentum of the fish.

From here, the conversation expands as the children brainstorm other animals that could be responsible for creating the ripples. Charlotte offers the ideas of frogs that jump into the water (Line 26) and Amanda adds that birds could make ripples when they land on the water (Line 27). Another interesting occurrence is that Charlotte and Amanda both follow the pattern Henry sets up, stating the name of an animal, then addressing the characteristic way that animal moves and the influence that movement would have on the pond.

A similar kind of sophistication of ideas happens in Louise and Eli's conversation about the differences between raindrops and mist, represented in Table 4.2. Eli's decision to draw a picture of the mist that he experienced during his nature play develops his and Louise's understanding of what mist is and how it differs from raindrops. To begin, in Line 15 Eli states that he wants to "draw that we got wet from the mist" causing Louise to make the statement "You need blue for the mist?" as she offers him a blue crayon. Eli's acceptance of the blue crayon suggests that they both agree on two things: the first, that the color blue represents water, and the second, that mist is a state of water. Representation of the phenomenon of mist is an important question that Eli and Louise grapple with as they talk. Though they both agree that the blue crayon is the best tool available to represent mist, the pair appear stumped when it comes to the shape and size of mist. Eli goes so far as to state in line 17 that he doesn't "know how to draw mist."

For a period of time Julie allows Eli to struggle with the idea of how to represent mist in his drawing. She says little to him as she prepares a nature journal clipboard for Louise to draw on, then turns her attention to Eli, who still has not drawn anything on his page. Julie chooses her words carefully as she prompts Eli, stopping in the first question she poses, in order to ask it a different way. Julie originally begins to ask Eli why mist is different, but changes her question to a more precise "how is mist different from rain?" (Line 18). This proves to be too difficult a question for Eli to answer though, as in two subsequent turns at talk he states merely that "it's different." In Line 24 Julie makes a suggestion. "Maybe it's the size of the drops? Are raindrops bigger or smaller than mist?" This appears to be just the question that the children need to improve their understanding of the differences between the two types of precipitation. Louise's immediate response, mist is smaller, deepens her understanding by allowing her to think about

the physical characteristics of both raindrops and mist, and Eli agrees with her, clarifying and expanding Louise's statement by adding details of his own. "Mist is smaller than rain because you can't see it" (Line 26).

Despite this agreement that mist is smaller than rain, and despite the clarification the children make to their understandings of the different states of water, representation in their artwork still proves to be difficult for both Eli and Louise. Though they both begin to draw their representations of their nature play, Louise takes exception to Eli's final representation of the mist. In Line 31 she states "Eli, those look like raindrops," disagreeing with and criticizing the representation he makes in his artwork. In order to accommodate Louise's criticism and his own abilities as he learns how best to represent the phenomenon in his drawing, Eli chooses to combine the terms, creating for himself a new way to label a drawing that didn't quite represent mist in a way he was fully satisfied with by labeling them as "mist drops."

In the previous sections I have provided examples of the ways in which key concepts of sophisticated language – sophisticated vocabulary and the sophistication of knowledge, thought, and understanding – emerge and are enhanced by artmaking activities. Amanda, Charlotte, Henry, and Shemar's conversation regarding changes at the lake highlights the children's ability to make connections between prior knowledge and new ideas using vocabulary terms they already know by playing with the meaning of those terms. The children already have an understanding that the words baby and small can be synonymous, and they use their co-constructed definition to help them understand the ripples on the pond. Louise and Eli use sophisticated vocabulary (i.e. mist) to help them expand their understanding of the different states of water. In both cases, the children's artmaking experiences provided them with a place

where they could refine their understanding of academic content. In the next section, I will discuss the planning that Julie does to prepare for lessons such as the ones described above.

Setting Up Artmaking Lessons: What Happens Before A Teaching Episode

Julie's preschool class participates in nature walks year-round. In the summer and fall months during which data collection for this project took place, these were an almost daily occurrence, often lasting between two and three hours each time; in the winter months the nature walks were dependent on weather conditions.

"We like to get them outside when we can, as much as we can. And having as many assistants as I do, there are a lot of options for what a nature walk can be each day. We don't all have to go as one big group, we can divide the kids up based on…well on anything really," Julie explains. She goes on to add, "We sometimes have themes that each of us are going to address with our groups, but not always. I like to find places where there's interesting things for them to look and make observations about. And, you always want somewhere that they can get up and move around. Run through the grass, climb a tree. The point of being outside is so that they're moving and active and engaging with the world around them."

The daily nature walks serve multiple purposes and require thoughtful, meticulous planning in order to allow the children to thrive. First, nature walks are an opportunity to engage with the outdoors. There are dedicated places where children are encouraged to climb trees; gather fallen leaves, sticks, and rocks; search for animal tracks; and run up and down hills. In each of these locations, there are established safety rules, norms for play, and opportunities for learning. Often, small groups gather near the pond to discuss academic content, usually focused on science or math, and to a lesser extent on the social studies concepts of community use of things like water and land. Other common gathering places are at the top of a large hill where

there is a naturally occurring sandbox; a large tree with low-hanging branches thick enough to support preschoolers climbing; and a small clearing within a wooded area.

Setting the Day's Objectives. "The thing about preschool is that it's kind of like herding cats. They're going to go where they want to go. We try as much as possible to respect their…choices." Still, it was obvious during my observations that there are routines and expectations in Julie's classroom. From the way that she carefully constructs her sentences when giving students options for their activities, to materials and tools that she makes available to the students, it is clear that Julie's classroom has a structure, and that careful planning for learning episodes takes place.

As stated in Chapter 3, Julie's school is Reggio-inspired, which suggests certain beliefs about young children and their educational and social-developmental needs. One of the major principles of the Reggio-Emilia curriculum is that the environment is a teacher (Biermeier, 2015). Therefore, Julie often looks for ways to fill her classroom with natural light, order, and beauty. Reggio-inspired classrooms often view the outdoors as a natural extension to the classroom (Biermeier, 2015). This provides some rationale for the extended amount of time that the children spend outdoors year-round.

The curriculum is largely student-centered, drawing from the children's interests and building from their questions and curiosities. It allows children to pose their own questions, work at their own pace, and develop solutions or arrive at answers that are satisfying to them. Still, a quick sketch of the layout of Julie's indoor classroom makes it clear that she has taken steps to guide the students' questions and interests. "I do try to keep the kindergarten standards in mind. I don't let them [the standards]…I don't let them dictate everything I do. But they [her students] do need to be ready to successfully transition to kindergarten when they turn five," Julie once

stated. So, while she does make some concessions to the fact that the students are not always going to be in an environment that provides them with such extensive choice and time to work at their own pace, Julie makes instructional decisions with the intent of preparing her students to move on and be successful when they enter kindergarten. Traditionally, many of Julie's students move to the local public school where classrooms are much more rigidly structured than the Reggio preschool classroom tends to be.

Julie's lesson plans tend to be fluid and leave significant room for students to follow their own interests. Table 4.3 is a portion of her lesson plan from which the ripples on the pond conversation emerged. A lesson plan from the mist and raindrops conversation was unavailable.

Table 4.3: Sample Lesson Plan

1. I can observe changes in familiar outdoor locations. 1.1 I can draw/sketch the things I see. 1.2 I can talk about the changes I see. 2. I can describe colors and textures. 2.1 I can use color words. 2.2 I can use touch words. 3. I can climb, run and/or jump.		
1. Pond Observations (Julie)	2. Goldenrod Path (Alexandra)	3. Climbing (Chelsea)
Materials: Nature journals/crayons/marker Paint chips Pantone: Colors (copy 1)	Materials: Camera Hand lens Textures box Pantone: Colors (copy 2)	N/A

This excerpt from Julie's lesson plan represents only the part of her morning that the class spent on a nature walk. It is representative of her lesson plans for this activity. Each day that Julie took the class on a nature walk she divided the students among herself and her assistant teachers. Depending on the number of children present, there were three or four groups. Students were assigned to a teacher for the period of time that it took them to walk from the school to the park (approximately a five-minute walk from the front door of the school to the entrance to the park).

Once there, children were permitted to circulate between three learning stations that the adults set up. It is typical for Julie's nature walk lesson plans to include at least one station (in this case, the climbing station) that the children are free to participate in active or dramatic play. She also usually has at least one station where the children can practice writing, artmaking, or other methods of symbolic communication. By planning for a variety of activities, it is easier for Julie and her assistant teachers to take into account the needs and desires of the students. Alvestad and Sheridan (2015) point out that when the days' activities are not planned "too tightly" (p. 385), then teachers are able to take into account each child's input and cater to the broader interests of the group.

While her written lesson plans are little more than lists of "I can" statements and necessary materials, Julie puts a lot of careful thought into her learning activities. The following transcript is a conversation we had about her planning process.

Table 4.4: Conversation about Planning

Line #	Speaker	Utterance
1	Tracy	I think to an outsider it would look like your lessons come together really easily. Can I ask you about your planning process?
2	Julie	I knew you were going to ask me that eventually! [Laughter] Sure.
3	Tracy	Well, because I think it's a lot more…you make it look really easy but as someone who knows what it takes to make it look easy, I know there has to be a lot that you do.
4	Julie	Sure. So you already know that there are certain staple things that we do. You're asking in regards to the nature walk lesson plans, right?
5	Tracy	Yeah. Or if there are other things, I'd love to hear about that too.

Table 4.4, Continued

6	Julie	Yeah. So you already know some of the staple kinds of things. We always make sure that there's a teacher by the climbing tree. So that they can climb or run in the field or…lately Shemar and some of the boys have been findings sticks and turning them into…just all kinds of things. They've kind of made their own dramatic play area over there. So someone is always there. And then I always have a spot where they can draw or write. Some of them write. Most of them don't. A few do. But mostly they draw.
7	Tracy	How do you…what makes you decide that you're going to put the nature journal station in a specific place? Because I've seen you do them all over the place.
8	Julie	Yeah. Um. Observation. I watch the kids. What are they interested in, what are they talking about? What materials are they commandeering for their dramatic play [laughter]? I watch them and I follow their lead. So like, the other day they were really interested in the tree branch that fell. The one that broke?
9	Tracy	Right.
10	Julie	That day I hadn't planned to be at the pond, but we were walking past and it caught their attention. It was a pretty big branch and it broke and fell in the water, so they were talking about that. I did several things after that. I knew if I had a nature journal opportunity there the next day that most of them would want to come draw it. And the opportunities for talk about what had changed, that was a big thing. But I was talking to Natalie…we were all talking…and she had a really good idea about a play activity. So the planning…it kind of happens in response to what the kids are interested in. And we talk, the teachers talk, you know, 'what did you notice, what questions did they have? What was Shemar into today?' [Laughter]
11	Tracy	With so many assistant teachers who are seeing things and interacting with the kids-

Table 4.4, Continued

12	Julie	They have some really good ideas. Natalie's idea…you should talk to her about it too…Natalie's idea was to pull out the sand table again and kind of recreate the pond area. Put tree bark and twigs and whatever in it and let them explore with the idea of the fallen tree branch. And from there…we were all talking, I don't remember anymore who said what, but we decided that we would add twigs and bark and whatever…feathers, leaves…to the art area and just see what they do with them.
13	Tracy	They kind of went to town with that. I saw some of their finished pieces.
14	Julie	They did. And so that's kind of how planning goes. I try to observe as much as possible what they're interested in. What questions are they asking? What kinds of things are they ready to know? And like I said, it's a team effort. Natalie and Alex are almost always here with me and they're great. Both of them are really great, they have some fresh ideas, things I never would have thought of.

Julie views artmaking and writing in a similar light. She understands drawing to be children's first attempts at writing, a view which is upheld in early childhood literacy research (Sulzby & Teale, 1985; Dyson, 1993). As such, she refers to the nature journal activity, in which children are encouraged to draw or write about observations they make on their walks, as a staple of the nature walk experience, a sentiment which she states in Line 6 of our interview. This conversation also highlights how the Reggio curriculum inspires Julie's teaching. The key concept that children should be allowed to follow their own interests is the foundation for the learning that happens (Biermeier, 2015). Julie's statement in Line 8 is telling. She states that observation of the children's interests is the main thing that helps her to plan, a practice that is aligned with research (Alvestad & Sheridan, 2015; Edwards & Cutter-Mackenzie, 2013). Julie and the assistant teachers who work with her are constantly paying attention to the questions that children ask on their nature walks, as well as the sights and objects that catch their attention.

Line 10 is a prime example of the ways in which Julie's observations of her students guide her lesson planning. On the occasion when the children noticed the fallen tree branch, the class was only passing by the pond on their way to another location; she'd not planned to stop and observe the pond at that time. However, the limb, which was partially submerged in the pond, caught the children's attention. Rather than usher them on toward their destination, Julie took note of the student's interest, validated their observations, and used that interest to make changes in her classroom (i.e. the sand table play activity) and to improve her upcoming lesson plans in order to be responsive to her students' needs and interests. The children's comments about the fallen branch led Julie to offer them learning opportunities that included drawing and sketching, making observations about changes in their environment, discussions about those observations, artmaking opportunities, and play activities that allowed them to manipulate sticks, twigs, water, sand, and other natural materials in order to recreate the scene they'd come upon at the pond.

Nature Journals as Preparation for Artmaking. The students' nature journals serve several purposes. They create a space for recording what the students see, do, and learn on their nature walks. They also provide a place for students to practice writing in the form of labeling pictures and writing their names, though not all of the children are interested in writing or labeling. Julie has another view of the use of the students' nature journals which she described to me in the following excerpt of a conversation we had:

> I never really thought about it at first because we were just trying to get the nature journals started and I was trying to figure out how they could enhance the science curriculum. But then I realized that we were also starting to use them to help the kids tell stories, too. They were using them to dictate stories to us – or some of them were trying to write stories, too. And we were using them to help kids think about their artwork too. Like, someone would say 'I want to paint' and our typical response is 'what is your plan for the paint?' So when they didn't have a plan, one of the first things we started suggesting to them was, 'well, why don't you take a look at your nature journal and see if

> there's something in there that you might want to show in more detail with the paint?' And it kind of started that way. Now we use them for all kinds of things. Literacy kinds of things, where we'll pull out a book of their nature journals to read and talk about. Or Alexandra once did a thing where she had them build models of the things they'd drawn in their journals. That was really neat. We use them almost as notes of what we see while we're out and then they can come back and do all kinds of things with those journals to expand their thinking or deepen their thinking.

What is interesting about Julie's comments is that she understands the children's nature journals as artmaking in their own right. The journals are comprised of the children's drawings and sketches as they observe and record what they see and do on their nature walks. She also sees them as the impetus for more advanced kinds of artmaking such as painting, sculpting, or collage. Her comment that the nature journals serve as "notes of what we see" illustrates the versatility of the nature journal activity. Students have the opportunity to record their understandings and representations of nature in their journals, then use those initial sketches and drawings to complete a variety of art projects in various formats and mediums. Additionally, Julie has designed her art space with the nature journals in mind. The indoor classroom has an area dedicated to artmaking, where children have access to art easels for painting as well as a large table where other artmaking activities are often undertaken. On a nearby wall, Julie has affixed plastic page protectors. The children have the option of inserting their nature journals into those page protectors to refer to as they work on their painting or other projects.

By providing these page protectors, Julie has created an expectation that the children will have some kind of plan for their artwork before they begin. It reinforces the idea that children are ultimately in charge of the topics they explore as well. Using their own previous work as the basis for a new project gives children autonomy over their learning. Finally, by providing a safe place to keep their nature journal pages (or any other inspiration that the children might wish to display) Julie shows the children how to respect their work. The page protectors save the nature

journals and inspirational items from being ruined by paint or glue or other such items. "Preschoolers sometimes need to be messy," is a popular refrain of assistant teacher Natalie's, usually accompanied by a wry smile at the end of a busy day as she's putting the room back to rights.

Selection of Nature Walk Materials and Location. "It really depends on what is most important for the day's objectives," Julie explained when I asked her how she decides what to take with her for lessons away from the school grounds. Since so much of the learning activity happened outside of Julie's classroom, it seemed prudent to understand how she selected the learning tools she took with her into the field. With just two backpacks in which to carry required items such as the mobile phone containing emergency contacts, or the first aid kit, it was clear to me that the space in which learning tools could be contained was finite. She went on to add "there are things we always bring. Blank nature journals. Crayons and markers. Sometimes I bring measuring tools…sometimes the cameras. Today I have paint chips."

Julie made the choice to bring blue and green paint sample cards because she knew that the group would be doing sketches of the pond during that particular lesson. Frequently, she will use them to help children name specific shades of colors that they observe in nature, particularly when they are labeling elements in their drawings. Having such an item available while they are making sketches of scenes to paint or represent in other artistic mediums provides the children with specific language to describe their artwork. It allows them to recall the specific shades of color and gives them language to share their learning with others. Rather than just describing the water as blue, children might use the paint chips to better label the color as "rainwater blue" or "tidewater blue," allowing them to see and hear more sophisticated vocabulary terms than the common "blue." By carefully planning the materials available to children, Julie is able to be

responsive to the needs and interests of her students, while still meeting the educational goals she has for the group (Alvestad & Sheridan, 2015).

In addition to carefully planning the materials that will be available for the students during the nature walk and observation, Julie is meticulous about planning where the observations will take place. On their walk, the children encounter a pond with a waterfall that leads to a stream. While they do frequently make observations at all three locations, most often Julie selects the pond as her teaching point. Though I never specifically asked Julie why this appears to be her favorite place to hold lessons, several inferences can be made based on the landscape. First, the pond has a larger area in which to accommodate students. There is more room for them to sit or stretch out on blankets, and for them to have their own work space. For those children who are unable to sit for any length of time, there is plenty of space for them to move around and play. Often those children will return to their drawings with fresh new ideas to add to their artwork based on the observations they made during their playtime.

In contrast, in order to view the waterfall or the stream, Julie and the children would either need to sit on a footbridge, thus blocking the way of any other park-goers, or they would need to traverse a steep hill, often slick with dew, at the bottom of which is a drop-off into the stream itself. Due to safety hazards, the class rarely utilizes that area. Therefore, it seems logical that the pond is the most reasonable area for the children to engage in water-based nature observations.

Nature Lessons in Action: Julie's Instructional Talk and Moves

The previous section explored the question of what kinds of planning occurred before a learning episode lead to sophisticated conversation. Of interest in this section is the question of

what actions teachers engage in during a learning episode contribute to sophisticated conversation.

Instructional Moves in Ripples on the Pond. Julie's purpose, as stated in her lesson plan, was to encourage the children to observe and sketch things they noticed about the pond. In past visits they had discussed how the pond changed, noticing things such as the growth of marsh grass, or a family of ducks swimming offshore. "Amanda noticed the ripples on the pond, and I wasn't surprised, it was windy this morning," Julie noted in a chat we had later that afternoon. "And so I thought I would try and introduce a new word."

Table 4.5: Transcript of Ripples on the Pond

Line #	Speaker	Utterance
6	Julie	I wonder (1) {leans forward} if there's a better name that we could call them?
7	Amanda	Look! Fish!
8	Julie	There a::re fish, Amanda, you're right. They're >tiny little fish.< I'm curious still. Do you think there's a better name we could call the little waves?
9	Shemar	Maybe.
10	Julie	Maybe. Have you heard the word ripples?
11	Choral Response	[Nope.] [I have.]

Transcription Symbols Key:		
	Underlining	Indicates emphasis
	(#)	Numbers in parentheses = pauses in seconds
	:	Elongation of a sound
	> <	Increased rate of speech
	[ ]	Overlapping speech
	?	Questioning tone
	!	Enthusiastic tone
	{ }	Nonverbal gestures

Julie's attempt to introduce a new word was fairly unsuccessful because the children were not focused on vocabulary, but rather on substance. They wanted to know what caused the "baby

waves" as they labeled them and were unconcerned with finding a proper name to distinguish between waves and ripples. Julie makes three distinct attempts to draw the children's attention to the differences between waves and the phenomenon they are currently witnessing. In Line 6 she wonders whether they could more accurately name the ripples; Line 8 repeats this question, adding that she still has an unsatisfied curiosity, though the children do not appear willing to allow the conversation to move in that direction. Finally, she directly asks the students if they have heard the word ripples before (Line 10) and the children give a choral response of various yesses and nos.

One instructional move that Julie employs during this conversation is a cueing strategy, which allows teachers to divert learners' attention to specific sources of information that will help them to construct knowledge (Frey & Fisher, 2010). One type of cue that Julie used during this conversation was verbal cues. Teachers use their voices to provide hints or clues for children regarding what to pay attention to. Verbal cues include pauses and intonation which add emphasis to their statements or questions during conversation (Frey & Fisher, 2010). The verbal cue that Julie uses most often is emphasis. When calling the children's attention to her question, Julie emphasizes the beginning of her statement, indicating to them that what she is about to say is of importance. Within the same utterance, she also emphasizes the first half of the word 'better' in order to add importance to a key word in her question. A few seconds later, when Amanda is distracted by the minnows she sees in the pond, Julie uses emphasis again as she tries to draw the group back to her question. She emphasizes the words 'curious still' as a way to redirect the students' attention.

In Line 8, Julie uses two more verbal cues in combination. First, she uses elongation of sounds when she emphasizes the word 'are', when confirming Amanda's observation that there

are fish in the pond. This is followed by the verbal cue of increasing her rate of speech, which Julie does as she describes the "tiny little fish" that were swimming near the edge of the pond. Though these cues are used only once each in the conversation represented in Table 4.6, this is representative of Julie's voice in her instructional conversation. Julie uses these cues to signal to Amanda that she has made a valid observation, and then quickly employs the cue of emphasis again in an attempt to redirect the group back to the question at hand: is there a better name for the little waves. She uses a similar verbal cue in her conversation with Louise and Eli in the transcript below:

Table 4.6: Transcript of Mist or Raindrops

Line #	Speaker	Utterance and Gestures
1	Louise	I'm cold.
2	Eli	It's because of the rain.
3	Julie	{Looks to students} It's not rai:::ning!
4	Louise	It's raining over there. {Points to the bridge and waterfall}
5	Julie	Were you down by the stream?
6	Eli	We were playing (2) Miss Alex has the nets down there. We were playing in the >butterflies<.
7	Julie	Playing in the butterflies? You were trying to catch them?
8	Louise	Yeah. And it's cold down there because of the rain.
9	Natalie [assistant teacher]	It's mi:sty down where Alex was. She ended up having to move, they were getting wet.
10	Julie	Ahh, m::isty. Yeah, mist is ki::nd of:: like rain. Except that it's coming from the waterfall instead of from clouds in the sky. {Points to the sky}

Transcription Symbols Key:	Underlining	Indicates emphasis
	(#)	Numbers in parentheses = pauses in seconds
	:	Elongation of a sound
	> <	Increased rate of speech
	?	Questioning tone
	!	Enthusiastic tone
	{ }	Nonverbal gestures

In this conversation, Julie uses the verbal cue of emphasis in Line 10 as a method for helping Louise and Eli to understand the difference between the origin of mist (i.e. from the waterfall) and that of raindrops. She puts her emphasis on the terms waterfall, as well as the first sounds in clouds and sky as she clarifies for the students one way in which the two types of water differ. Julie also uses emphasis on the first sound in the word mist, however, since she wants the children to learn this new vocabulary term, Julie uses two verbal cues as she pronounces the term. In addition to emphasizing the beginning sound of the word mist, Julie also elongates that sound, drawing it out longer than the other sounds in the word. Doing so draws children's attention to the term, alerting them that they should pay close attention because she has something important to share, which may help them to make sense of their confusion.

A second type of cueing that Julie uses frequently are gestural cues, nonverbal communication that teachers can use to emphasize a point or draw students' attention to an object (Frey & Fisher, 2010). Typically, these kinds of cues are combined with verbal cues for added effect. The main nonverbal cues that Julie uses in her conversations with children are leaning in, or moving herself closer to the students, and pointing. One example of Julie's use of leaning in occurs in the "Ripples on the Pond" conversation. As she initially poses her question, "I wonder if there's a better name we could call them?", (Table 4.x, Line 6), Julie leans forward, positioning herself physically closer to the students even as she uses the verbal cue of emphasis to make her 'I wonder' statement. These cues work together to alert the students that they should pay attention to her question, as it might be important to their co-creation of knowledge regarding the cause of the "baby waves." She uses this same nonverbal cue later in the conversation when, having put aside trying to teach a new vocabulary term, Julie asks the students what other ideas they have about what might be causing the ripples in the water.

Perhaps a more frequent form of nonverbal cueing that Julie uses is pointing. Particularly when the class is observing the lake, Julie uses pointing as a means of drawing children's attention to a specific area or object. The students also use this nonverbal cue to communicate with Julie. When Louise comments that she is cold "because it's raining" (Table 4.2, Line 4), she points to the area below the bridge, at the base of the waterfall, as a means of contradicting Julie's protest that it's not raining (Table 4.2, Line 3). Pointing helps Louise to express where she believes the rain is located, and later allows Julie to emphasize the fact that rain falls from clouds in the sky, a fact that she emphasizes with both her intonation, and her gesture (Table 4.2, Line 10).

Findings

In the following sections I present the research findings from this chapter. These findings are divided into four broad categories, two of which examine the transcripts in regards to the conversations and actions of the children, and two of which examine them in regards to the planning before a learning episode and the teacher actions during the learning episode.

Finding 4.1. Artmaking aids in the development of children's understanding of content knowledge and represents their "thinking in progress." In the instructional episodes described in this chapter, the students used their nature journals as the primary method of artmaking. They had limited materials for their drawings and sketches, most often with access to only blank sheets of white paper, crayons and markers. Consequently, their attention was focused on the content of their art, rather than technique. This allowed the children to pay attention to their observations and their conversations with peers. Learning took place as they co-constructed knowledge by posing questions and debating solutions together, as evidenced in the conversation represented above in Table 4.1, Ripples on the Pond. Charlotte's interest in the "baby waves" as she refers to

them, draws her peers into a discussion about the cause of the ripples. She, along with classmates Shemar and Henry, included representations of the waves in their drawings before Julie encouraged Charlotte to pose her question to the group. After Charlotte's question, Amanda revised her drawing to include the ripples as well. All of the children added elements to their drawings as the conversation expanded. Shemar was the first to add a fish to his picture, while other students chose to include frogs and birds in their own representations of the pond.

With the addition of each new element to the conversation (i.e. discussions of animals or elements of nature that could be responsible for the ripples) the children's artwork began to reflect their buy-in to the ideas being proposed. The children's drawings provide ample opportunities to observe their expanding understandings of how ripples might occur, with new elements appearing in the drawings each time another possible explanation for the existence of the ripples was suggested.

A second example of learning that took place through artmaking was Eli's drawing of mist from the waterfall. While he had a clearly defined idea of what he wanted to include in his picture before he began to draw, Eli was puzzled by how best to represent the elements in his drawing in order to demonstrate his understanding of the differences between mist and rain. He clearly understood that they were not the same thing, but struggled with how to represent the mist in his drawing so that others would not mistake it for raindrops. There were several starts and stops as Eli worked out just how best to imitate mist with the artmaking materials he had available – crayons and blank white paper – and eventually, he settled on a pattern that satisfied him. Even when Louise opposed his choices, Eli elected not to alter his drawing, but rather to rename the image so that it more clearly reflected what he was capable of drawing. "It's mist drops," he tells Louise in Line 32 (see Table 4.2 above).

Finding 4.2. Young children engage in sophisticated conversations when they are vested in learning. Sophisticated conversation, talk in which children expand ideas or grapple with new information and explore higher levels of vocabulary, occurs in Julie's classroom on a frequent basis. By using the children's own interests and questions to plan units of study and to guide daily lesson planning, students are highly motivated to push through problems and find answers to the questions they encounter. This is highlighted in Eli and Louise's discussion of mist, as they struggle to describe the concept, first verbally, then later in picture form.

There are several statements the students make which indicate their vested interest in finding a solution for the problem they have identified: detecting the differences between mist and rain. Eli begins in line 15 (Table 4.2 above) by stating the topic that he wishes to explore further through drawing: "I'm going to draw that we got wet from the mist when we played in the…butterflies." Though he has identified the theme of his drawing (i.e. getting wet) Eli takes several seconds to attempt to make any marks on his drawing/blank page. He goes on to state in line 17 "You can draw rain, but I don't know how to draw mist." This is the first time Eli verbalized the problem he has identified. He understands that there is a connection between rain and mist; what Eli has not yet done is solidify his understanding of the different characteristics of the two. He has a vested interest in learning how to represent mist in his drawings because Eli knows it is important to represent the mist in a way that will not allow viewers to mistake it for rain. He strives for a level of realism in his representation that will show his current understanding of the minute differences, as he comprehends them, between the two phenomena.

Later, Eli and Louise describe the differences they perceive in more concrete terms. Louise begins by stating "Rain is smaller. I mean. Mist is smaller" (Line 25). Though she begins by incorrectly stating the size differences, Louise is able to correct herself quickly. Her tone of

voice increases slightly as she corrects herself, with the phrase "I mean" spoken more quickly than the other words in this utterance. She also places an emphasis on the word "mist" when she corrects herself. This is Louise's first turn at talk in nearly ten turns; prior to this she has been listening to Julie and Eli as they worked out what questions to ask about the physical differences between mist and rain in order to properly represent each. Louise's attention is divided between the conversation and her own drawing, which also represents the waterfall, and a large orange butterfly. Like Eli, Louise has not yet attempted to represent rain or mist her picture. She does so only after seeing Eli use blue dots to represent mist in his own work. Rather than drawing mist in her own picture, in the end Louise represents herself in the drawing as cold and wet, words which she will later have Julie help her use to label her drawing. Eli and Louise show their interest in learning about the properties of mist in different ways: Eli by representing the mist itself, and Louise by showing the effects of encountering the mist. In this way, they both show their new understandings of how water operates near the waterfall in their outdoor classroom.

Finding 4.3. Instructional planning influences the depth of conversation generated during learning experiences. One thing that became evident during my conversations with Julie was the level of thought and care she put into planning for learning episodes. Each of the conversations I had with her took place after she had taught the lessons.

The school in which Julie works bills itself as a nature-based, early learning center which offers a Reggio Emilia inspired curriculum for students aged 0-5. Julie stated several times over the observation period (approximately six months) that one of the priorities she and her co-teachers share is to take the children outside as frequently as possible. Julie listed several purposes: students are able to be more active outdoors; there are numerous natural phenomena for them to interact with; children are able to fine-tune their gross motor skills as they climb trees

and run up and down hills; and improve their fine motor skills as they pick up and manipulate rocks, sticks and fallen leaves. Thus, many of the lessons observed for this project took place outdoors. Julie was fond of saying that she frequently let the children set the plan for the day, however, my own observations showed that she often did more planning than she was willing to take credit for.

One prominent example of this is in relation to conversation 4.1 above, in which the children are discussing the ripples on the pond. Julie's lesson plan for the day included an opportunity to visit the pond in order for the children to sketch the changes they observed from previous visits. I had observed the class discussing the pond and drawing its features on approximately half a dozen instances prior to the visit transcribed. It was common for students to discuss the movement of the water as well as the animals that they could see or hear nearby. Julie and her co-teachers frequently read books related to themes associated with ponds and water in order to build both the students' background knowledge, and their vocabulary related to the topic. These kinds of learning experiences prepared the students to ask questions such as the one Charlotte posed: "Where do they [the ripples] come from?" (Table. 4.1, Line 12). Charlotte's vocabulary did not extend to the term *ripples* specifically, however, her background knowledge was evident in this interaction. She was able to display her broadening schema of the workings of the pond by posing a question which she hoped would help her improve her understanding of the forces which cause water to move. The previous learning experiences (i.e. conversations, observations, drawings, and stories) which Julie had created for the students provided Charlotte with enough of an understanding to capture her interest and allow her to explore further, on her own, and with her classmates. Despite Julie's modesty toward her influence on the children's conversations, it is clear that the learning opportunities she provides for her students directly

influence the kinds of questions they are prepared to ask of themselves and one another, as well as the level of sophistication of the conversations they engage in.

Finding 4.4. Teacher talk and actions matter – to an extent. Frequently, Julie will employ conversational strategies designed to draw her students' attention to an object they are observing or to a question she or someone in the group has posed. In the conversations represented in this chapter, Julie relied most heavily on cueing strategies, designed to draw her students' attention to important terms and concepts in the statements and questions she asks. This strategy was successful in some instances, but not in others.

To begin, Julie's cuing attempts were highly successful in the conversation transcribed in Table 4.2, "Mist or Raindrops." It is extremely important to the progression of this conversation that Julie make it known to her students that the conversation is breaking down. That is, their assertion that it is raining is at odds with the current weather conditions, leading to confusion between the speakers. Julie uses a variety of cueing actions in her quest to help the students explain their statements to her. She elongates sounds within the word raining to draw attention to the word and the natural phenomenon it represents. She also places emphasis on words to indicate the importance of specific terms, such as stream and waterfall. These cueing actions allow Eli and Louise to understand that their statements do not make sense to Julie, and therefore that they must further explain themselves. In this instance, the questioning leads Julie to the understanding that her students truly believe it was rain they had experienced, and allows her to set up a conversation in which she can teach the difference between rain and mist.

Cueing is not always successful for Julie, however, as evidenced in the conversation transcribed in Table 4.1, "Ripples on the Pond." While observing the changes which have occurred at the pond, Julie also utilizes the strategy of cueing in order to draw students' attention

to what she sees as the most important terms and ideas emerging from their talk. However, this time she is not successful in using the strategy to direct the conversation. Her belief that learning the new word *ripples* will enhance the conversation leads Julie to try cueing on multiple turns at talk. She emphasized specific words (i.e. ripple) and parts of sentences (i.e. the beginning of a question, such as *I wonder if there's a better name that we could call them?*) in order to alert the students to the importance of those pieces of her statements. Though the children were attentive to her questions and guidance, their responses made it clear that they did not find her interjections meaningful to the questions they were most interested in. Responses varied from noncommittal (i.e. maybe) to entirely unrelated (i.e. "Look! Fish!"). Verbal cueing did not direct the students' attention to the new vocabulary term Julie hoped to teach, as it did not advance the conversation that the children were most interested in exploring. They were much more interested in the cause of the ripples than in naming them. Julie's decision to drop the idea of naming the ripples allowed the children to focus on the point that had captured their attention and imagination, leading to arguably more sophisticated ideas about the workings of the pond.

Summary

This chapter begins to answer the question "W*hat are the characteristics of young children's conversations during art related experiences?"* It does so by investigating the ways in which sophisticated language emerges during children's art related activities and examining the ways that prior learning events inform or elevate new understandings. Additionally, this chapter details some of the planning and teaching actions that appear to influence children's conversations and the learning which emerges from them. This included probing children's actions and reactions to conversational prompts during art related activities as well as inspecting

the decisions teachers make prior to teaching, along with their actions and decisions as learning episodes are taking place.

Providing support for young children as they learn to become competent conversationalists necessitates constructing an understanding about how to ask questions and identify important concepts introduced by conversational partners. In Julie's classroom, she and her co-teachers expected students to take responsibility for their own learning by asking questions about ideas that were of interest to them. They began by wondering about anything at all that interested them, in this case, specifically outside the classroom on their nature walks, then using these wonderings to discuss their learning both verbally, and in their artwork. Based on the detailed descriptions above, I argue that artmaking aids in the development of children's understanding of content knowledge, and represents their thinking processes as they sketch and engage in conversations and observations together, then add further details representing their new knowledge or revised schemas. Additionally, this chapter begins to provide evidence to show that a vested interest in learning, when teachers determine the questions and concepts to be explored, invites higher levels of sophisticated conversations than children might otherwise achieve.

By carefully noting the questions children ask as well as the experiences that appear to engage and intrigue them, Julie and her co-teachers plan lessons and experiences to foster those interests. They carefully select materials to take with them into the field, as they are aware that their selections will limit the ways in which students are able to create artistic responses to the interactions they have while on nature walks. Since the school claims a Reggio-inspired curriculum to guide their instruction, teachers try to incorporate the tenants of that curriculum in their planning. The instructors view the environment as teacher and the nature walk areas as a

natural extension to their school building and classroom. Accordingly, they frequently take advantage of nature as a catalyst to engage students in curriculum related experiences. Their planning extends to preselecting the locations they will stop on their nature walks in order to observe changes and to allow children opportunities to play and explore, thus generating questions that teachers can incorporate into future lesson plans.

Finally, I argue that teachers' talk and actions during learning events matter, but only to the extent that children are willing to accept their guidance. Julie has a wide array of instructional strategies that she depends on to help her meet the needs of her young students. In this chapter, her use of the conversational strategy of cueing, diverting students' attention to specific sources of information in a conversation, was prominent. She frequently overemphasized specific terms in order to indicate to the children that they were important. Julie also used emphasis to highlight specific portions of a question or statement as a way to guide children's listening and comprehension during their conversations. This was a highly valuable strategy when a conversation was in danger of breaking down. Julie allowed these cueing techniques to probe her students' understanding of the differences between mist and rain. However, when Julie used the same technique to attempt to guide a learning conversation in a direction other than what the students were interested in, she was unsuccessful in redirecting them, and ultimately discontinued her attempts. This suggests that it is highly important that teachers pay attention to and foster their preschooler's interests, and be willing to allow children to lead conversations and guide learning opportunities toward outcomes that increase their understandings of curriculum knowledge.

CHAPTER 5: FAMILY AND COMMUNITY INTERACTIONS

"I have a basement in my house, but I'm not drawing it on here," Eli stated as he glued green tissue paper to the bottom of his project. The decisions that children make regarding what they represent in their artwork offer insights into how they perceive what is most important as well as their understanding of new knowledge.

In chapter 4 I explored how young children's nature-based artmaking experiences led to sophisticated conversations as well as how teacher planning and instructional moves during nature-based experiences influenced student learning. In this chapter, I examine children's artmaking and conversations through the topic of family and community interactions. This chapter expands on the previous one by advancing the kinds of artmaking materials that were available to children during each episode and by including social-emotional learning in addition to content knowledge. This chapter continues to explore the question posed in Chapter 4 (What are the characteristics of young children's conversations during art-related experiences?) using the theme of family and community interaction to describe the level of sophistication of children's conversations, as well as the influence of teacher planning and actions before and during learning episodes.

Overview of the Lessons

In this chapter, I use transcripts from three conversations that the children had while they were making artwork related to family and community topics. In the first, students are creating blueprints of their homes after having engaged in an interactive read aloud of *Creaky Old House: A Topsy-Turvy Tale of a Real Fixer-Upper*, by Linda Ashman, in which characters plan and create a new design for their home. Following this, is a conversation in which children represent their family's daily lives through multiple art forms, focusing on preparing for a holiday, in

which they think about how families work together to complete chores to allow households to run smoothly. The final conversation explored in this chapter took place following a demonstration in which the local fire department came to the school to hold discussions with the children regarding fire safety. This visit included an instructional component in which children were told how to escape from a burning building, and a play component in which they were encouraged to try on firefighter's protective gear, and to climb into and explore the fire truck. Following the visit, children created artwork based on their experiences with the emergency personnel. Below, I engage narrative description to detail these conversations.

Learning During Artmaking: Narrative Descriptions of Children's Conversations

One of the tenants of the Reggio Emilia philosophy is that learning takes place not just within schools, but also at home and throughout the community. In Julie's classroom, children's families are encouraged to participate in daily learning activities; their unique experiences are celebrated and highlighted whenever possible. Likewise, the contributions of community organizations and services to children's learning opportunities are welcomed into Julie's classroom as well. The lessons and conversations below examine just a few ways in which families and community activities are incorporated into student learning. Following each narrative description, I will provide an analysis of the patterns of sophisticated conversation that emerge.

Narrative Description of Making Blueprints. In Julie's classroom there are three small tables that are dedicated to small group activities. Students are permitted to move about the room as they like, participating in any learning activity they desire. For the conversation featured in this section, Julie sat in a chair with her back to the windows and had space for six children to work on artmaking projects. They were invited to create images of their homes, though some

children chose to use the art materials for other projects, which was also seen as an appropriate use of materials. The conversation transcribed in Table 5.1 (below) focuses only on students who were creating images of their homes, which Julie and the students referred to as "blueprints," a word which they borrowed from a recent read aloud text. In the classroom, the students have access to a large variety of artmaking materials. On nearby shelves, within easy reach, are stacks of construction paper in a variety of primary and pastel colors, though Julie has white and pale-yellow options on the worktable which she offers to each student who comes to the table. In small metal pails she keeps a supply of thin markers, colored pencils, crayons, and glue sticks. There are also jars containing colored cotton balls, popsicle sticks, buttons in a variety of shapes, sizes, and colors, and another jar of colored feathers. They have access to small squares of tissue paper, pipe cleaners, stickers, ribbon and yarn as well. Students who elect to make paintings also have access to an easel and tempera or watercolor paints.

Each time a new student joins the artmaking, Julie poses the same question, "what are you going to make today?" (Table 5.1, Line 16). This question allows several possibilities. First, it allows the children to decide if they want to create artwork other than blueprints. This is important because the Reggio philosophy suggests that all activities should be student-directed, allowing children to follow their own passions and interests. By asking each student what they want to make, Julie expresses to them that their ideas are valid and that they are free to follow their interests. Second, a question such as 'what are you going to make today?' alerts students that they should have a plan for their work. Julie and her co-teachers frequently ask students what their plan is for projects they choose to undertake. This signals to the students that planning ahead helps them to be successful. It requires the children to state as clearly as they are able what they wish to achieve. Having a plan for their work also allows students to learn to be organized

and to work more effectively, skills which will aid them in successfully completing future goals. Finally, asking students what they are going to make engages children in conversation, which builds knowledge and ideas.

Charlotte responds to Julie's question by providing a list of what she views to be the most important locations in her home, places that she is certain she wants to include in her blueprint. "My bedroom, my mom's room and my kitchen," Charlotte explains (Table 5.1, Line 17) when Julie asks about her plan. It can be assumed that these are the rooms Charlotte spends the most time in, making them more meaningful to her than other rooms of her home, for example a laundry room or dining room. These are also the rooms that other students sitting nearby have included in their drawings, making it possible that Charlotte borrowed ideas for her plan from others whose artmaking was already underway.

Listing becomes a common action in this conversation. Henry lists for Julie, and his classmates, items that he intends to incorporate into the kitchen section of his blueprint. In Line 31 (Table 5.1 below) Henry states that he is going to show "the table and the fridge and the plates and the cups" in his kitchen. Then, in Line 39, he also lists items that belong to his dog, such as food and water dishes, which are also kept in the kitchen in his home. In my field notes from this learning episode I noted that the children used their lists in two different ways. First, they appeared to be using their lists as a plan for their projects. In Charlotte's case, she listed the elements she wanted to include in her blueprint before she began to draw. Her list was a response to Julie's prompt for an explanation of her intentions. She could use her list as a meter to check that she had completed the items she wished to include, and to check that her blueprint was complete. Students also used their lists as a means of describing their artwork to others. Henry's list of items in his kitchen was a response to Julie's question about work he already had in

progress. Many of the items Henry listed (e.g. the refrigerator, plates, and cups) had already been represented in his work. He was able to point at each item individually as he named them in his response in Line 31 of Table 5.1.

As the conversation continued, student's artwork grew more detailed as well. Their lists reminded them of items they wished to include in their blueprints, leading to the use of a greater variety of artmaking materials. Henry's decision to incorporate a representation of a door in his blueprint led to the use of brown construction paper, which he glued to the edge of his drawing. Another example of children using artmaking materials to represent items in their work was Charlotte's decision to use a scrap of pink material to represent the bedcoverings in her room. There were several different colors and textures of material available. It is unclear whether Charlotte chose the pink material because it most closely represented the actual blankets in her bedroom, or whether she made her selection based on preference of the available options. Regardless, she elected to give her artmaking a sense of reality by including materials similar to what might be found in her home. The conversation concludes with the children completing their blueprints and leaving the artmaking station for other learning activities.

Table 5.1: Making Blueprints

Line #	Speaker	Utterance
1	Henry	I have tile. And I have carpet in there too.
2	Julie	Tile and carpet in the house?
3	Henry	Yep.
4	Julie	Neat. How do you think you can show the difference between where there is tile and where there is carpet in your house?
5	Henry	I drew the tile.
6	Julie	You drew the tile. So, you're going to use markers and draw lines for the tile?
7	Henry	And colors.
8	Julie	What kind of colors?
9	Henry	Tile colors.

Table 5.1, Continued

10	Julie	Tile colors. Makes sense.
11	Charlotte	Miss Julie, I wanna make my house now.
12	Julie	You would like to make a blueprint of your house. Great, Charlotte. Um…there's a seat for you right here…as soon as I move my…I have to move my stuff…there, now there's a seat for you. I have white paper and I have some…sort of yellow paper. Which would you like to have to create your blueprint of your house?
13	Charlotte	Um. White.
14	Julie	White please?
15	Charlotte	White, please.
16	Julie	Here you are, Miss Charlotte. What are you going to make today? What kind of rooms are in your house? Which ones will you put in your blueprint?
17	Charlotte	My bedroom and my mom's room and my kitchen.
18	Julie	Those are important rooms. Any others?
19	Charlotte	Nope.
20	Julie	No other rooms in Charlotte's house.
21	Henry	Where do you go to the bathroom?!
22	Charlotte	Oh yeah. [Laughter] The bathroom is next to Mommy's room.
23	Eli	I have a basement in my house but I'm not putting that on here.
24	Julie	Eli has a basement in his house. Does anyone else have a basement?
25	Henry	I do, but I don't like it. The stairs are icky.
26	Julie	They're icky?
27	Henry	Yeah.
28	Julie	Hm. Sounds…sounds like a problem. Henry, I see you're working on the…is that the kitchen in your house?
29	Henry	Yep
30	Julie	What kinds of items are you going to show in your kitchen?
31	Henry	The table and the fridge and the pates and the cups.
32	Charlotte	And the spoons and forks?
33	Henry	No, those are in the drawer, you can't see in it.
34	Charlotte	The stove?
35	Henry	Yeah. The stove too. And Riley's dish.
36	Charlotte	Riley's dish?
37	Henry	Yep.
38	Julie	I think Riley is Henry's dog, right?
39	Henry	Yep. He has a food dish and a water dish on the floor beside the back door.

Table 5.1, Continued

40	Julie	Are you going to show where the door is?
41	Henry	Just draw it?
42	Charlotte	You could use brown paper.
43	Eli	Or a stick.
44	Julie	A popsicle stick? That's a neat idea.
45	Charlotte	Miss Julie, look at my bedroom!
46	Julie	Wow, there's a lot in your bedroom. Can you tell me about it?
47	Charlotte	That's my bed. And my dresser. And that's my toys.
48	Julie	All over the floor? [Laughter]
49	Charlotte	Yeah! Mommy didn't pick them up yet.
50	Julie	Why don't you pick them up? Save Mommy the work?
51	Charlotte	I can't.
52	Julie	You can't pick up your toys?
53	Charlotte	Nope.
54	Julie	Hmm. Good thing you know how to pick them up here, huh?
55	Charlotte	Mommy doesn't like to pick up toys either though. I wanna make my bedspread now.
56	Julie	Did you inherit that from your mom?
57	Charlotte	Did I hear it?
58	Julie	Inherit. Did you inherit not liking to pick up from your mom?
59	Charlotte	Maybe.
60	Julie	Inherit means you got something from your mom. Like, your mom has the same color eyes as you do, so you inherited your eye color from your mom. Jonathan inherited his curly hair from me.
61	Charlotte	Oh. I might, maybe, I might hear it that from my mom.
62	Julie	Inherit. That's kind of a neat word, isn't it?
63	Charlotte	Inherit. Miss Julie, I wanna make my bedspread now.
64	Julie	Ok. How are you going to show your bedspread? What do you think you need? Are you going to draw it? Or use paint? Or cotton balls? Or…I think I still have…
65	Henry	What's that?
66	Julie	Oh, I do! I still have…I have a bunch more. Look. [Lays scraps of material on the table.]
67	Charlotte	Oh! Pink! I want…Miss Julie, I want pink!
68	Julie	You would like pink?
69	Charlotte	Yes!
70	Julie	Let's see…this is pretty big…how big is…let me see your paper for a minute…let's try this. [cuts pink material]. Try that. Is it the right size for your bed?
71	Charlotte	It's a little too big.
72	Julie	So I should cut it down some more?

Table 5.1, Continued

73	Charlotte	Yeah.
74	Julie	Hand it back here and I'll trim it. Will you be making pillows for your bed too?
75	Charlotte	I'ma use the cotton ball for the pillow. Like Eli did.
76	Eli	I did that first.
77	Charlotte	Yeah. I'm gonna too.
78	Julie	Charlotte liked your idea, Eli, so she's going to try it out for herself. Try this, Charlotte, and see if…see if it's the right size for your…your bed now.
79	Charlotte	Yay! It fits!

Figure 5.1: Charlotte's Blueprint

Figure 5.2: Henry's Blueprint

Narrative Description of Preparing a Thanksgiving Turkey. Unlike the previous conversation in which students had been given choices about where they wished to work, the students participating in the conversation described in this section were specifically invited by Julie to join her small group. While all of the students enrolled in Julie's class participated in this same exercise at some point, she and her co-teachers decided to create small groups based on the needs of individual students. "We were hoping that some of the groups would be able to do some writing along with their drawings, and sometimes it's easier to have the older students together and the younger ones together for that kind of project," Julie explained as we sat down with the small group. Julie had invited me to observe Alice, Shemar, Daniel, and Louise (all age 4) as they talked about preparing for the upcoming Thanksgiving Holiday.

Julie invited the students to join her in the art studio, a small room where small group activities are often held. As the students took seats around the art table, each sitting on their own stool, Julie arranged a tub of art supplies nearby, then placed a legal pad and pen in front of her.

Once everyone was settled, Julie explained her problem to the students: Thanksgiving was quickly approaching, and she needed to cook a turkey but didn't know how. She explained to the students that she thought they were smart kids and might be able to help her create a recipe. One by one, Julie elicited ideas from the children about what she might need to do to cook a Thanksgiving turkey. "You get it from the store and cook it," Louise offered (Table 5.2, Line 17) with Shemar adding that it was important to "pay for it at the store…otherwise it's stealing" (Table 5.2, Lines 19 and 21). Next, the students decided that it was important to wash the turkey, suggesting Julie accomplish this task using either the bathtub or the dishwasher. Then, they came to stuffing the turkey.

Julie questioned each of the children about what she should use to stuff the turkey. "Um, strawberries. And bananas," was Alice's suggestion (Table 5.2, Line 32) while Daniel was confident that "oatmeal" (Table 5.2, Line 34) was another ingredient she should include in the stuffing recipe. Having decided that it was now time to cook the turkey, Julie asked the children for suggestions about the temperature and cooking time.

> They didn't really understand temperature. Or cooking time. I knew from doing this lesson in past years that if I questioned them about units they would have some funny answers. And, I was using that for the learning story today because parents love those sorts of quotes from their kids. I didn't really expect any of them to have very accurate responses but it's cute to see what they think about how long stuff cooks or how hot the oven should be.

Her prediction regarding the students' responses was accurate. In response to Julie's wondering "how hot the oven should be?" (Table 5.2, Line 35), Daniel replied "I think five" (Table 5.2, Line 36) while Alice's suggestion was "I think you should make the oven nine" (Table 5.2, Line 39). As a group, they settled on a temperature between five hundred and nine hundred degrees. Then, Julie asked the children if anyone knew how long the turkey should cook; once again the

group failed to agree on an exact number of minutes, but instead settled on a time range: between six minutes and eight months.

Having agreed on a recipe for cooking a turkey, the group then turned their attention to Thanksgiving related art projects. Julie invited the students to think about how their families were preparing for the upcoming holiday, then distributed paper, crayons and markers for drawing. She also laid out a variety of other artmaking materials that the children were invited to use as part of their projects. During this time, the children's conversations divided into two groups: Alice and Daniel were seated side by side on the west side of the table while Louise and Shemar shared the east side. Due to audio recording malfunctions, only Alice and Daniel's conversation was captured.

Daniel is the first to share, explaining to Alice that "we clean the house to get ready for Thanksgiving" (Table 5.2, Line 68), though in his drawing he does not begin by representing house cleaning. The earliest marks that Daniel makes on his paper are a large rectangle, which he drew in brown marker, with sticks on each corner, representing his kitchen table. Daniel used a brown crayon to color in part of the table, then stopped in favor of drawing other objects on the table first. He drew a representation of a turkey, then several other food items as he chatted with Alice. Her drawing is similar, with a round table, also with a turkey prominently featured. Despite their drawings, the children continue to discuss the physical preparations their families will make to get ready for the holiday. "Mommy does that [cleaning]. And Daddy does the outside. And me and…[my sisters] have to play in the basement so that we don't mess up the cleaning Mommy does," Alice tells Daniel (Table 5.2, Line 69). Their attention then turns to the guests who will gather with them for the holiday, mentioning cousins, aunts and uncles, and grandparents.

In Line 91 (Table 5.2) Alice notices with glee that "Daniel, we both made a turkey on the table!" Despite most of their conversation being focused on getting their homes ready for Thanksgiving and the people who would visit, both children had created artwork depicting a table with a feast (Lines 76-82 do mention baking desserts). Round circles of construction paper represent dinner plates on Daniel's paper. He also used a combination of buttons, beads, and un-popped popcorn kernels to represent food in his artwork. Alice used a method of finger painting to represent food on her table, but only after Julie's reminder to the whole group that they were welcome to avail themselves of the other supplies she'd made available for their use. Alice and Daniel's conversation concluded with the pair listing the food items they might include on their tables.

Table 5.2: Preparing a Thanksgiving Turkey

Line #	Speaker	Utterance
1	**Julie**	Boys and girls, I need your help with something. Thanksgiving is coming next week and Jonathan's [Julie's son who is in her class] grandparents are coming to our house to visit.
2	Alice	Yay!
3	Julie	Sit down, Alice. Alice sit on your bottom. Jonathan's grandparents are coming. And I need to cook a Thanksgiving turkey, but…I don't know how.
4	Shemar	Uh oh.
5	Daniel	Too bad.
6	Julie	Yeah, too bad. But I was thinking…you're some smart kids. Maybe you could help me out? Do you think?
7	Shemar	Nope.
8	Julie	You won't help me figure out how to cook a turkey?
9	Alice	I will.
10	Louise	Me too.
11	Daniel	I know.
12	Julie	You know? You know how to cook a turkey?
13	Daniel	Yeah.

Table 5.2, (cont'd)

14	Julie	Ok. Well, let's do this. You tell me, and I'll write it down so that I don't forget anything. Louise, your hand is up, can you help me out? What's the first thing you have to do before you can cook a Thanksgiving turkey?
15	Louise	Before you cook it?
16	Julie	Yeah, before I cook it, is there anything I have to do to get it ready?
17	Louise	You get it from the store and then cook it.
18	Julie	I get it from the store?
19	Louise	Yeah. Pay for it at the store and then cook it.
20	Julie	Pay for it at the store.
21	Shemar	Otherwise it's stealing, so you gotta pay for it at the store.
22	Julie	Good point. So I don't go to, say, the farm? I know I saw turkeys at the farm.
23	Louise	Those aren't Thanksgiving turkeys, those are animal turkeys.
24	Julie	Oh, I see. So, I go to the store and pay for the turkey so no one thinks I'm stealing it. Good, Louise. Then what do I do next?
25	Louise	Then you go home and wash it.
26	Julie	I wash it? How do I wash it? In the bathtub?
27	Louise	Maybe. You could maybe use the dishwasher.
28	Julie	Oh, the dishwasher. That's a great idea. Ok, good. Um, then what?
29	Louise	Then you cook it.
30	Alice	No, then you stuff it.
31	Julie	Wait, I stuff it? What do I stuff it with?
32	Alice	U, strawberries. And bananas.
33	Julie	Oh, interesting. Ok, stuff it with strawberries and bananas.
34	Daniel	And oatmeal. I think.
35	Julie	Great. Strawberries, bananas…I'm writing this down in my notes…and oatmeal. Then I cook it. Oh, I should probably turn on the oven, huh? I wonder how hot the oven should be.
36	Daniel	I think five.
37	Julie	Five? Five what?
38	Daniel	Five cooking.
39	Alice	I think you should make the oven nine.
40	Julie	Nine what? Ninety? Nine hundred?
41	Alice	Nine hundred.

Table 5.2, (cont'd)

42	Julie	Ok, got it, turkeys must need it really hot to cook. So, I'm stuffing it with strawberries and bananas and oatmeal and then making the oven somewhere between five hundred and nine hundred degrees…I guess I'll have to figure out which one feels right when I start to cook. This is great! Hey, one more question…does anyone know how long it takes for the turkey to cook?
43	Shemar	Six.
44	Julie	Six what, Shemar?
45	Shemar	Six.
46	Julie	Six minutes? Six hours? Six days?
47	Shemar	Six minutes.
48	Julie	Cool. Shemar says it needs to cook for six minutes. Does that sound right?
49	Louise	I think it has to cook for ten hours.
50	Julie	Ten hours. Alice, do you have any thoughts on how long it should cook?
51	Alice	I have no idea, I'm not old enough to use the stove.
52	Julie	[Laughter] I see. Alright. Daniel, how long do you think it should cook?
53	Daniel	Eight.
54	Julie	Eight seconds? Eight hours? Eight months?
55	Daniel	Eight months.
56	Julie	Eight months. Wow. I should have started a long time ago, I think. Ok, let's read this recipe and make sure I have it right. I'd hate to make a mistake with my turkey and not be able to feed anyone on Thanksgiving. So, here's my recipe, let's check it. First, I go to the store and buy a turkey instead of stealing it. Then, I drive home and wash it in the dishwasher or the bathtub. Right so far?
57	Choral Response	Yep.
58	Julie	Good. After it's clean, I stuff the turkey with strawberries, bananas and oatmeal, then I cook it at a temperature between 500 and 900 degrees. And it needs to cook for somewhere between six minutes and eight months. Did I get everything?
59	Choral Response	Yeah.
60	Alice	Miss Julie, I think eight months is a little too long.
61	Julie	You do?
62	Alice	Yeah.

Table 5.2, (cont'd)

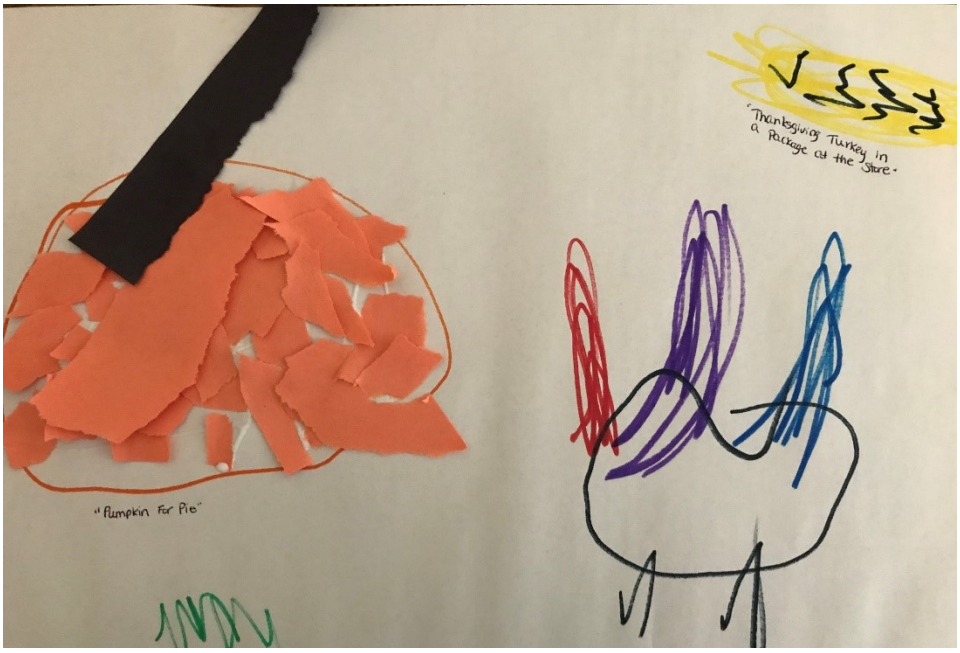
63	Julie	Well, maybe I'll check on the turkey several times until it looks done. Wow, this is a great recipe. I'm going to take it home with me and next week Jonathan and I will let you know how it worked out for us. Now, I have another question for you. Would anyone like to draw a picture of how your family gets ready for thanksgiving? Look what I have. [Puts a bin with art supplies on the table, then shows students large sheets of paper.] I thought maybe we could try to make some art projects and maybe some writing if we feel like it, about how we get ready for Thanksgiving? Would you like to try?
64	Choral Response	Yeah.
65	Julie	[Distributes paper for each student.] Let's take a minute and think about it. What do you and your family do to get ready for Thanksgiving? Hm…let's think quiet
66	Daniel	We clean the house.
67	Julie	Let's think quietly for a second and then maybe we can share and decide on our plans for our art.
68	Daniel	We clean the house to get ready for thanksgiving.
69	Alice	Mommy does that. And Daddy does the outside. And me and Eleanor and Isabelle, we have to play in the basement so that we don't mess up the cleaning Mommy does.
70	Daniel	We don't got a basement. So we just mess up the living room and my Mommy cleans it up again.
71	Julie	Your poor Mommy [laughter]. Couldn't you help her keep it clean? Do you have company coming over for Thanksgiving or are you going to someone else's house?
72	Daniel	We're going to Nana and Papa's house. And my cousit's will too.
73	Julie	Your cousins [emphasizes correct pronunciation].
74	Daniel	Yeah. My cousins.
75	Julie	Do you and your parents do anything to get ready to go to your Nana and Papa's house?
76	Daniel	I make cookies for dessert.
77	Julie	Oh, yum! Cookies are my favorite. What kind do you make?
78	Daniel	Chocolate chips.
79	Julie	Yum. Do you make pies for dessert?
80	Alice	We do! Chocolate and pumpkins and apples.
81	Daniel	I don't like pies so I only make cookies.

Table 5.2, (cont'd)

82	Julie	I see. That's good though, you have dessert that you like.
83	Daniel	Yeah.
84	Julie	Alice, what about you? Do you stay home and have people come to your house or do you go somewhere else?
85	Alice	We stay home. And my auntie comes and my uncles. All of them.
86	Daniel	All of them?
87	Alice	Yep, all of them. Aunt Celia and Aunt Nicole and Aunt Sue. And Uncle Randy and Uncle Ian and Uncle Jack. And all my cousins.
88	Daniel	All those people go in your house?
89	Alice	Well, me and my sisters and my cousins play in the basement. Or outside. Then we can, we can get the toys out. When Mommy says we can.
90	Julie	Alright, friends, it sounds like everyone has a plan for your art projects. I'm going to take the lid off of the tub and put out the crayons and markers, you can start with those. And the paint dotters too. And then when you need other things you can get them from here.
91	Alice	Hey! [Laughter] Daniel, we both made a turkey on the table.
92	Daniel	That's what we eat for Thanksgiving.
93	Julie	What else do you think you'll put on your table, Daniel?
94	Daniel	And I'm going to put potatoes and cookies and carrots on there too.
95	Alice	Oh, we have potatoes at Thanksgiving, too.
96	Daniel	You can draw potatoes, too.

Figure 5.3: Thanksgiving Table

Figure 5.4: Pumpkin, Corn, and Turkey



Narrative Description of The Firemen's Visit. Much as the children had self-selected to work at the artmaking station in the conversation represented in Table 5.1, Julie and her co-teachers had invited students to choose where they wanted to work in a subsequent artmaking

lesson focused on family and community helpers. For this lesson, Amanda (age 4) and Liam (age 3) engage in crayon and marker drawings of scenes depicting buildings on fire. As the children converse, their drawings become more detailed in order to accommodate new developments in the stories they create through both their conversations and their artmaking. Their choices of artmaking materials advanced, as well, to include colored cotton balls; yarn and ribbons; and scraps of tissue paper and construction paper.

As the conversation begins, Amanda and Liam are discussing colors that represent fire. Liam's statement in Line 1 that "fire is red" prompts Amanda to consider what other colors she could add to her fire. "Mine is sort of red. And I have some yellow," Amanda tells Liam, adding yellow marker to her drawing. Liam remains unconvinced, however. "But fire is red," (Table 5.3 Line 3) he insists. As I was observing this conversation, I noticed that Julie was making notes as she listened to the student's conversation. I asked her in a short interview later that same day what had caught her attention. This question led us to a short discussion of Amanda's addition of yellows and oranges to her depiction of flames. I asked Julie whether this development surprised her in any way.

> Not really. I'm friends with her mom, so I know [the family]. They have campfires a lot and they've got a fireplace in their house. I remember once Amanda talking about these special logs that they'll buy sometimes that are designed to burn in different colors. So, it didn't surprise me that she would think about that. Now, if I didn't know her family so well, then yes, for sure [it would surprise me]. Like, I wouldn't expect some of the other kids to have thought about it. They probably don't have that much experience looking at the colors of flames, it's not something they have a ton of exposure to.

Given Julie's familiarity with Amanda's family, she found it unsurprising that Amanda would have added other shades of red to her drawing, given that her family has drawn her attention to the different ways in which flames can appear.

Liam's insistence that fire is red is the last comment either student makes regarding the colors of flame. Instead, they both turn their attention toward creating fictional accounts of houses on fire. As they talk, their stories develop, beginning with Liam's exclamation that "There's fire coming on the roof!" (Table 5.3, Line 3). Both Liam and Amanda tell portions of a story where the roof of the house in their artwork was, or currently is, burning. They use their prior learning from the fire department's visit to craft two different stories about their artwork. Liam's version of the story tells about how the house in his artwork is currently burning and that the fire trucks have arrived to battle the flames. Though Liam's artwork depicts the fire truck in front of the house, his story focuses on the residents inside the home. Julie comments that red fire must be really hot (Table. 5.3, Line 12) to which Liam replies "It isn't too hot if you're a fireman. But for the people that live in the house it is hot hot hot hot. They have to keep low on the floor because it's not too hot there" (Table 5.3, Line 13). His story focuses on how the home's residents can escape from the burning building, citing advice such as crawling on the ground to avoid smoke, and touching doors to make sure they're not hot before opening them (Table 5.3, Line 13 and 17).

Throughout the telling of this story, Liam adds several elements to his work in order for his artwork to reflect the development of his storyline. With each new idea that he verbalizes in the story, Liam adds another element to the artwork in order to represent that idea or event. For example, prior to the addition of residents crawling on the floor to avoid smoke, there were no people represented inside the drawing of the house. Liam had initially colored the walls of the house to represent wood or vinyl siding. With the addition of homeowners to his story, he then drew figures of people in the window, illustrating how they would crawl on the floor to escape the blaze.

Initially, Amanda and Liam's artwork had many similarities. They had both drawn houses with square bodies and triangle rooftops, each with flames emanating from the top. Both pieces of artwork included representations of firefighters and their equipment, the truck being most prominent, though they each had hoses as well; Liam's drawing also included an ax and some Band-Aids ("for in case someone gets hurt" Table 5.3, Line 23). However, as their stories diverged, their artwork did as well. While Liam focused on the people inside the burning house, Amanda's story explored what might happen after a fire. "I have a fireman and a ladder truck and he's already put the fire out so there's no more hot flames in the roof…On the house the fire is all out. But next I want to make the trees in the…back yard. And they might could get on fire next" (Table 5.3, Lines 25 and 27). Amanda's story focused on what elements in her drawing might be in danger of catching fire in the future, and as her ideas grew, so did the background of her drawing until it included trees, shrubs, and a garden shed. She had a plan to protect the house and its garden and outbuildings, however: "The fire truck is still there. So that in case the house gets on fire again it can put it right out."

Table 5.3: The Firemen's Visit

Line #	Speaker	Utterance
1	Liam	Fire is red
2	Amanda	Mine is sort of red. And I have some yellow. [Adds yellow flames.]
3	Liam	But fire is red. Look out! There's fire coming on the roof! [Draws long red lines to the roof of the house.]
4	Amanda	On the roof! Don't get on fire if you go on the roof!
5	Liam	Is your room got fire on it?
6	Amanda	No, the fire truck put water on it so there's no more fire.
7	Julie	How did the fire truck put water on it?
8	Liam	From the truck.
9	Julie	Yeah, but how did the water get from the trucks to the flames?

Table 5.3, (cont'd)

10	Amanda	They used the hose [points to black line] and put water on it and now there's no more fire in mine. There might be fire on Liam's still. [Adds blue dots to represent water].
11	Liam	Mine still has red fire on the roof.
12	Julie	Red fire on the roof, wow, I bet it's really hot.
13	Liam	It isn't too hot if you're a fireman. [Adds fire hat to image of a firefighter. Adds ax and Band-Aid box]. But for the people that live in the house it is hot hot hot hot. They have to keep low on the floor because it's not too hot there.
14	Amanda	And because smoke can't get to the floor.
15	Julie	The smoke can't get to the floor at all?
16	Amanda	That's why they crawl on the floor if the room gots fire in it.
17	Liam	And they touch the door and make sure it's not on fire on the other side.
18	Julie	Oh, right, that's what the firefighters taught us when the fire truck came.
19	Liam	Otherwise if they open the door they'll get all burned up.
20	Julie	I see. Liam, I see your house and your fire truck, but then I see some…what are these down here?
21	Liam	That's the ax that the fireman had on the truck. And, the rake and the mask and the ladder. And that's a Band-Aid box.
22	Julie	A Band-Aid box?
23	Liam	For in case someone gets hurt in the fire, then they can have a Band-Aid.
24	Julie	Oh, that makes sense. That's a really great idea, actually.
25	Amanda	Miss Julie. Look at mine. I have a fireman and a ladder truck and he's already put the fire out so there's no more hot flames in the roof.
26	Julie	The fire is all out?
27	Amanda	On the house the fire is all out. But next I want to make the trees in the, next to the, in the back yard. And they might could get on fire next.
28	Liam	And then the fireman would have to come back. Eee ooo eee ooo!
29	Amanda	The fire truck is still there. So that in case the house gets on fire again it can put it right out.

Figure 5.5: Liam's Firetruck Artwork

Figure 5.6: Amanda's Housefire Artwork

Artmaking as the Development of Sophisticated Conversation

The conversations transcribed above each have features of sophisticated language that develop through the medium of children's artmaking in response to social studies lessons and activities presented (i.e. family holiday traditions; community helpers). One part of the focus of

the Reggio Emilia curriculum focuses on "the image of the child," which is the idea that children are competent and full of potential. The social studies lessons highlighted in this section illustrate the ways in which Julie helps to establish the concept of competence with her students – she shows them through her actions and lessons that she values their ideas, celebrates their competences, and believes that they are capable of achieving a vast variety of things if they choose to. The lessons highlighted in this chapter also adhere to the NAEYC (2009) belief that a key feature of sophisticated conversation comes from rich vocabulary and meaningful, thoughtful ideas. Using their artwork as a way to think through their understandings and ideas provides children with a place to "try out" their thinking and to revise their ideas as new understandings take place. It allows them to practice new vocabulary terms and to co-construct knowledge with their peers and teachers (Early et al., 2010). These key features of language development were the foundation for my definition of sophisticated language in chapter 4 and will continue to inform the following analysis of children's artmaking and conversations.

Artmaking Prompts the Use of Sophisticated Vocabulary. In chapter 4, I discussed the ways in which children's artmaking activities highlighted their capability of employing sophisticated vocabulary during nature study. I pointed to the ways in which children's conversations were supported by their drawings, such as when Eli struggled to understand the difference between mist and raindrops, struggling with the new concept as he worked to find a way to represent the differences in his drawing. In this section, I will explore the theme of sophisticated vocabulary use in social studies through the topics of family and community in order to further highlight the versatility of artmaking as a tool for improving children's vocabulary.

Just as the medium of artwork allowed Eli to practice new vocabulary, Charlotte's conversation about her artwork prompts new word learning as well. In a discussion regarding family characteristics, Charlotte mentions to Julie that neither she nor her mother particularly enjoy cleaning house. "Did you inherit that from your mom?" Julie asked Charlotte in Table 5.1 Line 56. The term inherit is new to Charlotte and at first she misunderstands the word. Her response in Line 57, "Did I hear it?" is a question, suggesting that communication has broken down. Charlotte has encountered a new word, which it appears she has never heard before, and therefore chooses the phrase most close in sound: hear it. Understanding that Charlotte was confused by her response, Julie repeats the word and offers a definition when Charlotte is unable to respond in any meaningful way. Their exchange is as follows:

Julie: Did you inherit that [disliking to clean] from your mom?

Charlotte: Did I hear it?

Julie: Inherit. Did you inherit not liking to pick up from your mom?

Charlotte: Maybe.

Julie: Inherit means you got something from your mom. Like, your mom has the same color eyes as you do, so you inherited your eye color from your mom. Jonathan (Julie's son) inherited his curly hair from me.

Charlotte: Oh. I might, maybe, I might hear it that from my mom.

Charlotte's understanding of this new word is basic when the exchange concludes. She still pronounces it incorrectly and there is little evidence that she understands the nuances of the term in any meaningful way. In my field notes of the event I commented that Charlotte seemed only mildly interested in the term. I asked Julie about the exchange in an interview later that day.

> I didn't think about the fact that it was a word she wouldn't know until she gave me a sort of blank stare. And then I realized that I had to find a preschool definition to give her and

> the eye color thing probably wasn't the best example. I could have come up with something better if I'd been on my toes. For something that she probably had never heard before and wasn't really ready to learn at that moment, I think she took away a fairly decent understanding of what inherit means. I would be surprised though, if she used that word again in conversation. I was really just pleased that she pronounced it correctly before we moved on.

Despite Julie's belief that Charlotte was not ready to learn the word inherit yet, and that she was unlikely to use it again, research suggests that merely hearing new words is beneficial to children's vocabulary growth (Kamil, 2004). Indeed, Kamil and Hiebert (2005) suggest that the first stage of word learning is to have simply heard the word for the first time. Even if a child has no association for the word, no ideas about the word meaning or morphology, the fact that they have heard the word spoken in the past gives them a place to start to build an understanding of the term. Having heard Julie repeat the word, as well as give examples, provides Charlotte with a foundation so that when she encounters the word in the future, she'll already have some information about the meaning and use of the term. This improves the likelihood that Charlotte will successfully engage with the term in later literacy learning. Without the conversation prompted by her artwork, Charlotte may not have had the opportunity to discover the term inherited until she was much older. That in itself would not be problematic, however, Julie's introduction of the term gave Charlotte another way to describe the similarities in characteristics she shares with her mother. In this way, artmaking allowed Charlotte to expand her understanding of academic content.

Liam and Amanda used their artwork to practice vocabulary knowledge in a similar way as they engaged in a storytelling episode during their conversation about firefighting in Table 5.3 above. They use sophisticated vocabulary to help them describe the elements or essence of a fire. For example, in Line 17 Liam uses the word glow to describe the effects of a fire, a word he learned from an explicit teaching episode during the fire department's visit the week prior. Prior

studies have shown that when more time is spent on vocabulary instruction and students are given multiple opportunities to interact with a word in multiple contexts, learning of that word and overall vocabulary growth improves (Coyne et al., 2007; Silverman & Crandell, 2010; Bowne, Yoshikawa, & Snow, 2017). Liam's first introduction to the term glow as it relates to firefighting occurred in his interactions with the members of the fire department as they explained to children that fire can make heated metal glow, a concept which they illustrated through an example of a glowing doorknob. I remarked in my field notes for the day that the children seemed intrigued by this idea and that for the remainder of the day they would comment that the doorknobs were not glowing and therefore it was safe to enter or exit a room as they moved about their day. Liam's artwork, and the storytelling he engages in as he creates it, provide additional opportunities for him to expand and solidify his understanding of the word glow and how it can be used in multiple contexts.

"They touch the door and make sure it's not on fire on the other side. And make sure the door handle doesn't glow," Liam tells Amanda and Julie in Line 17. His assertion that persons trapped in a burning building should check if the door handle is glowing is a direct result of his understanding that fire can make metal hot and therefore glow, indicating that it is not safe to open that door. He goes on to state this more explicitly in Line 19: "Otherwise if they open the door they'll get all burned up." Liam engages in several steps as he confirms his understanding of the term glow. Since children need to have a reason to learn new words or word meanings, and motivation for language learning is crucially related to engagement with a concept (Cobb & Blachowicz, 2014), it is highly suggestive that Liam is vested in expanding his understanding of the nature of firefighting and connected events. He is clearly working to expand and deepen his

understanding of words he already knows and to apply them to new contexts such as were introduced to him during the fire department visit.

Much as with the word glow, Liam also attributes the idea of an explosion to firefighting. He continues in Line 19: “Otherwise if they open the door they’ll get all burned up. Boom! It might explode.” Explode is another example of sophisticated vocabulary Liam employs to help him describe and understand the nature of fire, as well as to move his storytelling forward. As he adds this new detail to his storytelling, he also adds billowing black smoke to his drawing, representing an explosion which might occur if a character were to open a hot door. This is not to suggest that Liam yet understands that the sudden introduction of large quantities of oxygen would spark the explosion, but it does suggest that he understands that a change in the environment (i.e. opening the door) could spell disaster for the house in his drawing. Liam’s story suggests that he understands that changes in environment have an effect on that environment, despite it being unlikely that he has a clear, or even murky, understanding of what that effect is. His use of the word explode, rather than a milder but related term such a burn, suggests that Liam grasps the idea that the change would be large in nature and likely catastrophic. Silva and Otwinowska (2018) suggest that this could be due to *motivation of need*. They describe motivation of need as whether a word is necessary for completion of a task or understanding of a concept. Learners view need as moderate, for example if use of the word is required by an outside source (i.e. a predefined word list) or as strong, for example when a learner chooses to use a specific term themselves, rather than having an outside source influencing their word choice (Silva & Otwinowska, 2018). Liam’s use of the word explosion falls into the second category, thus suggesting that he is highly invested in the project, which is a highly valued tenant of the Reggio approach (described in chapter 3).

Not all examples of motivation of need fit Silva and Otwinowska's (2018) definition of strong need, however. An example of moderate need, or need imposed by an outside source, appears in Daniel's comments recounting a list of family members who will attend a Thanksgiving celebration in Table 5.2 above. Daniel states in Line 72 that "We're going to Nana and Papa's house. And my cousit's will too." His mispronunciation of the term cousins prompts a short exchange with Julie as she emphasizes the correct pronunciation. In this example, cousins is classified as sophisticated vocabulary because of its specificity and its relation to academic content. Family relationships are one of the key topics of study in preschool social studies curriculums, making terms such as cousin, grandpa, aunt, etc. sophisticated vocabulary for young children (MSBE, 2013; Weizman & Snow, 2001). Particularly as Daniel has not yet mastered the pronunciation of the term, his use of it in conversation suggests that he has a strong desire to more deeply familiarize himself with the term. He has a clear understanding of who his cousins are; his task now is to master the use of the label for that relationship.

As the conversation continues, Daniel and Julie turn the topic toward the menu for the Thanksgiving celebration. Julie inquires in Line 75 whether Daniel and his parents do anything in preparation for the party. "I bake cookies for dessert," Daniel replied (Table 5.3, Line 76). The term bake is another example of sophisticated language, as it directly relates to the social studies content. Additionally, bake is a higher-level word than others which Daniel might have selected instead. Weizman and Snow (2001) point out that sophisticated vocabulary occurs when children use more nuanced words in place of other terms that are also likely firmly in their vocabulary. Daniel's choice of the word bake, which elicits images of baking sheets in a hot oven, the ingredients evolving from small round balls of dough to warm, round cookies, offers a much more nuanced understanding of the process than synonyms such as *make* or *cook* might convey.

Sophistication of Ideas and Storytelling During Artmaking. As expressed in Chapter 4, a key feature of sophisticated language requires that children's conversations allow them the opportunity to express themselves and interact with others as they think and grow as learners. In these instances, children think about and express their understandings of new ideas, or new understandings of concepts they are already somewhat familiar with (Early et al., 2010). Liam and Amanda engage in just this sort of conversation in their storytelling episode expressed in Table 5.3 above.

Their interaction began as a drawing and painting episode during which students were invited to create artwork inspired by a recent visit from the local fire department. Each of the children had created drawings depicting a house on fire with a fire truck parked in front or nearby the burning structure. Though there is talk before the transcript begins (Table 5.3) the utterances do not take the form of meaningful conversation. It is only when Amanda makes a comment about adding yellow flames to her artwork that she and Liam begin a storytelling exchange in which they begin to develop a narrative about their individual pictures. It is at this point that the students' schemas of a house fire and ensuing visit from the fire department begin to develop. In Line 5 (Table. 5.3), Liam asks Amanda "Is your roof got fire on it?" There is a short pause as she considers his question before providing a response. "No, the fire truck put water on it so there's no more fire," Amanda explains. This is a noteworthy statement for two reasons. First, it signifies that Amanda understands the process of a typical visit from the fire department: the trucks use water to extinguish the flames. Her drawing depicts a long black hose attached to the fire truck spraying the house in her drawing with droplets of water, consistent with her experience observing the tanker truck that came to the school.

The second reason her response that there's no more fire due to the water is noteworthy is that Amanda's drawing shows something different from her statement. She's already drawn flames from the roof of the house. However, the narrative Amanda wishes to tell has expanded and moved past the flames that are depicted in her drawing. Her story continues to develop through the conversation she and Liam engage in, prompting her to add features to the drawing to move the plot forward, while ignoring other elements in her drawing that no longer conform to the story she wishes to tell. Therefore, the flames on the roof in Amanda's drawing become less relevant as her narrative develops; her attention is drawn to other areas of her artwork instead. This type of literacy, that which depicts children's use of written and spoken words, along with drawing and other genres of artwork, allows students to communicate through multiple medias. Dyson (1993) refers to this as children's "attempts to accomplish social work" or to communicate their ideas, deepen their understandings, and build relationships with peers. Amanda's development of the story of the house in her drawing and Liam's response to her statement suggest that they are working together to deepen their understanding of how fire can work. For example, Liam appears to accept Amanda's statement that the roof of the house in her picture is no longer on fire, despite her having make no effort to dull or remove the image of flames from the roof. He, however, has a different narrative he wishes to develop for his own picture. "Mine still has red fire on the roof," Liam explains in Table 5.3, Line 11. He goes on to describe that fire and its significance to the people inside. "It isn't too hot if you're a fireman. But for the people that live in the house it is hot hot hot hot. They have to keep low on the floor because it's not too hot there." Liam's storyline is vastly different from Amanda's, but more importantly, there is agreement between the story he tells and the elements in his drawing.

Unlike Amanda's story, which evolved beyond what was shown in her artwork, Liam's story adheres to the images that he has drawn. To begin, Liam describes fire encompassing the house in his drawing. He states that there is fire on the roof (Line 11) and that the fire is too hot for anyone except firefighters (Line 13). In his drawing, Liam has depicted fire erupting from the roof of the house. On the grass in front of the house there appears to be a figure holding a hose and wearing a firefighter's hat, an indication that this figure could battle the blaze because he is properly attired. Liam appears to believe that this gear will keep the firefighter from being burned as he extinguishes the flames. Moving on, Liam describes the state of the residents inside the house, explaining in Line 17 that they will only escape the burning building by practicing fire safety rules he learned in the previous weeks' lesson: stay low and don't open doors before checking whether there's fire in the next room. The choices Liam makes in his storytelling are important because storytelling requires specialized ways of using language, which are closely associated with learning language needed for future literacy learning (Dickinson & McCabe, 2001; Dickinson & Tabors, 2001; NELP, 2009). For example, in storytelling, children require language that relays events removed from the immediate context, as well as language that communicates an experience and its interpersonal significance (Flynn, 2016). Liam meets the requirement of relaying an event removed from immediate context in two ways: he tells a fictional story that he makes up as he adds elements to his drawing; and he imparts information that he gleaned from a previous learning activity. By using decontextualizing language, Liam's sophisticated storytelling allows him to practice vital language skills that will better prepare him for later literacy learning (Demir et al., 2015; Flynn 2016).

A similar kind of sophistication of ideas happens in the conversation represented in Table 5.2, Preparing a Thanksgiving Turkey. To begin, Julie invited Alice, Shemar, Daniel and Louise

to assist her in a shared writing activity. This served as an introduction to an artmaking activity in which each student was invited to create a scene depicting their own family's holiday traditions. As the children co-create their recipe for cooking a turkey, they employ another conversational strategy that research has shown to be beneficial for later literacy learning: approximating known forms of communication (Martin & Rose, 2008; Rothery & Stenglin, 1997). As the children begin to piece together their recipe, they use their prior experiences with recipes or cooking to aid them in compiling the most likely list of steps to successfully make a Thanksgiving dinner. To begin, in Line 17, Louise suggests that the first step to cooking a turkey is to purchase a bird from the store. "Otherwise it's stealing" Shemar points out in Line 21. Next, Louise advises Julie to wash the turkey, suggesting that the dishwasher might be an appropriate place to clean the bird (Line 27).

The children then turn their attention to stuffing the turkey. They make various suggestions about what might be the best ingredients to stuff the bird with – strawberries and bananas (Line 32), and oatmeal (Line 34). These are interesting suggestions, in no small part due to the humor of the children's misconceptions regarding ingredient choice, but more importantly because it becomes apparent that they have a clear concept of the parts associated with a recipe. In other words, they have made an attempt to approximate a known form of communication: the recipe card (Martin & Rose, 2008). These kinds of humorous misconceptions regarding elements of a recipe (for example, Line 41, Alice's belief that the turkey needs to roast at a temperature of 900 degrees, or Line 45, Shemar's instance that it will only take six minutes for baking to be completed) continue throughout this portion of their conversation. While the children may have no concept of baking times or temperatures, they clearly understand how recipe cards are

created. With this pre-artmaking conversation complete, the children are then encouraged to begin creating depictions of their own family's Thanksgiving celebrations.

Two conversations emerged during this section of the artmaking activity, one between Shemar and Louise, who were seated side by side, and a second between Daniel and Alice, also seated side by side. Due to incoherent audio recordings, only the conversation between Daniel and Alice will be examined now.

Along with the shift from whole group discussion to artmaking and conversation, the children's talk also shifted in purpose. Prior to this shift, their talk had focused on practicing approximating known forms of communication as they co-created instructions for roasting the turkey. Now, Daniel and Alice take their conversation in a new direction as they discuss who will attend their respective holiday celebrations. Vezzani (2019) describes the kind of conversation that Daniel and Alice engage in as one intending to evoke shared knowledge. By this, Vezzani (2019) means that children use their talk to practice or check their understanding of information they have already learned and discussed. For instance, they might use the conversation to solidify details of a topic, or to confirm their understanding of an experience (Vezzani, 2019). With the preschool social studies curriculum having a heavy focus on familial relationships, Julie's students spend much time thinking about who their family members are, how their families are similar and different from their peers, and how the members of their households work and play together. As such, the art talk these two children engage in fits Vezzani's (2019) description of talk as practice.

After what Julie terms a period of "quiet thinking" Daniel and Alice both begin to draw. As they do so, they share details about their families' traditions, prompted by Alice's observation that her artwork has some similarities to his.

Alice: Daniel, we both made a turkey on the table.

Daniel: That's what we eat for Thanksgiving… And I'm going to put potatoes and cookies and carrots on there too.

Alice: Oh, we have potatoes at Thanksgiving every year, too.

Daniel: You can draw potatoes, too.

The children use this exchange to confirm their understanding of what a tradition is – in Alice's words, something that happens "every year" – as well as to notice similarities between their traditions (i.e. serving turkey and potatoes at the holiday meal). The class has been studying families, and family traditions in particular, for several weeks prior to this artmaking activity. Consequently, Alice and Daniel both have prior experiences in describing their families and thinking about what constitutes a tradition, and therefore are able to utilize this artmaking conversation as a way to confirm their understandings of what a holiday tradition consists of (Vezzani, 2019). Alice receives confirmation of her understanding that a tradition is an established custom (i.e. having potatoes at Thanksgiving every year) from Daniel's encouragement that she add the element to her artwork as well.

In this section I have provided examples of the ways in which children use artmaking experiences to practice sophisticated vocabulary and to express sophisticated ideas. Henry and Charlotte's conversation about the elements included in the blueprints of their homes highlight the importance of finding concrete ways to describe new terms for children, particularly when the words themselves represent abstract ideas such as heredity. Though the conversation did not conclude with Charlotte having a full and complete understanding of the term inherit, she nonetheless began to generate a foundation that can later be expanded. Louise, Shemar, Daniel and Alice used sophisticated vocabulary to help them express sophisticated (if not entirely

correct) ideas about family traditions, while Amanda and Liam depended on their artwork to practice terms taught in prior lessons. In all three cases, the children's artmaking experiences provided them with a place where they could practice previously learned vocabulary, expand their receptive and expressive vocabularies, and deepen their understanding of academic content. In the next section, I will discuss the planning that Julie engaged in to prepare herself and the children for the learning experiences described.

The Work of the Teacher: How Julie Prepared for Learning Experiences

The learning episodes examined in this chapter differed from those in Chapter 3 in two significant ways. First, the nature conversations highlighted in Chapter 3 all took place outdoors while children were involved in examining a natural phenomenon that was part of their immediate context. This was not the case with the conversations described here: the children's homes served as inspiration for their blueprints, while the fire department's visit was the basis for the fire truck drawings. Both of these inspirations were outside of the children's immediate context either by means of spatial location or time. The conversation represented in "Preparing a Thanksgiving Turkey" was also removed from immediate context by means of time. The conversations included in Chapter 3 resulted in artwork children created with only a limited supply of artmaking materials, mainly crayons and construction paper, while they had access to a whole array of artmaking materials in the instances reported in this chapter.

Previously, I recounted an interview with Julie in which she described the necessity of having a limited selection of artmaking materials during nature walks. Subsequently, I asked her about her selection of artmaking materials available when children are working in the classroom:

> Not all of my co-teachers agree with me, but my general belief is that if a kid wants to use some material, I don't tell them no. Unless they're about to go home or we're about to transition to another area of the classroom or the building, if someone asks me for paint, they get paint. If they ask me for glitter…I might cringe inside, but they get glitter.

> Otherwise we're stifling their creativity and that's not ok. I always ask them first what their plan is for whatever material they're asking for. They usually have a plan and can explain it to me. That cuts down on the waste a bit. And if they don't have a plan, that's the only other time I might tell them, no, they can't have that thing. Not until they can come back and tell me what they need it for. And, they have access to the basics all the time. Paper, glue, crayons. Whatever we happened to put on the art shelf that day or that week. They always have access to those things. But if they ask for something special, something that's not immediately available to them, my general rule is they can have it unless I have a really good reason to say no. And usually it's 'no, not right now, but ask me at such and such a time.

Artmaking is a staple in many preschool classrooms (Edwards, Gandini & Forman, 2012) and it is a center that is always available to students in Julie's classroom. On some occasions there will be a single table dedicated to open artmaking. Other times, she will add a second artmaking center where she has a specific purpose or idea for children to explore. The conversations serving as data for this chapter all took place at the second type of art center. Typically, children are welcome to move about the classroom, joining centers at their pleasure, and this was the case with all three of the art conversations recorded here. Children elected first to join the center, and second, to adhere to the project Julie suggested. Though she has specific intentions for these particular artmaking sessions, students are permitted to use the available materials in any way they desire. Thus, not all students who joined her for the blueprint making episode chose to create blueprints of their homes, rather using the materials for alternate purposes. Julie respects children's decisions when they elect to use the materials for other purposes and celebrates their creativity.

Planning for Learning Experiences. One of the tenants of the Reggio approach is that time is important to the learning and development of children's deep understanding of academic content (Biermeier, 2015). Teachers who subscribe to the Reggio approach understand the value of a child being able to return to a topic and examine it for as long as they wish, from any angle that intrigues them, using any materials that feel appropriate. "My students tend to need to return

to ideas pretty frequently. Learning in preschool is never a one and done kind of thing. They need to hear an idea and play with it and talk about it. They need to draw it and sing about it," Julie mentioned in an interview when I asked her about her planning. "So we come back and revisit things pretty frequently. As long as they're interested in a topic or an idea then we keep it active in the classroom however we can."

While the school adheres to the Reggio approach to education, I commented in my field notes that Julie appears to have a firm grasp of the curriculum expectations that students will need to meet when they enter kindergarten. During the observation period, her students were engaged in social studies concepts relating to family and community, both of which are included in the Early Childhood Standards of Quality of Prekindergarten by the Michigan Board of Education. For instance, when Daniel and Alice were engaged in their conversation about the ways in which their families prepare for and celebrate the Thanksgiving holiday, they were actively engaging with the Social Studies expectation 2.3, "show an understanding of family and how families are alike and different" as well as expectation 2.5, "begin to recognize that people celebrate events in a variety of ways" (Michigan State Board of Education [MSBE], p. 80, 2013). Likewise, Charlotte and Liam's fire department inspired artwork relates to expectation 5.1, "can talk about some of the workers and services in their community" (MSBE, p. 81, 2013).

While these standards are intended to help children meet kindergarten readiness standards (MSBE, 2013), Julie has indicated that she does not allow them to fully prescribe the learning that occurs in her school. An interview reported in Chapter 4 explained her rationale for this: though her students will need to be ready to successfully transition to kindergarten, Julie believes that adherence to the Reggio approach provides an alternative path to success. "There's something to be said for letting a child explore and learn at her own pace. And I think that's just

as important as ticking off a set of expectations. So while they're here in my classroom, we respect their right to learn in the way that's best for them," Julie explained.

Table 5.4: Sample Lesson Plan for Preparing a Thanksgiving Turkey

1. I can make a plan. 3.1 I can use ordinal words (first, next, last). 4. I can manipulate light. 4.1 I can make shadows. 4.2 I can mix colors. 5. I can build or design.		
1. Turkey Recipes (Julie)	2. Light (Natalie)	3. Blocks and Construction (Alexandra)
Materials: Drawing paper Assorted art supplies	Materials: Projector Flashlights Laser pointers Light table Magnatiles	Materials: Block area toys Chart paper Markers Images of buildings

Therefore, it is no surprise that Julie's lesson plans for the experiences highlighted in this chapter were highly flexible in order to allow her students to explore the concepts that were of most interest to them. An excerpt of the lesson plan from which the Thanksgiving Turkey conversation arose appears in Table 5.4 above, followed by an excerpt of the lesson plan from which the Blueprints conversation occurred in Table 5.5. A lesson plan from the Fireman's Visit conversation was unavailable.

Julie's lesson plan is illustrative of the ways in which she sets up her classroom in centers-based activities. She and her co-teachers carefully plan where they will situate themselves within the classroom in order to best guide children's play. Unlike the lesson plans in the previous chapter where children were assigned to small groups and expected to stay within them, when Julie has her students inside, the groupings remain fluid, allowing students to choose which activities they wish to participate in and which friends they desire to spend their time with.

The number of activities that students can select from is far greater in the classroom than on the nature walks represented in Chapter 4 as well.

Table 5.5: Sample Lesson Plan for Making Blueprints

1. I can draw my home. 1.1 I can draw/sketch important rooms/items. 1.2 I can describe colors, shapes. 2. I can describe items that float. 2.1 I can scoop. 2.2 I can squeeze. 2.3 I can clean up after myself. 3. I can build or design		
1. Blueprints (Julie)	2. Water Table (Chelsea)	3. Blocks and Construction (Natalie)
Materials: Construction paper Assorted art supplies *Creaky Old House*	Materials: Water table Towels Sponges Nets Floaties	Materials: Block area toys Cones Construction Trucks Images of construction sights

One of the reasons that Julie tends to offer as many options for children as she does is directly related to the Reggio approach to learning in that the approach insists that children should be able to follow their own curiosities and engage in learning activities that are meaningful to them. This means that the day's activities cannot be so structured as to allow no input from the students regarding their broader interests (Alvestad & Sheridan, 2015).

Julie and I had many informal conversations about her planning process. Often the information seeking went both ways. That is, sometimes our conversations were focused by my attempt to understand the thought process Julie engaged with as she planned for learning activities, while other times the conversations were initiated by Julie asking my opinion about future plans or looking for ideas for planning purposes. In Chapter 4 I recounted a conversation in which she and I discussed her planning process for lessons that take place outside of the classroom. Julie's responses centered on the importance of observing her students' interests and

using their questions and wonderings to guide her lesson planning decisions. Observation tended to be one of the main components to her planning decisions, whether she was planning for outdoor lessons, or learning activities which would take place in the classroom. However, it was not her only consideration. The transcript related in Table 5.6 is another conversation between Julie, her co-teacher Alexandra, and me, which highlights the importance she places on the ideas and talents of co-lead teacher Alexandra, and the assistant teachers assigned to the preschool classroom.

Table 5.6: Planning Discussion: What's Most Important?

Line #	Speaker	Utterance
1	Julie	I don't know if they're really all that interested in the light table and such anymore. If you watched today, it was all 'the block area is full.' Because they all wanted to be there.
2	Alexandra	And we've had the light table out for a while, maybe it's time to refresh the room?
3	Julie	I was thinking that too.
4	Tracy	What does that mean to you? Refresh the room?
5	Julie	Just making sure we're keeping up with the interests. We need to expand the block area so that more kids can work there. Right now there's only room for…
6	Alexandra	I was limiting it to six today because some of their…Eli's building was really elaborate and with more kids it would have limited what he was able to do.
7	Julie	I saw that. Did you document?
8	Alexandra	Yep. They're on my phone so I'll send them to you.
9	Julie	Cool. So what if we were to move some furniture around. Make more room for the block area. We can probably expand into the reading corner for now, take out some of those pillows, move the shelves in. And that'll make it a little more homey too. We'll need to add to the materials there. And maybe change out the pictures on the walls.
10	Alexandra	I like it. And, Chelsea was saying the other day that she has some ideas for other kinds of centers that maybe would relate to this too.

Table 5.6, (cont'd)

11	Julie	Oh! I remember! She mentioned something about making centers with different kinds of building materials. Yeah. You know what else we could do? Is start to tie together some of the other daily staples so that we have a theme of construction running across several areas. Read aloud and the different centers. And somewhere we've got those big riding…they're almost like bikes. For outside.
12	Tracy	The dump truck and the crane?
13	Julie	Yeah, you remember those? When we had them out on the…didn't we have them out on the hill?
14	Tracy	I think so. But that was a while ago.
15	Julie	I think they're in the basement. In fact, I think I know right where they are, I'll have to go look for them later. This sounds good to me. Do you think enough of them are interested and invested in building right now for it to make sense that we would dedicate that much time and space or whatever to this?
16	Alexandra	I think so. I mean, today…and the last couple of days…the blocks have been a big draw, so I think it's worth expanding out a bit and giving them more related kinds of things to do.

Like much of Julie's planning, this conversation represents the importance she places on observation, but more than that, it highlights both how much she relies on the expertise of her co-teachers, and her Reggio inspired belief that children should have multiple opportunities to think deeply about a topic of interest.

Reliance on Co-Teachers. Julie and Alexandra are both considered lead teachers in the classroom, and they frequently plan together. During my observation period, I noted that whenever possible they, along with their assistant teachers, will gather together to discuss the progress of the class and to share ideas for future learning activities. Though Julie and Alexandra are typically responsible for writing lesson plans, all of the teachers who work in the room have a voice in the planning process. Having a positive working relationship is important for teachers who work in close proximity with each other, as Julie and her co-teachers do. A responsive

relationship between co-teachers sets a tone for the classroom that will affect the quality of interactions between teachers and students which will affect or influence children's comfort in the classroom and have a direct impact on their development and learning (Pianta, Laparo, & Hamre, 2008; Mashburn et al., 2008; Landry et al., 2014).

Evidence of the positive relationships between all of the teachers assigned to Julie's classroom abounds. One such example of this appears in Lines 10 and 11 of the transcript above which represent Julie and Alexandra's exchange regarding suggestions made by one of their assistant teachers. These suggestions were later incorporated into the classroom learning activities available to the students. Since student learning is enhanced when teachers share planning and use their observations and analysis of classroom practices to guide their teaching, these group planning sessions are essential (Bennett, 2011; Malec, Peterson & Elshereif, 2017).

Multiple Opportunities for Exploration. A second belief that is highlighted in the conversation represented in Table 5.6 is the belief held by all teachers in Julie's classroom that students require, and are entitled to have, as much time and as many resources as they desire to satisfy their curiosities and deepen their understandings of a topic of interest. This means that Julie's lesson plans must account for the children's different but related needs and desires, as well as provide a sufficient amount of time for explorations so that students do not feel as if they are shortchanged. It is important that children feel their work is respected and their learning is celebrated, rather than adhering to a strict calendar whereby a set list of topics are covered broadly and children's curiosities are left unfulfilled. The planning episode detailed above resulted in Julie and Alexandra making significant changes to the layout of the indoor classroom space. They followed through with their idea of expanding the block area and adding more building materials to it. Images that were located online were printed, laminated, and displayed

in the block area so that children had examples of blueprints, construction sights and a variety of completed structures as inspiration for their own creations.

Beyond the block area, they also expanded other centers to include building and construction related themes. For example, the dress up area was updated to include construction hard hats, safety vest and tool belts. A loose parts area was created to house various tools and hardware elements including tape measures, hinges, and other items usually found in a hardware store. In addition, Julie added a shelf of building and construction related books to the classroom and planned the read aloud of Linda Ashman's *Creaky Old House: A Topsy-Turvy Tale of a Real Fixer-Upper*. This led to the artmaking experience related in Table 5.1 above. In my field notes after these changes were implemented, I made a comment regarding the enthusiasm with which the students had taken to the new additions: "The block update was a success. Though the block area has doubled in size, I observed Chelsea on more than one occasion today telling students that the center was full. She pointed out similar activities they could engage in while they waited for the block area to open up. The students seemed to find the new additions to the classroom exciting."

Selection of Artmaking Materials. "When we're in the classroom, the sky's the limit. At least within reason." As stated above, Julie believes that students should have unlimited access to artmaking materials whenever possible. This is echoed in the setup of the classroom in that near the tables where artmaking frequently happens are shelving units stocked with a wide array of crafting supplies. These shelves are typically kept fully stocked, particularly those shelves that are accessible to preschoolers, though even shelves that are taller than children can easily access were usually kept stocked with refill supplies. While Julie isn't afraid to ask students "what's

your plan?" regarding art supplies they don't have easy access to, she is willing to provide them with yarn, paint, glitter, and other crafting supplies when they ask for them.

Following my observation of the Thanksgiving Turkey conversation, I asked Julie about her selection process for that lesson. She had elected to take her small group to the light studio, a small room connected to Julie's classroom, which had until recently been used for children to explore with light and shadows. The room was stocked with flashlights, penlights, curtains for creating shadows and other related items, but was not currently stocked for artmaking. As such, I thought it would be prudent to ask Julie if there was any significance to the materials she packed into her small tote for the lesson.

"Yeah, you know, we [the teaching team] talked together about what outcomes we wanted from this activity and one of the things we were hoping to accomplish was for students to think about their family traditions. And food is the main tradition they relate to Thanksgiving. So when I started tossing things into the tub, I was looking for crafting supplies that might remind them of food items. Cotton balls for mashed potatoes, different kinds of paper. I have stamps of different kinds of food and different colors of ink. None of them used that today though, I don't know if they just didn't realize that was in there? Or if they were just like 'those are dumb'," Julie explained with laughter in her tone. "So I don't know about those. Yesterday I had rice and pasta and popcorn and they liked those a lot. Again, this group, not so interested." Julie's bin of craft supplies also included crayons, markers, ribbons and yarn, craft sticks, and many different types and colors of paper, along with glue and paint. Her selections of materials were carefully planned in order to make sure that students would have the widest array of artmaking items, while still meeting the educational objective she had for the day, that of prompting thought and discussion of the children's family traditions (Alvestad & Sheridan, 2015).

Teacher Talk During Social Studies Artmaking Episodes

The previous section explored the question of how planning affects learning episodes and student engagement, leading to sophisticated conversations. In this section, I examine the influence of instructional moves and teacher talk to see how they contribute to the emergence of sophisticated conversation.

Talk Moves in Making Blueprints. As shown in her lesson plan (Table 5.5) for the conversation that emerged from "Making Blueprints," Julie's purpose was to encourage children to identify important locations and items in their homes, and to describe those rooms and items using color and shape words. These learning objectives are supported by the Early Childhood Standards of Quality for Prekindergarten, distributed by the Michigan State Board of Education, and are skills that the children have previously practiced. Since her goal was for the children to practice describing important details using specific vocabulary, Julie used cuing strategies to guide the conversation between she and Henry.

Table 5.7: Excerpt of Making Blueprints with Transcription Symbols

Line #	Speaker	Utterance
1	Henry	I have tile. And I have carpet in there, too.
2	Julie	Tile and carpet in the house?
3	Henry	Yep.
4	Julie	Neat. How do you think you can show the d::ifference between where there is tile {points to an area of Henry's drawing} and where there is carpet {points to another area of the drawing} in your house?
5	Henry	I drew the tiles.
6	Julie	You drew the tiles. So, you're going to use markers and draw l::ines for the tiles?
7	Henry	And colors.
8	Julie	What kind of colors?
9	Henry	Tile colors.
10	Julie	Tile colors. Makes sense. {smiling, laughing tone}.

The cueing strategies Julie employed in this short discussion were fairly successful in that she was able to elicit from Henry an understanding of the differences in the kinds of floor coverings he would represent in his drawing of his home. Cueing allows teachers to draw students' attention to specific kinds of information (Frey & Fisher, 2010). In this short exchange, Julie used a combination of verbal cueing (i.e. asking specific questions), and gestural cues (i.e. movements and other nonverbal forms of communication) with Henry's own artwork as a prompt to elicit further information from him.

To begin, Julie employs verbal cueing as she uses her voice to provide Henry with hints or clues about which portions of her utterances are most important to pay attention to (Maloch, 2002). This is evident in Line 4 when she elongates the beginning sound of the word, difference, as she asks him to think about and express how he will represent the distinctive kinds of floor coverings that are present in his blueprint. By drawing out the initial sound of the most important word, Julie also gives Henry extra time to consider the meaning of the term and to make sense of the task required to answer the question. This fraction of a second slows the conversation down enough that Henry is able to capture the first part of Julie's statement and have a clear understanding of the type of distinction she will ask him to make, before she goes on to name the elements of his artwork that she wants more information about. Julie uses another type of verbal cueing in the second half of her question as she places emphasis on the terms tile and carpet, once again indicating to Henry that those terms are of importance as he considers how to respond to her utterance. Finally, Julie uses a questioning tone by having a rising intonation at the end of her utterance. Together, the drawing out of sounds, emphasis on specific words, and rising intonation serve as verbal cues for Henry as she indicates for him which parts of her statement are most important (Maloch, 2002; Frey & Fisher, 2010).

A second kind of cueing Julie uses in this short exchange with Henry is gestural cueing, movements and nonverbal communication in order to emphasize importance. She does this by pointing to specific parts of his artwork as she asks about his plan for differentiating between tile and carpet in the blueprint of his home. This was a natural action for both Julie and Henry, as a large amount of everyday interaction involves both verbal and nonverbal gestures; pointing, for example, serves the same purpose as telling someone to look toward a specific location (Daum, Ulber, & Gredeback, 2013). Julie's gesture drew Henry's attention to the area of his drawing where he had already represented tile, then to the blank area where he'd indicated he would represent carpeting. This nonverbal action was an indication that he should focus his response on the portions of the drawing where Julie had drawn his attention. Henry was then able to explain that he would use lines to draw tiles and color them in a different hue than he would use for the carpeted areas.

Talk Moves in The Firemen's Visit. Just as she did with the blueprints interaction, Julie uses a variety of talk moves as she engages with Liam about his fire truck drawing, an excerpt of which is represented in Table 5.8. The major talk moves Julie uses in this excerpt are visual and verbal cueing, which will be the basis of this section.

Table 5.8: Excerpt of The Firemen's Visit with Transcription Symbols

Line #	Speaker	Utterance
17	Liam	And they touch the door (2) and make sure it's not (2) on fire on the other side. (3) And make sure the door handle doesn't glow.
18	Julie	Oh, right, that's what the firefighters taught us when the fire truck came.
19	Liam	Otherwise if they open the door they'll get all burned up. Boom! It might explode.
20	Julie	I see. Liam,(3) I see (2) your house and your fire truck (1), but then I see some (1)what are these down here? {points at elements of the drawing}.

Table 5.8, (cont'd)

21	Liam	That's the ax that the fireman had on the truck. >And the rake and the mask and the ladder.< And that's a Band-Aid box.
22	Julie	A Band-Aid box?
23	Liam	For in case someone gets hurt in the fire, then they can have a Band-Aid.
24	Julie	Oh, that makes sense. That's a really great idea, actually.

Visual cueing, identified as illustrations, pictures, colors and diagrams, among other things, have one thing in common, their graphic nature (Frey & Fisher, 2010). Teachers frequently use visual cueing to scaffold students' understandings or to garner ideas. Liam's drawing itself serves as a medium for visual cueing and Julie takes advantage of this by asking questions such as "what are these down here?" (Line 20) as she points to unidentified elements near the bottom of his drawing. Visual cues are used to scaffold students' understanding of a topic or to check for understanding (Frey & Fisher, 2010); Julie's use is the latter since she is attempting to discern what Liam has drawn in order to make sense of all of the elements in his drawing. His response proves that he does in fact have a clear understanding of why the elements are important to his drawing – they are all items that will either help the firefighters complete their work, or will provide relief to the injured. Liam quickly lists the elements for Julie (i.e. the ax, rake, ladder, mask, and the Band-Aid box), then goes into more detail about the item he names as a "Band-Aid box" when she questions him further, explaining that anyone who might have gotten burned can have a Band-Aid to assist in their recovery.

Frey and Fisher (2010) indicate that visual cueing is often used in tandem with other kinds of cueing moves, and this holds true with Julie and Liam's exchange as well. Along with visual cueing Julie leans heavily on verbal cueing in order to focus Liam's attention on the most important features of her statements. This allows him to identify the elements of her questions

and statements that he must respond to in order for the conversation to successfully move forward (Frey & Fisher, 2010).

As in other conversations, Julie uses emphasis as one of the main ways that she focuses students' attention on the elements of speech she wishes them to attend to. Beginning in Line 18, she places emphasis on terms that indicate her agreement with prior statements Liam has made, or on the vocabulary that carries the most meaning in a phrase. For example, she places emphasis on the phrase "oh, right" (Line 18) as she recalls that the visiting members of the fire department had instructed the children to check for glowing doorknobs before opening doors if ever caught in a burning building. By emphasizing this term Julie confirms to Liam that his recollection is correct, a move which aids in solidifying his understanding of the lessons he learned during the visit (Frey & Fisher, 2010). In the same line, Julie also places emphasis on the term firefighters, expanding on Liam's prior statement by adding further information – "that's what the firefighters taught us: (Line 18).

Talk Moves in Preparing a Thanksgiving Turkey. Julie uses the talk move of questioning in many of the conversations she has with her students each day, but none more than the conversation that emerged from her lesson about cooking a turkey. This conversation was a prelude to an artmaking activity in which children would represent their family holiday traditions related to the Thanksgiving holiday. Julie's goal was to determine what children knew about recipes and cooking. She explained to me that she'd done this activity in years past and repeated it because parents enjoyed reading the recipes children co-created. It also allowed her to give the children more practice with understanding the nuances of the concept of traditions. Her lesson began with a question and answer period in which Julie pretended that she needed the children to

help her craft a recipe so that she could successfully roast a turkey for her family. An excerpt of this conversation appears in Table 5.9.

Table 5.9: Excerpt of Preparing a Thanksgiving Turkey with Transcription Symbols

Line #	Speaker	Utterance
24	Julie	Oh, I see. So, I go to the store (2) and pay for the turkey so no one thinks I'm stealing it. Good, Louise. Then what do I do nex:::t?
25	Louise	Then you go home and wash it.
26	Julie	I wash it? How do I wash it? In the bathtub?
27	Louise	Ma::ybe. You could maybe use the dishwasher.
28	Julie	Oh, the dishwasher. That's a great idea. Ok, good. Um, then what?
29	Louise	Then you >cook< it.
30	Alice	No:::, then you stuff it.
31	Julie	W:ait, then I stuff it? What do I stuff it with?
32	Alice	Um, strawberries. (2) And bananas.
33	Julie	Oh, interesting. Ok, stuff it with strawberries [and bananas.]
34	Daniel	[And oatmeal. I think]
35	Julie	Great. Strawberries, bananas (2) I'm writing this down in my notes (3) and oatmeal. Then I cook it. Oh! I should probably turn on the oven, huh? I wonder how hot the oven should be?
36	Daniel	I think five.
37	Julie	Five? Five what?
38	Daniel	(3) Five cooking.

Transcription Symbols Key:		
	Underlining	Indicates emphasis
	(#)	Numbers in parentheses = pauses in seconds
	:	Elongation of a sound
	> <	Increased rate of speech
	[ ]	Overlapping speech
	?	Questioning tone
	!	Enthusiastic tone
	{ }	Nonverbal gestures

Instructional questions are one of the most salient features of classrooms, used for a variety of purposes including guiding student thinking, scaffolding conceptual knowledge, and framing issues (Chin, 2007; Mitchener, Proctor, & Silverman, 2018). They can also be used to

allow students to explain what they know as they recite prior knowledge or provide pre-specified answers, though this is a highly criticized use for questioning (Boyd & Rubin, 2006; Mitchener, Proctor, & Silverman, 2018). Julie's purpose in questioning is to determine what students are thinking. Her questions are authentic in that they do not seek pre-specified answers (Mitchener, Proctor, & Silverman, 2018) as she attempts to determine what students already know or understand about the topic under consideration.

Julie poses questions intended to elicit open ended ideas from the students. She asks things such as "then what?" (Line 24). She relies heavily on how, what, and why questions (i.e. How hot should the oven be? What should I stuff the turkey with?) in order to allow for the children's ideas to guide the conversation. She used her knowledge of individual students to construct a space where they could fully participate in the conversation, engaging with the students who appeared eager to share their thoughts or ideas, probing them for further details whenever appropriate (Worthy et al., 2012). This talk move allowed the children's ideas – regardless of correctness – to dominate the conversation, rather than having them rely on her to provide expertise. Questioning provides a space for the children to share their ideas about a topic they know little about, generating ideas which they are then able to examine together. It allows children to expand ideas, such as the exchange that takes place in Table 5.2, Lines 52-55:

> Julie: Daniel, how long do you think it [the turkey] should cook?
>
> Daniel: Eight.
>
> Julie: Eight seconds? Eight hours? Eight months?
>
> Daniel: Eight months.

It also opens a space where children can question the legitimacy of other responses, and revise understandings that no longer make sense to them, as Alice does in Line 60, "Miss Julie, I think

eight months is a little too long." These sorts of evaluative statements allow teachers and students to acknowledge that a student has made a contribution to something that changes or redirects the discussion (Nystrand et al., 2003) by using the students' contribution to further an explanation or deepen the group understanding of the content (Mitchener, Proctor, & Silverman, 2018).

Findings

In the following I present the research findings from this chapter. These findings are divided into four broad categories, two of which examine the transcripts in regards to the conversations and actions of the children, while two examine them in regards to the planning and teacher actions before and during learning episodes.

Finding 5.1. Children's artwork scaffolds their ability to provide details as they tell stories. In the instructional episode titled "The Firemen's Visit" children used their prior experiences to create artwork aimed at helping them to confirm their current understandings of how community helpers interact with the public. They had a wide variety of artmaking supplies available to them, which prompted them to create much more detailed art than they could have with fewer materials. They also had vivid memories of their experiences with members of the fire department, which provided them with the details they included in their artwork. Learning took place as Liam and Amanda used both their art and their chatty conversation to confirm details they had previously learned, and to expand on their understanding of how community helpers operate within their town.

Both children used their artwork as a means to create a narrative about their experiences with the fire department, which they develop as they add and revise the details represented in their pictures. Amanda uses her artwork as practice or confirmation for her understanding of the

process of firefighting. Her story evolves beyond what is shown in her artwork; details that appear in her narrative either take place after the scene she has created on her paper or have evolved beyond what she chooses to illustrate. In this way, her artwork becomes a "rough draft" of her narrative, allowing her to add to and revise the story as she continues to work.

Liam's artwork serves a different purpose in the "drafting" of his narrative. With each new detail he added in his oral storytelling, Liam also added details to his artwork to match. In this case, his artwork evolved as the story progressed, acting as a scaffold for his narrative attempts. Like Amanda's storytelling, Liam's narrative evolves as he adds more details recalled from the prior learning experience with the fire department, using his artmaking as a method to confirm his understanding of the job of a firefighter and the dangers faced.

Finding 5.2. Sophisticated vocabulary use is compelled by need. Sophisticated conversation, in which children express new ideas and explore new information, necessarily features highly sophisticated vocabulary. Teachers can introduce new words into children's conversations by giving them synonyms for known words, or by naming phenomena that children may not have names for. By using children's own ideas as a basis for the introduction of new words, students are more likely to be highly motivated to learn and explore these terms. This is highlighted in Julie's conversation with Charlotte as she introduces the term inherit (Table 5.2, Lines 56-63).

Charlotte goes through several steps as she begins to learn this new word. First, she identifies a word she does not recognize in Julie's speech. Charlotte asks for clarification by repeating the phrase she thinks she heard, "I hear it" (Table 5.1, Line 57). Following Julie's clarification and definition of the term, Charlotte tries again to repeat the term, though she still mispronounces it, and never comes to a clear understanding of the nuances of the term. Rather,

she leaves that interaction having been introduced to a new term, but with much learning still left to occur. Charlotte's need for the term 'inherit' was low. Since it is an abstract concept, it is not something she can easily represent in her artwork, nor is the concept of inheriting traits something that Charlotte had previously considered as she thought about her family's traditions. Therefore, her need for the term was low and the rudimentary examples Julie provides her with are sufficient.

Likewise, Liam's fire truck drawing and related conversation offer an opportunity for him to practice sophisticated vocabulary. He describes the characteristics of a fire using sophisticated vocabulary terms taught to the children by the visitors from the local fire department. "…Make sure it's not on fire on the other side [of the door]. And make sure the door handle doesn't glow," Liam explained in Line 17. Since need is one major reason that children attend to sophisticated vocabulary, Liam's use of the term glow suggests that it is vital to his understanding of the rules for escaping a burning building. He places emphasis on the beginning sounds in the word glow (see Table 5.8, Line 17) which lends support to this being a critical term for him. His focus on the drawing and accompanying narrative makes Liam's word choice paramount. Rather than selecting a more basic term such as hot to describe the doorknob, Liam pauses slightly for effect, emphasizing the beginning sound in the term glow in order to draw his listeners' attention to the word, thus showing his comprehension of the new term which he now finds vital to his understanding of the lessons taught by the members of the local fire department.

Finding 5.3. Teachers intonation guides students' attention to salient conversational exchanges. One cueing system that Julie uses frequently and to great result is to change the inflection or intonation of her voice as she speaks with her students, allowing these vocal changes to direct their attention to what she views to be the most important words or phrases in

their conversation. Elongating sounds within words is one typical intonation move that Julie finds effective; she also frequently employs pauses and emphasis of words or sounds to draw students' attention to conversational features.

One central illustration of this appears in the Making Blueprints conversation presented in Table 5.7 when she emphasizes the kinds of floor coverings Henry wishes to represent in his drawing. By slowing down the pace of her speech as well as altering the upward and downward tone of her voice with each term, she indicated to Henry that these terms are of importance and he should not only pay attention to them, but incorporate the terms or ideas related to them in his response. Later in the same exchange, Julie uses the technique of elongating sounds in words for similar effect. In Line 6, Julie combines the use of emphasis, elongation of sound, and increased rate of speech in order to guide Henry's thinking. "You drew the tiles. So you're going to use markers," she said to Henry, emphasizing the words drew and markers; this indicates to the listener that these actions have already occurred and Henry has the opportunity to correct this if he disagrees. Continuing in the same utterance, Julie goes on: "So you're going to use markers and draw lines for the tiles?" (Table 5.7, Line 6). In this second half of the utterance, Julie uses elongation of the initial sound in the word line as an indication to Henry that this term holds important meaning in the question she seeks an answer for. Not only does he confirm her understanding, but he offers further details regarding the plan for representing tiles. "And colors," Henry told Julie in response to her question. Her intonation throughout this short exchange allowed Henry to successfully explain his plan and receive confirmation from Julie that she understood his intentions with his work.

A similar thing happens in Julie's interactions with a small group of students in her lesson plan, Preparing a Thanksgiving Turkey. She uses vocal intonations to indicate to the

children what is important to attend to in the conversation. As with the previous example, Julie uses emphasis to great result in this conversation. Emphasis serves as a way for Julie to confirm ideas with students, as she does in Line 24. Louise and Shemar's prior comments relate to paying for purchases at the store: "Pay for it at the store" (Line 19) because "otherwise it's stealing" (Line 21); when Julie repeats Louise and Shemar's statement, she emphasizes the word stealing, since it was the crux of their argument, avoiding the possibility of theft. Julie's emphasis confirms her agreement with Louise's and Shemar's idea. Later, Julie uses this verbal tactic in a similar way when responding to Alice and Daniel's suggestion for ingredients for stuffing the turkey. She repeats with emphasis the words strawberries and bananas as a way to confirm to the children that she understood their recipe and also that their contributions were important to the group's understanding of how turkeys should be roasted.

By using the intonation of her voice, Julie is able to direct students' thinking. She can indicate agreement or question just by raising or lowering the tone of her voice. By drawing out sounds within words, teachers can provide students with time to think and consider specific portions of conversation, and guide them toward information that will best aid in crafting a response that will build on the topic and move the conversation forward in a meaningful way. Julie uses intonation to guide her students and to offer confirmation of their ideas, with the goal of improving their social relationships or academic understandings.

Finding 5.4. Judicious questioning by teachers invites greater student involvement in conversations. In the past, teacher questioning has been looked down on or challenged due to the prevalence in many classrooms of the initiate-response-evaluate pattern of discussion. IRE questioning leaves little room for children to engage in a topic or a conversation. However, when teachers ask meaningful questions to which they do not expect specific responses, children's

conversational skills can mature and grow. Facilitating discussion through questioning takes much thought and planning on the teacher's part because it requires a thorough understanding of the interests of the students as well as the comprehensions and capabilities of the students. Additionally, planning these sorts of questions requires teachers to anticipate the direction of learning that conversations will lead to. Though it takes careful planning and consideration, when teachers use judicious questioning, students participate with frequency.

The conversations Preparing a Thanksgiving Turkey and The Firemen's Visit both offer ample instances where Julie uses questioning as a way to guide the students' thinking just enough that she can step back from the conversation and allow the children to lead. Much of her questioning in Preparing a Thanksgiving Turkey comes in the form of *what, why*, or *how* questions as the children create a recipe together. "Then what?" is a frequent question she poses, as is "what should…" These kinds of questions allow the children to guide the conversation, offering ideas, making suggestions, and revising their thoughts together as they invent the recipe as a group. Though some students still wait to be acknowledged by Julie, others begin to offer suggestions to her or to their peers unsolicited, as with Alice's insistence that "eight months is too long" for the turkey to cook.

In other instances, Julie uses questioning to discover what students already know or what their thoughts are on a topic, as with her question "The smoke can't get to the floor at all?" (Table 5.8, Line 15) in The Firemen's Visit. She uses this question to probe Liam and Amanda's understanding about facts learned during the previous week's fire department visit. Her question prompts further discussion of how people who find themselves in a burning building should react, (i.e. crawl on the floor, touch the door to make sure it's not hot) as well as further details about how firefighters go about their jobs. In this case, judicious questioning created a space for

Liam and Amanda to share what they know, combining their understandings to improve both their storytelling narratives, and to allow both of them to participate in the conversation without needing direct prompting from an adult.

Summary

This chapter continues to explore the question *what are the characteristics of young children's conversations during art related experiences?* by building on examples detailed in chapter four. It examines the ways in which social studies topics provide space for children to use sophisticated vocabulary and express sophisticated ideas, and examines the ways in which artwork prompts these conversations. Additionally, this chapter investigates the ways in which planning and teacher actions influence children's conversations and the learning that occurs as they practice already known concepts. This included probing the children's actions and reactions during conversational prompts during art related activities as well as examining the decisions teachers made during teaching episodes.

Aiding children in becoming competent conversationalists requires that teachers understand how children practice academic and social concepts as they engage in dialog together. In Julie's classroom, she and her co-teachers purposely plan artmaking activities which will allow children to practice already known knowledge as they expand and solidify their understandings, such as Liam and Amanda did with their fire truck drawings. Based on the detailed descriptions at the beginning of this chapter, I argue that artmaking allows children to rehearse and revise their understandings, represent their thinking as they add details, and engage in conversations with peers to check that their knowledge is correct. Additionally, this chapter continues to add evidence supporting the idea that when children have a vested interest and a

specific need for vocabulary terms, their learning of these terms increases more quickly than in cases when the need or interest is low.

Next, I argue that the teacher's tone of voice, or intonation, is highly important to the scaffolding of oral language and the development of conversational skills. By emphasizing sounds, elongating words, using pauses, or increasing the rate of speech, teachers can provide students with vital clues concerning which portions of an utterance are most important. Intonation can indicate understanding or breakdown of conversation, guide children toward specific terms or definitions, and provide them with information regarding what is expected in a response to the statement. Teachers' use of intonation helps children to successfully communicate in discussions.

Finally, I argue that teachers' use of questioning is highly important and should be used sparingly. When teachers are thoughtful about the kinds of questions they ask, and when during a conversation they pose questions, children's participation in conversation can increase. Asking questions that prompt children to reconsider an idea or suggest a new direction for conversation removes the temptation of an IRE pattern of questioning, allowing children to take control of the direction of the discussion. This requires that teachers are highly engaged with their students, understanding their interests, their capabilities, and their willingness to grapple with difficult, but interesting content matter. It requires teachers to carefully plan learning activities and to anticipate the questions and curiosities of their students. Julie uses questioning in a way that allows her students to control discussions whenever possible, respects their interests and views them as capable of having meaningful input in the topics of discussion and the opportunities they explore as a group.

CHAPTER 6: ANIMALS AND INSECTS IN CHILDREN'S ARTMAKING

"The eggs have turtles in them. Baby ones. And then they break open and turtles come out." Julie's preschoolers are fascinated with animals. Their observations about the creatures they encounter on their nature walks and elsewhere are astute, their questions meaningful and thoughtful. This chapter will examine three conversations children engaged in when creating artwork depicting animals and their characteristics, as well as their habitats. I will examine the children's sophisticated language use and how it influences the sophistication of ideas. Following that, I will discuss Julie's planning and instructional moves before and during the artmaking experiences, and conclude by examining connections to children's prior learning experiences, particularly as connected to their nature studies.

Overview of the Lessons

This chapter features three conversations which took place in Julie's classroom while children were discussing recent learning about animals. All three conversations took place in late summer and early fall just as the seasons were changing and the animals were beginning to be more active. In *Turtle Eggs*, Henry and Alice discuss her painting of turtle eggs which she had first sketched in her nature journal. Their conversation leads them to the question of whether or not turtles were alive during the time of dinosaurs. As such, it provides evidence to show how children's artmaking creates space for deep, sophisticated conversations in which they are able to strengthen and refine their understanding of academic content.

In the second conversation, *Bird Nests*, Louise, Eli, Amanda, Shemar and Daniel use modeling clay to create scenes of a forest. Their artmaking morphs into an instance of symbolic play in which Shemar and Louise make believe they are bird parents caring for their young. Much as The Firemen's Visit in Chapter 5 encouraged storytelling and dramatic play through the

medium of drawing and painting, Bird Nests shows yet another instance of children's creative language use. Additionally, I will show how Julie's careful and precise language during her interactions with students led to Shemar and Louise's dramatic play episode.

Finally, Charlotte, Liam and Shemar discuss what they have previously learned about butterfly camouflage and resisting predators in *Butterfly Wings*. Their use of sophisticated vocabulary during this episode is perhaps greater than in any other conversation examined in this project, as they easily adopt terms from a prior reading experience to describe and solidify their understanding of the concept of animal camouflage.

To examine each of these conversations, I employ a narrative description of each dialogue, highlighting the children's talk moves and artmaking decisions. Along with this, I also examine Julie's lesson plans, when available, and highlight connections between these conversations and other learning activities children have engaged with in the past which could have an influence on their current understandings and ideas.

Learning with Art: Narrative Descriptions of Children's Talk Interactions

Artmaking is considered one of The Hundred Languages of Childhood (Biermeier, 2015), and the children featured in the following conversations use their art to express their thoughts, feelings, and understandings about the environment in which they live. Julie and her co-teachers aspire to respect the rights of children to express their learning in whatever ways make sense to them. Consequently, the artwork children create is never product oriented, rather, the process of creating and learning is celebrated. In the conversations below, children's artwork is a means to greater understanding and playfulness as they learn and grow. What follows is a narrative description of each of the three conversations introduced above, then an analysis of the sophisticated language use that emerges from each interaction.

Narrative Description of Turtle Eggs. It's a rainy day, midweek, when Alice and Henry take their places at painting easels side by side. The art area is near the windows and Alice pauses in her painting to watch the rain splattering against the window, branches on the tree beyond the glass blowing in the wind. "What are you painting, Alice?" Julie asked (Table 6.1, Line 1), drawing her attention back to her dripping brush. Alice's eyes return to her painting, a blob of green alongside a splotch of blue. "I'm making a picture of the turtle egg I saw," Alice replies (Table 6.1, Line 2). Her response draws the attention of her painting partner, Henry, who has his own large sheet of paper attached to an easel next to hers. Describing the eggs for Henry, Alice requests white paint, only to discover that the class has used the supply and is waiting for a new shipment of artmaking materials. Her suggestion that Julie go now and purchase more falls short, prompting suggestions from the teacher for ways that Alice could show the turtle eggs without white paint. Using another color is quickly dismissed and Julie suggests an outline next. "Generally when I want to draw something that's white I'll just draw the outline of it because the paper's white. Could that work for you? Until I can replace our white paint?" (Table 6.1, Line 13). This suggestion appears to be accepted.

As the children continue to paint, their attention occasionally drawn by the rain just outside the window, Julie asks Alice what else she recalls about the turtle eggs. "They were beside each other. In the grass," she reports (Table 6.1, Line 16). Since Henry hadn't seen the turtle eggs Alice had discovered, he asks her for details, namely how many she found. It is then that Alice realizes she can't recall and asks Julie for her nature journal. "Oh, did you draw the turtle eggs in your nature journal? That might help you remember how many eggs there were," Julie praised (Table 6.1, Lines 22 and 24). Her nature journal reveals that there were four eggs, which Alice then represents on her painting with black paint outlines. As Alice paints the turtle

eggs, Henry's painting evolves as well. The image on his paper represents himself and his siblings playing outdoors. When asked, he explained to Julie that they were playing with their dog; interestingly, the element he pointed to as representing the dog was painted green.

"Miss Julie, turtle mommies lay eggs," Henry offered as the painting activity went on (Table 6.1, Line 27). After sharing a few other facts that he knows about turtles, Henry then recalls a fact shared by another teacher, one he is not certain is entirely accurate. "Miss Alexandra said that turtles…are as old as dinosaurs! But I don't think so," (Table 6.1, Lines 39 and 41). Henry's reasoning is that the dinosaurs all died "a long time ago" and that if the turtle they saw on the playground had lived at the time of dinosaurs, it would have already died as well. This reasoning seemed to play well with Alice, who suggested that Miss Alexandra "probably meant they are as old as alligators" (Table 6.1, Line 48) because there are still alligators today.

Table 6.1: Turtle Eggs

Line #	Speaker	Utterance
1	Julie	What are you painting, Alice?
2	Alice	Um, I'm making a picture of the turtle egg I saw.
3	Henry	You saw a turtle egg?
4	Alice	By the pond.
5	Henry	I didn't see turtle eggs.
6	Alice	They were white.
7	Henry	White eggs?
8	Alice	Yeah. Miss Julie, I need white paint.
9	Julie	Um. I'm sorry, I think we're all out of white paint. I'll order us some more.
10	Alice	Right now?
11	Julie	Well, probably after school. Is there another color you could use?
12	Alice	No. The turtle eggs were white.
13	Julie	I see. Generally, when I want to draw something that's white, I'll just draw the outline of it because the paper's white. Could that work for you? Until I can replace our white paint?
14	Alice	Um. Probably.

Table 6.1, (cont'd)

15	Julie	What do you remember about the turtle eggs that you saw?
16	Alice	They were beside each other. In the grass.
17	Henry	How many?
18	Alice	What?
19	Henry	How many?
20	Julie	I think Henry wants to know how many turtle eggs you saw.
21	Alice	Oh, I saw…I can't remember. Miss Julie, I need my nature journal.
22	Julie	Oh, did you draw the turtle eggs in your nature journal?
23	Alice	Yes.
24	Julie	Great. So that might help you remember how many eggs there were.
25	Alice	I made four in my nature journal. So I think I saw four.
26	Julie	It looks like four.
27	Henry	Miss Julie, turtle mommies lay eggs.
28	Julie	They lay eggs?
29	Henry	Yep.
30	Julie	That's neat. Where did you learn that?
31	Henry	I'm just smart.
32	Julie	You are very smart. What else do you know about turtle eggs?
33	Henry	They have turtles in them. Baby ones. And then they break open and turtles come out.
34	Alice	And they live in the pond and they eat flies.
35	Henry	And they swim.
36	Julie	Turtles swim?
37	Henry	In the pond. And you know what? You know what Miss Alexandra said?
38	Julie	What did Miss Alexandra say?
39	Henry	Miss Alexandra said that turtles, turtles, turtles are as old as dinosaurs!
40	Julie	Really?
41	Henry	She said that! But I don't think so.
42	Julie	You think Miss Alexandra is wrong?
43	Henry	Because otherwise, if turtles were as old as dinosaurs, then they would all be dead. I think they live now. Not with the dinosaurs.
44	Julie	The turtles would be dead?
45	Alice	Yeah, because dinosaurs all died a long time ago.
46	Henry	And so if the turtles were as old as them they couldn't live that long. I don't think so.
47	Julie	Hm. We'll have to ask Miss Alexandra what she meant by that.

Table 6.1, (cont'd)

48	Alice	Probably she meant they are as old as alligators.
49	Julie	Alligators?
50	Alice	Because there are still alligators. But not dinosaurs.
51	Julie	That could be. We'll ask her when we see her.

Figure 6.1: Alice's Turtle Eggs

Figure 6.2: Henry's Painting

Narrative Description of Bird Nests. Midmorning, just after snack time, Julie invited children to make choices about where they would work for the remainder of the morning. A group of children made a beeline for the blocks. Others went in pairs and trios to the light table or the dress up area. Louise, Eli and Amanda were drawn to the art table, racing each other across the room for the best seats, only to be sent back to practice "indoor speeds." By the time they returned, those "best seats" were occupied by Daniel and Shemar. Artmaking was slightly different on this occasion than it had been the past several days, as Julie had elected to offer modeling clay along with other materials. For several minutes, little conversation takes place between the children and Julie is quiet as well, allowing them to explore how modeling clay feels, how it moves, what can be done with it.

Finally, Louise makes a request. "Miss Julie, I need orange," she said in Table 6.2, Line 1. Unfortunately for Louise, the orange modeling clay is all being used. Her choices are to wait for a friend to be finished with their portion of the orange clay or to ask someone to share with her. Before she can make a decision, Eli passes her his orange clay. "I'm done with this part of orange," Eli explains, garnering a quiet "thank you," from Louise (Table 6. 2, Lines 3-4). It is this interaction regarding the distribution of materials that draws the attention of the children gathered at the table to the projects that others around them have begun. It is this that leads them to discussion of academic content.

"Do you make a bird?" Amanda asked Eli, pointing to the figure on the table in front of him. He looked down at it and nodded. "Yep. It…flies to Mexico when it gets cold," he explained (Table 6.2, Lines 5-6). This appears to surprise Louise who had been absent due to illness the previous day, the fact of which Julie reminds the children in Line 8. "Do you want to tell her some of the things we learned about birds yesterday?" Julie coaxed the children (Table

6.2, Line 8). Concern for their friend's welfare dominates the conversation for several turns, causing Julie to smile, presumably at their compassion. When their concerns seem appeased, Julie redirects their conversation. "Did you want to tell her about birds?" she repeats in Line 11, prompting the children to take turns sharing bird facts with Louise. "They fly to Mexico when it gets cold" (Table 6.2, Line 14). "They build nests to lay their babies in" (Table 6.2, Line 15). Shemar contests this claim however, clarifying, "Not all birds build nests. Some of them find old nests," (Table 6.2, Line 18).

Thinking about birds that build nests prompts the children to think about the characteristics of birds' nests, particularly one they were able to examine up close the previous day. They make statements such as "they had hair in them" as well as "grass and sticks" (Table 6.2, Lines 23-25). Artmaking continues throughout this conversation. Eli adds more birds to his nest, causing Julie to comment "You're going to have a whole flock of birds," (Table 6.2, Line 35), an observation that prompts the children to attempt to define what the term 'flock' means, making connections to families of birds. They discuss the members of a bird family (i.e. the mommy bird, the daddy bird, and the baby birds hatching from their eggs, Line 46).

Academic discussion makes way for language play as Louise and Shemar begin to use their clay figures for storytelling. In their narrative, a mommy and daddy bird discuss creating a bigger nest to house all of their hatchlings, and feeding the baby birds. Shemar requests and is granted permission to collect bird seed from a supply of food kept for feeders on the playground, returning with it to use as a prop for their storytelling. The children's conversation concludes with a discussion of how bird parents feed their young, given that they don't have "spoons or hands" (Lines 61-63).

Table 6.2: Bird Nests

Line #	Speaker	Utterance
1	Louise	Miss Julie, I need orange.
2	Julie	The orange is all being used right now. You'll have to wait for someone to be done. Or ask a friend to share.
3	Eli	I'm done with this part of orange.
4	Louise	Thank you.
5	Amanda	Do you make a bird?
6	Eli	Yep. It's a…a…it flies to Mexico when it gets cold.
7	Louise	It does?
8	Julie	Eli, Louise wasn't here yesterday. She was sick. Do you want to tell her some of the things we learned about birds yesterday?
9	Eli	You were sick? Did you get better?
10	Louise	Yeah, I hadda cold but I feel better.
11	Julie	That's so nice to check after your friend. Did you want to tell her about birds?
12	Eli	I dunno.
13	Julie	About hummingbirds? And bluebirds?
14	Eli	They fly to Mexico when it gets cold. Some of them.
15	Amanda	And they build nests to lay their babies in.
16	Shemar	Not all of them.
17	Julie	Not all birds build nests? Or not all birds fly to Mexico?
18	Shemar	Not all birds build nests. Some of them find old nests.
19	Daniel	No, they build nests.
20	Shemar	Some of them find old ones. We read it yesterday.
21	Amanda	And yesterday, too, we looked at nests. Birds made them.
22	Julie	What did you notice about the nests yesterday?
23	Shemar	They had hair in, in them.
24	Amanda	And grass. And sticks from trees.
25	Shemar	Hair and grass and sticks.
26	Eli	Can I have red, Miss Julie?
27	Julie	Sure. How much red do you need?
28	Eli	I wanna make a red bird in my nest. Wait. Can I make two red birds?
29	Julie	Sure. There's probably enough here if they're small.
30	Shemar	How much birds fit in the nest?
31	Julie	That's a good question. Are you wondering how many birds will fit in Eli's nest? Or how many will fit in a real birds nest like we found outside?
32	Shemar	In Eli's bird's nest.

Table 6.2, (cont'd)

33	Julie	That's a good question. I suppose we'll have to wait for Eli to decide…Or, Eli, do you have a plan for how many birds will fit in your nest?
34	Eli	I was going to put two red birds and one orange bird.
35	Julie	Neat. You're going to have a whole flock of birds.
36	Eli	A flock?
37	Julie	A flock, a whole group of birds. Eli has a whole flock of birds and Louise has a nest full of eggs.
38	Daniel	Except I think Louise's eggs are cracked.
39	Julie	Why do you think they're cracked?
40	Daniel	Because she made a hole in that one.
41	Louise	The baby birds are coming out. They're going to break the eggs and come out.
42	Julie	How do they break the egg, Louise?
43	Shemar	They use their beak. We read it in the book.
44	Louise	Miss Julie, I need green.
45	Julie	Oh, look at this. Louise and Shemar are putting their art together and they have…what did you make?
46	Shemar	This is the forest where the birds nest is at, and that's the momma bird and the daddy bird and that's the nest where the babies are breaking out of their eggs.
47	Julie	Hatching out of their eggs?
48	Shemar	Yeah, the babies are hatching out of their eggs. And that's a snake that wants to eat the eggs, but it can't because the nest is too high up and besides, the birds are coming out of the eggs so they would peck the snake and it would fall out of the tree.
49	Julie	Oh, wow, that's quite a, quite a description. Louise, what is…
50	Louise	Those are pieces of grass that the mommy is going to use to build a bigger nest that the snake can't get into. She has too many baby birds in it and they need another room.
51	Shemar	Fly away and get more grass, honey, I'll watch the babies.
52	Louise	Ok, I know where there's good grass, I'll go get it. And sticks too, I know where there's good sticks.
53	Shemar	While you're gone, I'll watch the babies. And feed them…what are we going to feed them?
54	Louise	Um. They like bird food best. From the bird feeders by the window.
55	Shemar	Ok, I'll fly and get them some and then come right back. Miss Julie, can I have bird food?
56	Julie	Um…sure, why not? Do you know where it is?
57	Shemar	Yes, I helped Miss Natalie feed the birdfeeders.

Table 6.2 (cont'd)

58	Julie	Ok. You can have one scoop. Be very careful carrying it back, we don't want any spills.
59	Shemar	I have bird food babies! Time for dinner. Is it true the momma bird spits food in the baby's mouth?
60	Julie	I don't know if spit is the best word. But they do use their beaks.
61	Louise	Because they don't have spoons
62	Shemar	Or hands.
63	Louise	Yeah, or hands.

Figure 6.3: Shemar and Louise's Birds

Figure 6.4: Daniel's Birds

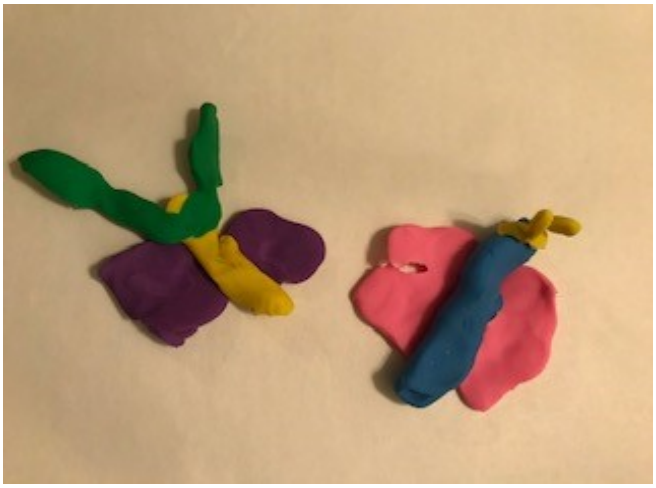


Figure 6.5: Eli's Birds

Narrative Description of Butterfly Wings. It was an 80-degree day in August and the air conditioner inside Julie's classroom was overwhelmed trying to keep twenty-two children and four adults cool. The decision to abandon the classroom was unspoken but unanimous; the adults broke off into teams, some lathering children with sunscreen, others gathering water bottles and sunglasses before we all spilled out onto the playground. There was just a hint of a breeze outside; it played with the leaves on the trees and tickled our skin. For several minutes it felt like organized chaos as the children ran every which way, back and forth across the playground, finding places to entertain themselves. Several began making food in the sand kitchen, while others began the laborious task of building roads and bridges in the loose parts area. When everyone seemed settled, Julie stepped back inside, emerging moments later with art supplies and picture books. After setting up an artmaking station, she sat back and waited for the children to notice her. Some did, casting a cursory glance over the materials on the table before returning to their play in progress. But a few approached and sat down across from her.

For a time, she looked at books with the children, examining pictures of butterflies and other insects; when they appeared to have discussed everything the books had to offer, the

children turned their attention to artmaking. “That’s neat, Liam…tell me about this,” Julie requested when Liam’s picture began to take shape. On his paper Liam had used crayons to draw a butterfly. The wings were uneven and his attempts at symmetry were largely unsuccessful, but it was clear that he’d given some thought to the importance of patterning on the butterfly’s wings. On each wing was a large round circle which Liam had colored brown. “It’s eyes to frighten the big animals away,” he explained to Julie (Table 6.3, Line 2). The picture books they’d been looking at had described ways that butterflies protected themselves from predators and Liam’s drawing reflected what he’d learned from the text.

“That wouldn’t scare me,” Shemar boasted (Table 6.3, Line 4); his own butterfly drawing was equally lopsided, the patterning unrelated to what the resource materials had taught. Still, he spent a moment or two studying the drawing his classmate was creating before turning back to his own project and scrubbing more orange crayon across the butterfly’s wing. “You’re right, something like that wouldn’t be very scary to a person,” Julie acknowledged in her next turn at talk (Table 6.3, Line 5). “But what if you were an animal that didn’t know it’s just a butterfly? It might be scary to a frog or an owl that wants to eat the butterfly.” Julie reminds the children of the lessons they learned as they read the picture book, and also of images she’d printed from the internet, referencing the resources to help the children think about how the butterflies kept themselves safe.

Liam reached for the pictures, pointing to the butterfly’s wings. “See, it has spots on it,” he said to those around him (Table 6.3, Line 7). With Julie’s prompting, the trio of children determine that the spots look just like eyes, which are used to trick predators into thinking that the butterfly is a much bigger creature, one that might have the ability to hurt the predators, and therefore frightens them away. “The big animals don’t know they’re butterflies,” Charlotte

explains. “They’re scared that they’re something that could hurt them, something that isn’t a butterfly,” (Table 6.3, Line 13). Sounds of agreement ripple through the little group and Julie uses their interest to further explain the concept of camouflage to the children. “So, when an owl comes along and sees that, what do you think it will do? What will he think when he comes along and sees this?” she asks the children. Their responses are concise, and build upon one another. “It will see the eyes and get scared,” (Table 6.3, Line 17). “He will think it’s a very big creature,” (table 6.3, Line 18). “Butterflies try to hide…because they look like trees or grass” (Table 6.3, Line 22). The students’ responses next lead them to think about people’s relationship with butterflies, and the fact that most humans enjoy seeing them. They describe butterflies as “pretty” and “beautiful” and state that they “love the flowers” (Table 6.3, Lines 28-32).

As their conversation winds down, Julie decides that she will hang the internet pictures of butterflies nearby so that the children can use them for inspiration as they complete their artmaking, working on their butterfly images. For several minutes the children are quiet as they finish up their drawings. One by one, they leave their papers with Julie and scamper off to find other adventures on the playground.

Table 6.3: Butterfly Wings

Line #	Speaker	Utterance
1	Julie	Oh, that’s neat. Liam. You have…tell me about this.
2	Liam	It’s eyes to frighten the big animals away.
3	Julie	The predators, yeah.
4	Shemar	That wouldn’t scare me.
5	Julie	You’re right, something like that wouldn’t be very scary to a person. But what if you were an animal that doesn’t know it’s just a butterfly? It might be scary to a frog or an owl that wants to eat the butterfly. Remember when we talked about the predators that will eat smaller animals? We looked at…let me grab the pictures.
6	Charlotte	Wow!
7	Liam	See, it has spots on it that…

Table 6.3 (cont'd)

8	Julie	And what do they look like?
9	Shemar	Eyes.
10	Julie	They do kind of look like eyes, yes. But what are they really?
11	Shemar	They're fake eyes. To trick the predators.
12	Julie	That's right, they're not really eyes. But this might tell the predator 'don't eat me!'
13	Charlotte	The big animals don't know they're butterflies. They're scared that they're something that could hurt them, something that isn't a butterfly.
14	Julie	You're right, the other animals don't know they're butterflies, they think they're a bigger creature, because these look like eyes and remind them of different animals, don't they Charlotte.
15	Charlotte	Mm hmm.
16	Julie	So, when an owl comes along and sees that, what do you think it will do? What will he think when he comes along and sees this?
17	Liam	Um, it will see the eyes and it will get scared.
18	Julie	He will. Will he think it's a butterfly?
19	Choral	No.
20	Liam	He will think, um he will think it's a very big creature.
21	Julie	He'll think it's a very big creature and he'll think to himself, 'gosh, I better leave that guy alone, he might hurt me.'
22	Charlotte	Sometimes, Miss Julie, sometimes butterflies try to hide by, they have, they hide because you can't see them because they look like trees or grass.
23	Julie	That's right, they camouflage so that predators can't see them. That's another way they protect themselves.
24	Shemar	I like butterflies. I'm not scared of them. All people like butterflies.
25	Julie	You're right, people like butterflies, don't we.
26	Shemar	Yeah.
27	Julie	We love them. Why do we like them do you think?
28	Shemar	They're pretty.
29	Liam	They're beautiful.
30	Julie	They are beautiful and they're wonderful in our garden outside, aren't they?
31	Liam	Yep.
32	Charlotte	And they love the flowers.
33	Shemar	And the predators eat them.

Table 6.3 (cont'd)

34	Julie	And sometimes predators eat them, yes, you're right, they do. So, what here is stopping the predators from eating them? Why won't the predators eat this particular butterfly?
35	Shemar	Because it has eyes on them and they think it's actually a big, um, creature.
36	Julie	Right, so the predator will come along and think it's a big creature and not eat them. Right. So, I'm going to hang this picture here. And you can refer back to it while you're working, maybe it will give you some inspiration about what you want to do with your artwork.

Figure 6.6: Liam's Butterfly

Figure 6.7: Shemar's Butterfly

Figure 6.8: Charlotte's Butterfly

Sophisticated Conversation: Artmaking and Academic Talk

Rich and meaningful conversation takes place in settings where teachers are careful and thoughtful as they plan learning experiences for students. As shown in Chapters 4 and 5, Julie and her co-teachers are meticulous in observing their students' interests and inquiries, using their observations as they plan for new or extended learning. This chapter seeks to provide further examples of the ways in which sophisticated conversation emerges from these lessons. Sophisticated conversation emerges when children engage in topics with substance (NELP,

2009). The conversations described above show children digging deep into academic content as they draw, paint, and make clay sculptures that help them to make sense of and describe their learning. Another feature of meaningful conversation is the presence of sophisticated vocabulary, words that children would not typically encounter in everyday conversation or with which they might not be entirely familiar. These key features are present in all of the conversations detailed above.

Talking with Crayons: Sophisticated Vocabulary Emergence During Artmaking. Talk is a young child's most natural method of meaningful communication, as they have not yet learned to write or read fluently. Oral language allows children to expand their knowledge, share thoughts and ideas, and revise their understandings of material they have learned in the past (NELP, 2009). This is evident in the conversation among a small group of children as they discuss the features of bird habitats.

One of the first examples of sophisticated vocabulary to appear in the conversation is Amanda's statement that birds build nests as a place to keep their young safe. In line 15 (Table 6.2) she declares "…they [birds] build nests to lay their babies in." The term nest qualifies as sophisticated language in this instance because of its connection to the academic content the children are engaged in. It is also a word that has versatile use in that it allows the children to talk about where birds live and how they keep themselves and their young safe. For young children, finding specific terms to help them talk about academic content is vital. Without that common language, they cannot have deep, meaningful conversations that allow them to express their thoughts or refine their ideas (NELP, 2009). The sophistication of the term *nest* provides a way for the children to discuss the characteristics of the object which they had discovered. They

are then able to name items used to create the nest (i.e. grass, sticks, hair, Table 6.2, Lines 23-25).

A second example of sophisticated vocabulary in the same conversation comes from Julie's comment to Eli in Line 35. "You're going to have a whole flock of birds," she says to him in response to his comment regarding the number and color of birds he wishes to create with the modeling clay. Her statement draws a look of curiosity from Eli and he asks, "A flock?" in Line 36, making it evident he does not know this term. In an interview with Julie I asked her about this exchange.

> I wasn't really that surprised when he didn't know what flock meant. He picked it up quickly enough and I don't know if Eli or any of the other kids used the word again while we were working on that activity, but for sure I've heard them use it since then. They're really interested in birds right now, we found a dead bird out by the fence and so they're really interested in where they live and how they keep safe and what happened to the bird we found. They're constantly talking about this bird or that bird. The books are always on the floor and we've seen a lot of birds in their drawings and their play. Feathers are popular right now. Natalie made masks with a few of them, so we've seen beaks and wings. Just lots of good learning lately.

Julie's response points to other ways in which sophisticated language appears in the classroom as well. She points to the terms beaks and wings, one of which appears in the transcript in Table 6.2. In Line 43, Shemar states that baby birds use their beaks to break through their eggs when they hatch, a feature which later appears in the classroom as masks that the children wear during their dramatic play. This is important because of the way in which one sophisticated vocabulary term led to the use of others. Byrnes and Wasik (2019) point to the connection between spoken vocabulary and reading vocabulary, a reminder that without a large expressive vocabulary, children are less likely to recognize a term in print, which has potential to hinder their reading comprehension as they continue through elementary school. Practicing sophisticated vocabulary in early childhood, particularly in a conversation such as this one where

further sophisticated vocabulary is generated, helps young children both in the current conversation and later as they learn to read.

Listening comprehension typically develops before reading comprehension (NAEYC, 2009). Read alouds in early childhood classrooms can provide students with opportunities to learn new, sophisticated vocabulary terms as well. Two examples of students learning sophisticated vocabulary from a read aloud, then applying that vocabulary to their academic conversations, appears in Table 6.3 when Shemar, Charlotte, and Liam gather to look at, and draw, butterflies. The first sophisticated term to emerge in this conversation appears right away in Line 2. When describing the pattern which he used to decorate butterfly wings he'd drawn, Liam states "It's eyes to frighten the big animals away," (Table 6.3). Rather than use a basic term such as scare, Liam chooses the term frighten, which the children had heard in a prior read aloud. Shemar states a few turns later that such a thing wouldn't scare him. This lends further support to the qualification of frighten as a sophisticated vocabulary term, especially for this age group. The term holds significance for both Liam and Shemar in that they understand the terms *frighten* and *scarce* to have similar definitions and uses. They are able to use the terms interchangeably to discuss their understanding of the purpose of the "eyes" Liam drew on his butterfly wings: they are there to frighten or scare "big animals" (Table 6.3, Line 2).

A second term that the children use frequently in this conversation comes from Julie's confirmation that the eyes would frighten away bigger animals. In her response to Liam, Julie names the "bigger animals" as predators (Table 6.3, Line 3), a term which the children pick up and continue to use throughout their conversations. While "predators" does not replace all instances of "big animals" in their talk, it does occur frequently.

> Predator and creature are both words that we found in a book about butterflies. Maybe even a couple of books used the word predators. For sure we talked about both of those

> words when we came across them but the kids weren't really using them until all the sudden they're drawing butterflies and Liam is 'predator this' and 'predator that.' I don't think I really did anything to prompt him to do that, I think he just…I don't know, maybe he just liked the word. Or maybe one of the other teachers worked with them on new words. Sometimes they get new concepts almost at once and this felt like one of those times. They understood the idea of camouflaging for protection almost right away.

This was something I commented on in my field notes as well. In a research memo, I wrote "Today the students really seemed to grasp some new words. Liam and Shemar's mental understanding of how butterflies protect themselves seems to be solidifying. They talked about how butterflies keep safe, and used some big words! Creatures, predators, frightened, all top tier words for preschoolers!" These terms all fit within the definition of rich vocabulary established by NAEYC (2009) which encourages teachers to expose children to words beyond those found in everyday conversation.

Another notable comment comes not from the transcript of the learning activity, but from Julie's interview response in which she states: "I don't think I really did anything to prompt him," as she thought aloud regarding her interactions with the students. A review of the transcripts shows that Julie did in fact prompt the use of at least one sophisticated vocabulary term when she used the term "predators" (Table 6.3, Line 3) in reply to Liam's explanation that the eyes he'd drawn were intended to "frighten the big animals away." Julie's response is interesting because recent research has shown that teachers who exhibit higher quality language input do so through incidental as well as intentional instructional techniques (Phillips, Zhao, & Weekley, 2018). That is, they introduce new vocabulary terms without preplanned intent. Julie's suggestion that she didn't prompt Liam's use of the term "predators" at all, despite the transcript showing otherwise, suggests that she did not preplan this vocabulary interaction. Additionally, Dickinson and Porche (2011) suggest that incidental word learning occurs frequently during engaging and extended discourse on meaningful topics.

Artmaking as a Catalyst for Learning: Deepening Understanding of Content. Previously I have discussed the importance of allowing children to express themselves and interact with others as they engage with academic content. The children in this study often used their artmaking as a form of play in which they practiced what they had learned in other settings or explored new learning taking place in the moment. By engaging in play children can grow in several ways. First, play is enactive. That is, it allows children to have physical interactions with their surrounding environment, which indicates greater understanding of the world around them. Second, play is iconic in that it exemplifies the environment through pictures or mental representations. In terms of artmaking, iconic play signifies a physical resemblance to the meaning or concepts which children are representing. Finally, play also allows children to expand their thinking into symbolic types of play. Symbolic play is related to iconic play in that it expresses children's thinking through representation, however, unlike iconic representations that take on the physical resemblance of the items represented, symbolic play has no resemblance to the material form or the mental concept with which it associates (Gestwicki, 2007; Biazak et al., 2010). In the conversations featured above, the children engage in both iconic and symbolic play as they take part in artmaking as a form of play.

To begin, I will examine an excerpt of the conversation in Table 6.2, "Birds Nest" in which Shemar and Louise sculpt birds together. Their conversation leads them to a play episode with their sculptures in which they engage in iconic play. Proximity played a large role in the interaction between Shemar and Louise, as they were seated side by side at the artmaking station. Shemar's comment that Louise's eggs contained birds that were about to hatch appears to be the catalyst of their play. During this play episode, Shemar and Louise are practicing what they have learned about birds during the unit of study. "The babies are hatching out of their eggs," Shemar

states in Line 48. Hatching is a term that he adopts from Julie. In a previous statement Shemar indicated that the birds were “breaking out of their eggs” (Table 6.2, Line 46). Julie’s response was to repeat and rephrase Shemar’s statement by substituting the term “breaking out” with hatching (Frey & Fisher, 2010). Repeating a child’s statement allows a teacher to check for understanding, and in some cases, teachers also use repeating to allow other students to hear material or ideas more than one time (Frey & Fisher, 2010). Julie also used her turn at talk to increase the level of sophistication of the conversation by substituting Shemar’s words ”breaking out” with a more precise term,” hatching.” Hatching was also a term that had been used previously in the classroom as the children learned about birds, so by rephrasing his statement she was able to reinforce academic vocabulary that had been introduced in the classroom.

Shemar goes on to add further detail to his statement in Line 48, “And that’s a snake that wants to eat the eggs, but it can’t because the nest it too high up.” Shemar’s introduction of the snake into his model shows that he has an understanding that birds have natural predators, one of which is snakes that will eat birds’ eggs if they are able to reach them. This example of iconic play shows that Shemar is able to describe the importance of predators and how birds protect themselves and their young. His description which continues, “the birds are coming out of the eggs so they would peck the snake and it would fall out of the tree,” shows that he has some understanding of how defenseless the birds are before they have hatched. It is important to the rest of the play episode that the snake not eat the birds, however, so Shemar invents further details which allow the birds to survive: they hatch from their eggs and are able to protect themselves by pecking at the snake and causing it to fall from the tree.

Louise appears to accept the story that Shemar has created for her eggs thus far. This is evident in Line 50 when she continues the story where he left off. “Those are pieces of grass that

the mommy is going to use to build a bigger nest that the snake can't get into. She has too many baby birds in it and they need another room," Louise explains in Line 50. As the story progresses, the nest Louise has crafted out of clay gets both larger and taller in an effort to increase its size enough to accommodate the growing bird family, and also, to make it more difficult for the snake to penetrate to harm the baby birds. Together, she and Shemar continue to create a story for the bird family while practicing what they understand and have learned during the bird unit. Louise specifically states that her mommy bird is going to fetch sticks and grass to improve the nest; both are materials that the children identified as components of the birds' nests that they were able to observe in their classroom. This sort of symbolic play shows that Louise and Shemar are not only practicing academic content in terms of science concepts, but they are also using routine kinds of language that they have seen others use in the past – parents speaking to one another about the safety and security of their children – to do so (Dyson, 1993). That is, they have an understanding that people adopt certain language roles towards each other during certain experiences (Dyson, 1993). There are key words or speech patterns that they have observed adults in their families adopt with one another, and they have added them to the narration of their play.

Their symbolic play continues as Shemar and Louise divvy up tasks for the mommy bird and daddy bird to accomplish over the rest of their storytelling. Louise's mommy bird will gather the grass and sticks necessary to transform the nest into something more secure than she originally created, and Shemar's daddy bird with look after the young. "While you're gone, I'll watch the babies. And feed them," Shemar's daddy bird tells Louise's mommy bird in Line 53. They have a short exchange regarding what to feed the baby birds, settling on food from the bird feeders located outside their classroom window. Shemar secures permission from Julie to use a

small amount of the bird food kept in the kitchen for refilling the outdoor feeders, and leaves the table temporarily to collect it, returning with a small handful of birdseed, which he sprinkles into the nest and over the clay bird eggs. This action leads to a question regarding bird parent care of their young. “Is it true that the momma bird spits food in the baby’s mouth?” Shemar asked Julie in Line 59. This question from Shemar suggests that he has some information about how chicks are fed but finds the information, or at least his recollection of it, to be questionable. Julie’s response confirms his thoughts, at least partially. “I don’t know if spit is the best word. But they do use their beaks,” she replies in Line 60. Louise and Shemar consider this, attempting to make this information merge with their current schema of birds: “Because they don’t have spoons,” Louise decides. Her understanding is that since birds don’t have table utensils with which to feed their young – or even hands with which to grasp them if they did, an idea Shemar adds – they must use the only resources they have available to them to feed their young. As such, both children seem to accept the idea that bird parents feed their young using their beaks. Louise and Shemar’s artmaking play shows that when children use artmaking materials to think through or practice academic content, they can improve and enhance their understandings. It also allows them to expand the kinds of language interactions they engage in, by taking on other roles within the conversation.

Artmaking does not always morph into play episodes, however. In the case of Henry and Alice’s conversation, “Turtle Eggs” in Table 6.1 above, there is little in the way of play. However, their interactions lead them to deeply question what they know as they attempt to incorporate new learning into their current schemas regarding turtles. As their conversation begins, Henry and Alice share a common understanding of turtles. Henry asks for details about the eggs Alice saw and seems satisfied with her description of them – her description matches

the schema he already has in place regarding the eggs. They also come to an easy agreement regarding the lifecycle of turtles. Henry states that mother turtles lay eggs, and then describes how turtles hatch. Alice's additions to the conversation include that turtles live in the pond and swim, and that they eat flies. Until this point, they have little to debate or discuss, as they list what they already know to be true.

The children's conversation deepens when they begin to discuss a fact about turtles that Henry introduces and claims to distrust. "Miss Alexandra said that turtles…are as old as dinosaurs!" he states in Line 39, Table 6.1. Researchers define schema as a pattern of repeatable behaviors (Athey, 2007) which provide the underpinnings of forms of thought (Nutbrown, 2011; Deguara, 2018). Deguara (2018) describes schema as something that "often features in young children's actions and drawings where they include signifiers of actions, which they gradually co-ordinate into more complex schematic relationships, often representing more complex thinking," (p. 5). In the case of Henry's distrust of the idea that turtles were as old as dinosaurs, he cannot conform the idea that turtles lived (the signifier of action) at the same time as dinosaurs because "dinosaurs are dead" (Table 6.1, Line 45). Henry has, of course, misunderstood the statement of his teacher. While his teacher intended to convey the idea that turtles as a species lived during the era of dinosaurs, Henry understood her to mean that the turtles they observed everyday near the pond were alive at that time. His schema of turtles rightly does not allow for the idea that an animal could have lived that long, hence his distrust of the information he learned during the prior conversation. Henry's complexity of thinking leads him to believe that his teacher must have been mistaken, as living creatures are not capable of surviving for tens of millions of years.

Henry uses a logical approach to address what to him is a complicated problem. It is unlikely that he has been taught to question information or facts supplied by his teachers, yet his understanding of how living things survive is at odds with what he took away from the previous learning experience. Henry's ability to apply logic to the problem shows that he has a complex understanding of the content under consideration. Though he describes his artwork for Julie in a conversation outside of the "Turtle Eggs" interaction transcribed above as an image of himself and his siblings playing outside with their dog, the dog takes on dinosaur-like features as he continues to paint. What is interesting about the dog, aside from its coloring and shape, is that it is set apart from the other images of living creatures in the painting. Whether Henry intended to suggest dinosaur-like qualities to the dog image or not, there are clear indications in his artwork that he is working through the idea that dinosaurs are removed from current living creatures.

In this section I have provided examples of the ways in which children's artmaking experiences open up space for them to learn and engage with sophisticated vocabulary and complex conversational interactions. Eli's interactions with Julie as he learned the term "flock" when referring to birds highlights the importance of allowing children to hear language, particularly new terms, multiple times and encouraging them to use those terms in their conversation. This was evident again in Shemar's quick adoption of the term "hatching" which Julie provided in her restatement of his utterance. In all of the cases examined in this section, the children's artmaking experiences opened a space where they could hear language being used in meaningful contexts, and when it felt appropriate or necessary to the children, they were able to emulate that language, incorporating new terms or ideas into their own vocabularies. In the next section, I will examine the planning which Julie and her co-teachers engaged in that led to the artmaking opportunities discussed in this chapter.

The Teacher's Task: Planning and Preparing for Artmaking Experiences

In previous chapters, I have explored artmaking experiences that differed in several ways. Some took place outdoors, others looked at children's conversations that served as prompts for narrative storytelling experiences. The conversations featured in this chapter take place in a mix of locations and serve a variety of purposes. Some, such as the birds nest and turtle egg conversations are again decontextualized conversations, taking place outside of the immediate "here and now." Others, such as the butterfly wings conversation, allow children to examine what they have learned and to share their knowledge with others. The purposes of these conversations vary widely, but the planning for each learning experience was carefully crafted to provide the children with the greatest amount of autonomy while keeping academic content at the forefront.

Any time I asked Julie about her planning process the conversation always found its way back to the Reggio Emilia philosophy of teaching. Kensington Pines Early Learning Center infuses this philosophy throughout their program and Julie has infused elements of it into all aspects of her classroom and her teaching. One thing that she seems very keen to highlight is the importance of giving children time to deeply engage with content.

The Importance of Time. "We decided that we were going to add butterflies back into our curriculum because the kids let us know they weren't done with that yet. We tried to put it away because it seemed like they were done with it, we thought they had moved on. And I think for a few days they did. But then someone found a caterpillar outside and the next thing we knew it was 'oh, remember when we saw the cocoon? Remember when we read about their wings?' And Alexandra and I made the decision to reintroduce butterfly options into their centers and the read alouds, and they're just as deeply invested as they were before." Julie's comments rang true, as

my field notes reflected similar thoughts while I observed the children in dramatic play, looked through their art, noted the books they were interested in, and watched them creating structures in the loose parts area. This was true not just of the focal children who are represented throughout this project in the transcripts, but of all of the students who spent time in Julie's classroom.

Acknowledging Social Relationships. Another of the Reggio tenets that came up frequently when Julie and I discussed her planning process was the value of relationship building, allowing students to work together in pairs and small groups. While there are whole-group lessons and interactions every day as part of Julie's schedule, she and her co-teachers make a point of allowing the children to work in small groups. Reggio Emilia's philosophy holds that children learn a great deal from one another and from teaching others what they know (Biermeier, 2015). I asked her specifically at the conclusion of the Butterfly Wings (Table 6.3) conversation whether she had assigned that group of children to the activity. Her response was telling.

> I did not. I highly encouraged Shemar to come draw with me. And I may have recruited one or two others as well. But I didn't tell any of them 'you have to do this.' Because truthfully, they don't have to do anything. They could choose to spend all of their time in free play. But with that activity in particular, one of the children in the group is pretty talkative and has a big personality. And I wanted Shemar to spend some time with that student, I think it would be good for the two of them to have to work together. They both have a lot of big ideas and I thought if they could talk their ideas through together, they might learn from each other. And in the end, Charlotte and Shemar started to play make-believe together with their butterflies, which was something I honestly wasn't expecting. So it was good, I was very pleased.

Not only does Julie carefully consider the interests and needs of the students, she also keeps a close watch on the friendships that bloom in her classroom. She gives careful consideration to how the students learn best and which might benefit from interaction with specific peers. In Shemar's case, Julie expressed a belief that he would benefit from engaging

with Charlotte and therefore, in her own words, "recruited" Charlotte to join the artmaking activity after Shemar had already begun his project. While there was no guarantee that the two would engage with one another, putting them together in the same space with a similar goal encouraged them to work together and share their thoughts, an experience that morphed into a dramatic play episode as well.

Art Experiences. Reggio Emilia's "The Hundred Languages of Children" is the idea that children express themselves in dozens of different ways. Since art is one of the most commonly seen methods of expression in preschool classrooms, Julie spends significant time planning those experiences for her students. Of particular interest now is the artmaking students engaged in while they discussed bird nests. Frequently when ECE teachers think about artmaking, they envision students drawing, coloring, and painting (Edwards, Gandini, & Forman, 2012). These are common activities in Julie's classroom as well, as evidenced by the artwork that accompanies the conversations presented in this project. However, those are not the only methods of artmaking that children engage in, and for their bird nest conversations, the children used modeling clay as their main source of artmaking material.

The decision to introduce modeling clay into the artmaking activities came about during a co-planning session in which Julie and some of her co-teachers were mapping out the upcoming days. I was invited to participate in this co-planning because of my interest in the artmaking experiences children are exposed to, and also because I had just completed an observation session when they met to begin their planning. I did not record this planning session due to technological malfunctions, however, in my field notes I observed that the teachers seemed to be in agreement that the artmaking materials were sparse, with one teacher commenting that the art area "looks a bit rough." They began by making a "wish list" of artmaking supplies, naming

items such as paints and glue sticks, multicultural crayon sets, and yarns and ribbons in fall colors. The conversation turned to other kinds of materials that could be put to use for artmaking, such as sticks and leaves, silk flower petals, and modeling clay.

Julie planned the bird nest artmaking experience specifically with the modeling clay in mind. “They’d been looking at the bird’s nest for a while and noticing its features. I wanted to give them a way to incorporate some of those features into their own designs if they chose to,” she explained to me as we cleaned up the art center together after that lesson. “I had the modeling clay and the design tools because I thought maybe they would use them to recreate the texture of the bird’s nest. And instead they used them to create texture on the birds themselves, which was interesting to me. Louise spent an hour making feathers on her birds.” Though her words were hyperbole, Julie’s point about the care that Louise put into creating her birds rang true. Upon completing their models, the children were given plastic baggies to keep their work safe and were permitted to take the sculptures home.

A few days later, Julie drew my attention to the children’s completed projects. Louise had elected not to take her birds home, instead leaving them on her shelf in the classroom. Over several days, she painted a background of trees, glued leaves and sticks to the image, and then added her birds to the image as well. Recent research has shown that when students are provided with a rich learning environment containing multiple learning resources, such as what Julie and her co-teachers created by replenishing the artmaking materials with new and innovative supplies for the children to use, students understandings were greater (Te Winkel et al., 2006; Wijnia et al., 2015). Wijnia et al. (2015) suggest that this is because children spend more time with a concept, allowing their thinking to develop and expand, creating a more complete and richer mental model of the concept they engaged with. Therefore, the selection of artmaking materials

becomes highly important, as materials that hold children's focus and attention for extended amounts of time captivate their thinking and lead to deeper learning than could take place without meaningful classroom materials.

The Image of the Child as the Focus of Planning. When the students in Julie's classroom returned to the idea of butterflies on their own, Julie's plans for their continued learning appeared to increase in complexity. Table 6.4 shows her lesson plan for the Butterfly Wings conversation.

Table 6.4: Sample Lesson Plan for Butterfly Wings

<table>
<tr><td colspan="3">1. I can describe how butterflies stay safe.
1.1 I can create and describe camouflage patterns.
1.2 I can name animals/insects associated with butterflies and describe their relationships (helpers, predators).
1.3 I can describe colors, shapes.
2. I can follow directions and pick vegetables from the garden.
3. I can take pictures that show what I have learned.</td></tr>
<tr><td>1. Butterfly Artmaking (Julie)</td><td>2. Garden Scavenger Hunt (Chelsea)</td><td>3. Documenting Learning (Alexandra)</td></tr>
<tr><td>Materials:
Butterfly pictures
Paint, crayons, markers, etc.
Paper</td><td>Materials:
Pails
Vegetables ready for harvest</td><td>Materials:
Digital cameras
Completed student projects (i.e. sand kitchen feasts, loose parts designs)</td></tr>
</table>

This sample lesson plan shows the activities that took place after Julie and her co-teachers chose to move their lessons outdoors to accommodate the unseasonably warm weather that day. The lesson plans stayed largely the same as they would have if the class had continued inside in their classroom, with the exception of the children now having the option of harvesting vegetables in the garden. In addition to the three activities being overseen by teachers, the children also had plenty of unstructured activities they could participate in as well, including all of the typical playground activities such as climbing, swings, and slides.

These plans focus on the needs and desires of the children in that, as fully as possible, they take into consideration the children's interests and what they are currently driven to learn

(Edwards, Gindini, & Forman, 2012). Since the children had already explored butterflies and have come back to that topic on their own, bringing with them new and interesting questions that they wish to explore, Julie made the instructional decision to increase the complexity of the conversations that she and the children had as they worked on their creations. Rather than just encouraging children to include butterflies in their artwork, she wrote lesson plans designed to encourage them to think about the lifestyle of a butterfly, paying attention to what other animals lived near the butterflies and the kinds of interactions butterflies would have with those animals. Julie's lesson plan still reflects the wide flexibility that characterizes her planning process; allowing children to have input into their learning and allowing them to follow the questions that interest them is one of the main tenants of the Reggio Emilia philosophy (Edwards, Gindini, & Forman, 2012).

Teacher's Roles During Learning Experiences

Above, I discussed the planning that occurred prior to learning experiences and its influence on student learning which led to the sophisticated conversations children participated in. In this part, I will examine the influence of instructional moves and teacher talk to understand how they contribute to the sophistication of conversations that emerged.

Talk Moves in Turtle Eggs. Julie's conversation with Alice and Henry focuses on the observations Alice made on a nature walk and her use of her nature journal to inform the elements of her painting. Her prompting and questioning leads the pair to a deep and thoughtful exchange in which they question the accuracy of information given to them by another adult. The exchange occurs when the children begin to outline the information they know to be true about turtles.

Table 6.5: Excerpt of Turtle Eggs with Transcription Symbols

Line #	Speaker	Utterance
39	Henry	Miss Alexandra said that turtles (2) turtles (1) turtles are as old as dinosaurs!
40	Julie	Really?
41	Henry	She said that! But I don't think so.
42	Julie	You think Miss Alexandra is wrong?
43	Henry	Because otherwise, if turtles were as old as dinosaurs, then they would all be dead. I think they live now. Not with the dinosaurs.
44	Julie	The turtles would be dead?
45	Alice	Yeah, because dinosaurs all died a long time ago.
46	Henry	>And so, if the turtles were as< o::ld as them, they couldn't live that long. I don't think so.
47	Julie	Hm. W::e'll have to ask Miss Alexandra what she meant by that.
48	Alice	Probably she meant they are as old as alligators.
49	Julie	Alligators?
50	Alice	Because there are still alligators. But not dinosaurs.

Transcription Symbols Key:		
	Underlining	Indicates emphasis
	(#)	Numbers in parentheses = pauses in seconds
	:	Elongation of a sound
	> <	Increased rate of speech
	[ ]	Overlapping speech
	?	Questioning tone
	!	Enthusiastic tone
	{ }	Nonverbal gestures

Julie's talk moves in this excerpt of the conversation are focused on the way she uses her vocal intonations to express curiosity and to probe the children's thinking. This instructional technique is useful because it allows teachers to push a student's thinking forward or to diagnose gaps in their understanding of a topic (Frey & Fisher, 2010). She uses a questioning tone as a verbal cue (Frey & Fisher, 2010) in Line 42 when she probes the children's comments, asking whether they believe that Miss Alexandra provided them with incorrect information. Though neither Alice nor

Henry explicitly confirm that they do believe their teacher to be mistaken, they go on to provide evidence to support their view. Julie also uses a questioning tone as a cue (Frey & Fisher, 2010) when she checks for understanding in Line 44. Henry's statement that if turtles were all as old as dinosaurs, they would be dead by now causes her to question whether she understood his comment. Additionally, Julie's question is designed to make sure that Henry is clear about his beliefs regarding the connections between the lifespan of turtles and dinosaurs. By using a questioning tone, Julie is able to indicate to Henry and Alice which parts of her speech they should pay most attention to as they formulate their responses and further explain their ideas, alerting them to just where the breakdown in understanding may be (Maloch, 2002; Frey & Fisher, 2010).

A second kind of verbal cue that Julie uses in this conversation, though only briefly, is the elongation of sounds. In her response in Line 47, Julie elongates the vowel sound in the word "we'll" when she states "Hm. We'll have to ask Miss Alexandra what she meant by that." By elongating the vowel sound, Julie draws attention to that word, indicating to the children that there is importance in its choice. She is suggesting that their confusion is shared by her as well because she does not have a clear understanding of what her co-teacher meant, at least not in the way the information was reported to her by the children. Though Julie likely realizes that the children have misunderstood their teacher's intent, she wants them to realize that, together, they can further question Miss Alexandra to discover just what it was she was trying to teach them. This elongated word indicates to the children that their questioning is appropriate and that Julie herself is now invested in finding an answer to it as well.

Talk Moves in Bird Nests. In the previous conversation, Julie relied heavily on a questioning tone of voice to help her guide the students in their understanding of the lifespan of

turtles and dinosaurs. When she guides the children's conversations regarding birds, Julie tends to use different cueing systems. She prompts children to expand their thoughts and to share information using emphasis and speed, rather than questioning. Her prompting leads the children to explain their ideas and provide further details for one another as they talk. The exchange under consideration occurs when Eli is questioned about the number of birds he intends to create for his sculpture.

Table 6.6: Excerpt of Bird Nests with Transcription Symbols

Line #	Speaker	Utterance
34	Eli	I was going to put two red birds and one orange bird.
35	Julie	Neat.(3) You're going to have a whole flock of birds.
36	Eli	A flock?
37	Julie	A flock, a whole group of birds. Eli has a whole flock of birds a:::nd Louise has a nest full of eggs.
38	Daniel	Except I think (2) Louise's eggs are cracked.
39	Julie	Why do you think they're cracked?
40	Daniel	Because (2) she made a hole in (1) that one.
41	Louise	The baby birds are coming out. >They're going to break the egg and come out.<
42	Julie	How::: >do they break the egg<, Louise?
43	Shemar	They use their beak. We read it in the book.

In this exchange, like many others, Julie uses both her voice and physical gestures to guide the children's conversation. When Eli explains that he is planning to create multiple birds, Julie's response includes a specific term, the word flock, which is a term most of the children are unfamiliar with. To place emphasis on that term, she slows down her speech, and enunciates each sound in the word. This cues the children that it is a new word which they should pay attention to, encouraging them to listen carefully to the sounds within the word (Frey & Fisher, 2010).

Julie also uses a method of prompting in this conversation. Several kinds of prompting have been identified by researchers (see Frey & Fisher, 2010; Paris, Cross, & Lipson, 1984; Cordon, 2007). In Line 42 she asks for specific information regarding how the baby birds hatch from their eggs, information that falls into Frey and Fisher's (2010) definition of prompting for procedural knowledge. Prompting for procedural knowledge allows teachers to help students more completely understand a process or a topic by outlining the steps of a process or key information regarding a topic (Frey & Fisher, 2010). In this instance, Julie uses prompting as a way to better evaluate what Louise understands about the process of hatching.

In addition to her question and her verbal cues, Julie also uses nonverbal cues in her exchange with Louise. To draw attention to the specific part of Louise's sculpture that she is interested in, Julie reaches out and taps the table beside the clay eggs to draw Louise's eyes, and the eyes of all the children who are paying attention to the exchange, to the part of the sculpture that is under consideration. This is another method of pointing, a nonverbal method of cueing that teachers frequently use to draw student's attention to specific images as they discuss the children's artmaking. These talk moves are successful in that Julie is able to guide not just Louise's thinking, but Shemar's as well, without taking over the conversation or requiring that their talk be mediated through her. Julie's verbal interactions are just frequent enough to scaffold the children's conversations in ways that allow them to follow their own interests and practice the academic content that they had previously learned, without Julie holding any sort of formal review.

Talk Moves in Butterfly Wings. Unlike other conversations that have been examined in this chapter and others, "Butterfly Wings" examines an instructional conversation in which Julie is doing more straightforward teaching, guiding the students thinking more directly. This is

because she has reintroduced butterflies after students indicated that they were still deeply invested in the topic. Consequently, she elected to provide them with more complex material than they had examined in the past. Due to this, the conversation evolves in a way that requires Julie to take many more turns at talk than in other conversations. One result of this is that there are more instances in the conversation when Julie mediates the talk, allowing more opportunities to examine her talk moves.

There are two main talk moves that Julie relies on in the excerpt transcribed in Table 6.7 below. The first, which she relies on heavily, is vocal emphasis in which she modulates her voice in ways that alert students to important words or phrases in the conversation. The second talk move Julie uses frequently in this conversation is restating and expanding in which she echoes specific words or ideas that the children offer, then adds further information to help them expand their thoughts.

Table 6.7: Excerpt of Butterfly Wings with Transcription Symbols

Line #	Speaker	Utterance
7	Liam	See, it has spots on it that…
8	Julie	And what do they loo:::k l::ike?
9	Shemar	Eyes.
10	Julie	They do kind of look like eyes, yes. But what are they r::eally?
11	Shemar	They're fake eyes. To trick the predators.
12	Julie	That's right, they're not really eyes. But this might tell the predator 'don't eat me!'
13	Charlotte	The big animals don't know they're butterflies. They're scared that they're something that could hurt them, something that isn't a butterfly.
14	Julie	You're right, >the other animals< don't know they're butterflies, they think they're a bigger creature, because these look like eyes and remind them of different animals, don't they Charlotte.
15	Charlotte	Mmhm.

Table 6.7 (cont'd)

16	Julie	So,(2) when an owl comes along and sees that, what do you think it will do::? What will he think when he comes along and sees this?
17	Liam	Um, it will see the eyes and it will get scared.
18	Julie	He w:ill. Will he think it's a butterfly?
19	Choral	No.
20	Liam	He will think, um, he will think it's a very big creature.
21	Julie	He'll think it's a very big creature and he'll think to himself, 'gosh, I better leave that guy alone, he might hurt me,'

Transcription Symbols Key:		
	Underlining	Indicates emphasis
	(#)	Numbers in parentheses = pauses in seconds
	:	Elongation of a sound
	> <	Increased rate of speech
	[ ]	Overlapping speech
	?	Questioning tone
	!	Enthusiastic tone
	{ }	Nonverbal gestures

Julie's conversational style with her students is heavily reliant on the ways in which she can modulate her voice. In this excerpt, her first turn at talk (Line 8) is in response to Liam's observation that the butterfly they are examining has spots. Julie's response is to ask a clarifying question that requires Liam to be more specific. She asks what the spots look like in an effort to get Liam to explain in more detail that the butterfly looks as if it has eyes on its wings. To accomplish this, she slowed down the rate of her speech when she spoke the words "look like" (Table 6.7 Line 8) and elongated the vowel sounds as a way to emphasize the idea that the spots were more than just decorative patterns on the butterfly's wings.

Later, she uses the same technique of elongating sounds within words to further prompt student's thinking when she asks them to restate their ideas of what the spots represent to predators. In Line 10 Julie asks the students to elaborate when they say that the spots look like eyes, by prompting them to verbalize what the spots actually are: a type of protective camouflage

designed to confuse and dissuade predators from attempting to harm the butterfly. By slowing down her pronunciation of the word "really" and placing emphasis by drawing out the beginning sound, Julie indicates to the children that the spots are not what they seem. She allows many opportunities for them to practice this fact by asking the question in several different ways, placing emphasis on the most important words in her questions as a way to guide students' thinking and responses.

In addition to using vocal cues to help students pay attention to the important features of the conversation, Julie also heavily relied on restating and expanding students' utterances to guide their thinking. She frequently restates specific words that the students used, as she did in Lines 10 and 12, where she repeats and places emphasis on Shemar's use of the word 'eyes'. In Line 9, Shemar answers the question of what the spots could represent by stating simply "eyes," (Table 6.7, Line 9). Since it is important for the students to understand that predators would see the spots as eyes and associate larger eyes with larger creatures, thus providing protection for the butterflies, Julie's frequent restating of the term 'eyes' provides the students with multiple opportunities to hear the term.

Children learn vocabulary best from language interactions with adults when they are invited to participate in conversations and receive meaningful feedback on their remarks (Wasik & Jacobi-Vessels, 2017). Research has shown that when children learn vocabulary in meaningful conversations, such as the "Butterfly Wings" exchange, students develop a clearer understanding of content knowledge than they would if vocabulary was merely taught as an isolated skill (Wasik & Jacobi-Vessels, 2017; Hirsh-Pasek et al., 2009; Dickinson & Porche, 2011). Since meaningful conversation tends to be a more effective method for teaching vocabulary terms, Julie's reliance on repeated use of vocabulary terms, in addition to asking students to talk about

the term in multiple ways, suggests that she understands the benefits of focusing the student's conversation on those terms.

Findings

Below I present the research findings that emerged from this chapter. As with previous chapters, these findings are divided into broader categories which examine the transcripts from the point of view of the children's conversational moves and physical actions during artmaking experiences, and the teacher's preparation, planning, and teaching moves during learning episodes.

Finding 6.1. Conversations about artmaking create opportunities for students to practice known vocabulary and for teachers to offer sophisticated vocabulary terms to enhance content understanding. In each of the conversations highlighted in this chapter children hold conversations about their artwork as they discuss their understanding of academic content. They use vocabulary terms associated with the content in ways that allow them to express their understanding and enhance how they think about their learning. In the instructional episode titled "Bird Nests" Amanda used the opportunity to share what she knows about birds with her classmates, practicing specific, sophisticated terms such as nest, to describe how and where birds live. She used her sculpture as a way to show her understanding of what a nest looks like and where it might be found. Learning took place as she and her classmates described the different materials that birds use to build nests, practicing their observational skills and finding specific words to describe what they see.

Further, Julie used the children's conversation about the elements of their artwork to introduce new terms designed to enhance their understanding of how birds live. Eli's declaration that he is going to craft several birds from clay prompts Julie to introduce the term flock, about

which the children did not seem to have a great deal of understanding. Her decision to introduce a new related term allowed Julie to provide students with a clearer and deeper understanding of the ways in which birds form families and organize themselves. Julie's statement during an interview that the students quickly assimilated the term into their knowledge of birds and her observation that they used the new term frequently in subsequent experiences, shows that their understanding of academic content grew and expanded due in part to the conversation they engaged in during the artmaking experience.

Similar learning also occurred in the instructional episode titled "Butterfly wings" as students discussed how butterflies can use camouflage to protect themselves from predators. In this conversation, the students practiced using highly sophisticated terms such as creature or predators, both of which were terms they'd heard and discussed in an interactive read aloud in prior lessons. By drawing butterflies and designing their own camouflage patterns, the children were able to discuss how features such as large spots on butterfly's wings serve as methods of protection. Julie's introduction of highly sophisticated terms such as the word predator, provided the children with common vocabulary which could be used to discuss various animals that present dangers to the butterflies. Shemar in particular was quick to pick up and use the term. Additionally, the first reminder of sophisticated vocabulary prompted students to use other terms that had been previously taught, allowing them to discuss butterflies and their camouflage patterns in more specific and concrete terms.

Finding 6.2. Children's artwork can evolve into symbolic play as they engage with academic content, allowing for deeper understanding of lessons previously taught. Play is one of the greatest tools young children have for learning. Play allows them to engage with academic content in ways that permit them to try out new ideas, manipulate material to deepen their

understanding of knowledge, and allow them to practice describing and explaining what they know. Shemar and Louise's artmaking in the instructional episode "Bird Nests" evolves into symbolic play as elements of their sculpture develop into symbols for play, which they can then manipulate and maneuver as they tell stories with their props. As their play develops, so does the intensity of the story they are co-constructing. They add details and respond to the comments and ideas they each share as the play continues.

As the story evolves, further artmaking materials are requested and included in the play. For example, Shemar's request to add bird seed to the artmaking materials available shows that he has an understanding of one way that wild birds find sustenance. Since the students have a birdfeeder outside their classroom window where they are able to observe birds gathering food, he shows through his addition of birdseed to the play that he has a solid understanding of one way birds gather food. Similarly, Louise uses the play episode to craft new elements such as grass and sticks as materials for her "mommy bird" to expand the nest in order to fit all of the babies she and Shemar have crafted during their play. In this way, both children are able to practice and demonstrate, through symbolic play, their understanding of how bird parents care for their young.

Finding 6.3. Successful teaching requires attention to children's interests and provision of adequate time for students to fully satisfy their curiosity. Careful and thoughtful planning for instruction continues to emerge as an important feature in successful teaching. Julie's attention to her students' interests and questions is evident in all of her planning, but comes to the forefront in the learning episode titled "Butterfly Wings." As mentioned above, the class had previously studied butterflies and it was thought that their study was complete. However, by observing her students and paying attention to the questions they were asking during their play, artmaking,

small group discussions, and nature walks, Julie and her co-teachers realized that the students still had valid and burning questions about butterflies. They decided, therefore, that it was imperative that they bring back the butterfly study. Doing so proved to be a very valuable use of the students' time, as they made great advances in their understanding of the ways in which butterflies live, particularly in how they protect themselves from predators.

Not only did students learn more about butterflies, they also greatly improved their vocabulary. By introducing sophisticated terms such as predator and creature, students became more accurate in their verbal exchanges as they engaged in discussion about their observations of butterflies and the ways in which the physical characteristics of butterflies work to confuse and frighten larger predators. Following students' interests and providing adequate time for them to fully satisfy their curiosities allowed students to make greater academic gains than they had achieved in their initial study of butterflies. This shows students that their thoughts, ideas, and interests are valid and valuable in the classroom, and that they are capable of guiding and directing their own learning. It also shows students that they are capable of asking meaningful and thoughtful questions which will help them to grow as scholars.

Finding 6.4. Guiding conversation through talk moves such as restating and expanding students' ideas encourages meaningful student understanding of academic content. Julie uses conversational cues in her interactions with students to alert them to the most important elements of their exchanges. Of the many possible conversational cues she could employ, Julie relied heavily on the actions of restating children's words and expanding on their ideas, as she guided their conversations represented in this chapter. As she guided the conversation titled "Butterfly Wings" Julie began by restating Shemar's statement that the spots on the butterfly looked like eyes. By emphasizing and repeating this term, she ensured that all of the children had multiple

opportunities to hear the idea and indicated to them that there was something important about the fact that the spots resembled eyes. This allowed students to think deeply and to take the opportunity to explain their thinking to classmates, thus practicing and revising, or improving, their understanding of the importance of camouflage patterns in protecting the butterflies. Julie used the strategy of restating again later in the same conversation when she restated Liam's idea that a predator might see the spots and think that the butterfly is a much larger creature. Julie's restatement that a predator might assume the spots to belong to something much larger than a butterfly not only solidifies students understanding of why camouflage is important, but provides the opportunity for other students to express their own ideas of how camouflage is important.

Additionally, Julie's strategy of expanding on children's ideas provides them with further information or more nuanced ways to think about the content than they currently had. In response to Charlotte's statement that other animals will see the spots and won't know that it's a butterfly, Julie expanded by describing how those other creatures will think that the butterflies are much larger animals because they will have seen more dangerous animals with similar looking eyes. She expands further by giving an example of a butterfly predator, stating that if an owl were to see the spots, it would avoid attempting to eat the butterfly because it might fear for its own safety. In this way, Julie provides the students with examples that enhance their own ideas, allowing them to develop a more complete understanding of the material under consideration.

Summary

This chapter concludes the exploration of the question *what are the characteristics of young children's conversations during art related experiences?* by providing further examples of early childhood student's artmaking conversations. It examines the ways in which discussions of

animal and insect observations create opportunities for children to learn new vocabulary terms that deepen and expand their understanding of academic content, as well as how children use their new understandings in symbolic play using their artmaking and how they develop their own questions and interests regarding lessons they have previously learned. In addition, this chapter investigated the importance of teachers' planning for learning opportunities, showing that when teachers pay close attention to children's interests and inquiries, they can develop experiences for children that will expand their learning and understanding. This includes observing and responding to children's choices during free play, and incorporating those interests into new learning objectives.

Artmaking experiences provide ample opportunities for young children to engage in conversation and practice skills that will benefit them as they make observations and participate in discussions and play episodes or storytelling opportunities. In Julie's classroom, artmaking opportunities are frequent and thoughtfully constructed to allow students to broaden their understandings of academic content and to engage with peers to try out new ideas or practice learning they have engaged with in the past. Based on the detailed descriptions at the beginning of this chapter, I argue that artmaking allows children to revisit and revise their prior learning, as well as explain and describe their understanding for teachers and peers. Additionally, this chapter continues to provide evidence supporting the idea that when children are interested and see the need or use for specific vocabulary terms, their learning and understanding of these terms is deeper and more complete than when they do not see the use or value of learning such terms.

Next, I argue that time is an important element of the learning process. When children are provided with adequate time to explore a topic of interest to them, they ask deeper and more meaningful questions, and they engage in learning activities that allow them to more fully master

the content in question. It is imperative then, that teachers carefully observe and reflect on the questions students ask and the interests they display, then use those observations to guide their planning of learning opportunities. This highlights for children that their interests and inquiries are important; it provides them with a semblance of control in the classroom and over their learning. When children are vested, their learning tends to improve; they more deeply comprehend material and are able to discuss their learning in more nuanced and subtle ways.

Finally, I argue that teachers' uses of conversational techniques influence the learning that occurs during conversational interactions. When teachers thoughtfully apply strategies such as restating students' ideas or expanding on their thoughts, they provide children with multiple opportunities to engage with content. Restating students' ideas allows other children to hear the idea again, providing them with more time to think about and internalize what they have heard. This allows children to more carefully consider their feelings regarding the information in question, and to craft a response to the utterance. By expanding on children's ideas, teachers not only validate those ideas, but also provide more detailed ways to think or talk about those ideas, deepening and expanding the conversation, often enhancing children's learning.

CHAPTER 7: DISCUSSION, IMPLICATIONS, AND CONCLUSIONS

The purpose of this descriptive study is to identify the characteristics of young children's conversations during artmaking experiences. By doing so, researchers and practitioners are provided with an example of the ways in which young children use conversation during artmaking experiences to enhance and expand their learning. In turn, this helps practitioners to think about new ways to scaffold or support children's oral language. Research questions examined the ways in which sophisticated conversation emerged during children's artmaking conversations, including studying the ways in which prior experiences and careful lesson planning contribute to the depth of children's talk. Nine focal students, ages three and four years old, along with their lead teacher, served as participants for the study. These participants were audio and video recorded during artmaking experiences. Transcripts of these conversations were analyzed to determine how sophisticated conversation emerged, and influences teacher planning and prior student learning had on the level of sophistication. Using discourse analysis as a method for understanding the conversation that emerged, the transcripts were coded for instances of sophisticated vocabulary and ideas, as well as talk moves that children and teachers made as they co-constructed knowledge.

Data was collected over a nine-month period beginning in October 2017 through June 2018 for 28 preschool students and their teachers. Of those, nine served as focal students, appearing in transcripts of the conversations which served as data for this project. Recordings were taken in a variety of participation structures over multiple portions of the school day and categorized based first on participation structure, then on school day activity. Ultimately, the artmaking conversations served as the body of data for this project. These activities, along with examination of teachers' lesson plan, and students' prior learning experiences, helped to identify

the characteristics of children's artmaking conversations, thus furthering our understanding of methods for supporting children's oral language development. The research question that guided this study was: what are the characteristics of young children's conversations during art-related experiences? Specific, related questions include:

- How does sophisticated conversation emerge during art activities?
- What planning and actions, including discourse moves, are teachers engaging in which lead to high levels of art-related conversations?
- In what ways do prior learning events inform or elevate children's learning during artmaking experiences?

Chapter Four, *Art and the Nature Walk*, presented findings through a narrative of children's artmaking conversations which took place as part of a nature walk experience. Chapter Five, *Family and Community Interactions*, presented findings of children's artmaking conversations regarding Social Studies themes such as home and family, and community helpers. The final analysis chapter, Chapter Six, *Animals and Insects in Children's Artmaking*, presented findings through a narrative of children's artmaking conversations as they discussed science concepts such as animal habitats and insect lifecycles. This chapter will provide a discussion of the findings, implications for practitioners, future research and final conclusions.

Discussion of Findings

Throughout the 2017-2018 school year I observed Julie's preschool classroom with particular interest in the artmaking experiences children were afforded. A richly descriptive narrative provided examples of the ways in which young children used conversations during artmaking experiences in order to elevate or enhance their understanding of academic content

and to build social relationships. Findings from this study loosely categorize into two broad concepts, which are discussed below.

The Uses of Artmaking and Conversation. Several findings in this study point to children's use of artmaking and the associated conversations. In Chapter 4, *Art and the Nature Walk*, students use artmaking conversations during nature walk experiences to represent their current thinking. Their artwork becomes a method for expressing how their understanding and knowledge is changed or shaped by the conversation. Supporting the theory that children's artwork can assist them in conveying thoughts or ideas, this additional mode of expression frequently helped the focal students and their peers to make connections and expand ideas in multimodal ways (Rowe, 2009; Lancaster, 2006). For example, in the transcript represented in Table 4.1, Ripples on the Pond, students' ideas of animals that might be causing the ripples make their way into the artwork not just of the student who proposes each idea, but also into the artwork of several of the children who participated in that conversation. For young children, writing is more than just letter symbols combined to make words and sentences; it is a process of communication that encompasses a variety of communicative modes (Siegal, 2006). In the case of the pond animals, the students appear to be using their artwork to test out their own hypotheses regarding the origins of the ripples. Consequently, not only do their drawings serve as an expression of their thoughts (Lancaster, 2006), the children's collective drawings assisted the group as a whole in developing theories, flawed though they were, and arriving at a conclusion that was satisfying to them all.

A similar thing happens in the conversation titled The Firemen's Visit (Chapter 5, Table 5.3). Liam's drawing of the firetruck and a home on fire represents his understanding of the abilities and responsibilities of community helpers, such as the members of the fire department.

As his story evolves, so too does his artwork. Dyson (1993) describes children's first writing attempts as "multimedia affairs, interweaving…written words, spoken ones, and pictures" (p. 4). Liam's artwork adheres to this definition closely as his drawing evolves along with the story he develops through conversation with Amanda. Liam's artwork becomes an element of a multimodal composition through which he engages elements within his drawing to help drive the narrative along. Siegel (2006) points out that today, writing is viewed as a socio-cognitive activity in which writers and readers communicate in a variety of modes; this is what Liam accomplishes with his drawings. He is able to use elements in his artwork (i.e. the ax, the Band-Aid box, etc.) in order to develop his theory about what tools firefighters require in order to work efficiently. Liam added these elements to his drawing as he developed and expanded the events of the story he told. These elements represented Liam's thinking in progress because they appeared in his drawing only as the narrative he told made them necessary.

These examples support the conclusions that art activities aid in the development of students' understanding of content knowledge and scaffold their abilities to examine or reexamine details or knowledge as they tell stories, engage in conversations, and create artwork related to their talk. Phillips et al. (2010) suggest that by involving children in activities that allow them to communicate and express themselves in representational ways, such as artmaking allows for, teachers can stimulate changes in awareness and belief, advancing children's academic growth. The artmaking experiences children engaged with in this study had the unique ability to allow students to interact with academic content in a way that puts the child and their understandings or ideas at the front of the learning activity in that what a child creates through drawings, paintings, or other artistic media represents what the child knows and understands in the moment; the artwork can act as a window into the students' learning progress as they interact

with peers and teachers, listening and contributing to conversations about the content the art represents. Such artmaking experiences allow students to grapple with new material, or to cultivate deeper, meaningful understandings of lessons previously taught.

These artmaking experiences are often guided by content needs. However, examples from this study also show that when children approach artmaking experiences without specific academic content in mind, they still engage in deep, meaningful talk. Leinhardt and Knutson (2004) indicated that involving students in conversations about art, either that they have created themselves, or the work of others, promotes high-level skills tied to greater literacy development. They suggest that encouraging children to discuss their art allows for practice with analyzing, describing, interpreting, and synthesizing ideas. One example of this appears in Table 4.2, "Mist or Raindrops," as Eli attempts to decipher the difference between mist and raindrops. In this case, he elects to draw in his nature journal with no real direction from Julie regarding what he should include in his picture. It is Eli's difficulty in representing both mist and rain in his drawing that indicates learning taking place. In this way, the artwork led to learning. He discovered as he attempted to represent the two types of precipitation, that there are physical differences between mist and raindrops; thus Eli's learning was due to the act of creating art, rather than due to other learning activities that he engaged in prior to the artmaking. In this instance, Eli is able to engage in the high-level literacy skills Leinhardt and Knutson (2004) identify as products of art related conversations. He interprets and synthesizes the differences between the kinds of precipitation he and Louise have encountered. By drawing mist and raindrops, and attempting to describe the differences – both verbally and through the mode of drawing – Eli used art as a way to deepen his understanding of precipitation.

A similar kind of experience occurred in Table 6.2 in which Shemar and Louise combine their clay models in a storytelling episode about adult birds caring for their young. In this experience, Shemar and Louise are quite particular about the kinds of artmaking materials they will use to represent the elements in their shared sculptures. For example, they ask for additional materials, such as seeds from the school's supply of wild bird food. The materials that were available for artmaking, including the new seeds that Julie agreed to provide, guided the remainder of the conversation as students asked questions and examined the ways that birds care for their young, including feeding methods. Dyson (2003) explains that children express themselves in creative ways by using the "textual toys" of a "shared childhood" experience (p. 7). Her definition of communication includes reference to spoken and written language that views children's art as attempts at making meaning in an effort to broaden and "normalize" variations in children's literacy and learning pathways (Dyson, 2003, p. 5). Shemar and Louise's artmaking products become the very "textual toys" that Dyson indicates are important in children's literacy development. They use their bird models as a method for showing their developing understanding of academic content. In this instance, Louise and Shemar give literal voice to their artwork, creating and speaking dialogue for their bird models as they play. In this way, this artmaking experience advances the idea that literacy is more than just reading and writing, and that children's multimodal methods of communication can add depth to their understanding of content knowledge as well.

Likewise, artmaking and available materials were of importance in "Making Blueprints" (Chapter 5, Table 5.1). Students who participated in this activity often selected the materials they would use in their blueprints based on the textures or shapes of the materials in relation to the objects they would represent in their artwork. Charlotte's request for pink fabric, rather than

other colors or materials, allowed her to accurately represent her bed in her artwork, while Henry's careful consideration of available materials with which to create a door in his house concluded with a request to Julie for further supplies. The students in these examples used artmaking materials and the act of making art as a way to increase their learning or understanding of the topics that were of interest to them, rather than using art merely as a way to show what they know.

In addition to creating new knowledge, findings in this study also show that students use their artmaking conversations to practice sophisticated vocabulary and to deepen their understanding of new words. Sophisticated vocabulary is unique to each child. That is, what is considered sophisticated language for a preschool student might not be considered sophisticated language for an older elementary student or an adult. Children in this study often used sophisticated vocabulary when they were compelled by need or when artmaking experiences created an opportunity for them to practice vocabulary terms they may have encountered in the past.

Eli's word learning in the conversation "Mist or Raindrops" (Chapter 4, Table 4.2) is a prime example of sophisticated vocabulary use compelled by need. His understanding of the concept of precipitation was hampered by his lack of understanding of the differences between rain and the mist that was coming off of the waterfall that morning. Without this new vocabulary word, *mist* (and its variant, *misty*), Eli's understanding of the phenomenon he and Louise experienced was lacking. He had no point of reference to help him distinguish between the two kinds of precipitation, and so Julie and Natalie's introduction of the term *mist* was necessary in order for the students to make sense of what they had experienced. Once Julie provided the new word, Eli was eager to represent the differences between mist and raindrops in his nature journal.

He was compelled by the need to differentiate between rain and mist not only in his description for Julie about why they felt cold and wet, but also as he tried to represent the differences in his drawing. Eli found it difficult to represent the new word in his drawing, and ultimately created a hybrid of the two – he drew, in his own words, "mist drops" (Table 4.2, Line 32).

Other examples of students taking up new vocabulary based on need appear in the transcript Birds Nest (Chapter 6, Table 6.2) as Shemar learns that baby birds "hatch" out of eggs. In this conversation, Shemar and several other children have created clay sculptures of birds, trees, and other objects found in the forest. They used their sculptures to tell narratives that revealed their understanding of recent science lessons. Though Shemar used the phrase "breaking out of their eggs" several times in the conversation prior to Julie's use of the term "hatching," Shemar was quick to pick up this word and used it throughout the remainder of the artmaking conversation. Children often learn novel vocabulary terms when they have a pressing need to do so. In situations where they have a desire to more precisely express their ideas or understandings, such as Eli exhibits when trying to determine the difference between mist and raindrops in his nature journal drawing, and Shemar exhibits with his consistent use of the term hatching as he and a group of classmates build clay sculptures, students will often revise their schema of the content under consideration in order to accommodate the new vocabulary term, then try out the new term in conversation. Their need for the new term might spring from a desire to more accurately express themselves, or it may stem from a situation in which students have never encountered the new word, and therefore, are compelled by a need for new language.

Teacher Influences on Artmaking Conversations and Experiences. The findings in this study suggest that teachers can influence the complexity of conversations related to children's

artmaking experiences. Additionally, teachers' discourse moves can influence the development of children's oral language skills, specifically receptive and expressive vocabulary.

Research suggests that when teachers engage students in conversation, content learning improves (Wasik & Jacobi-Vessels, 2017). By engaging children in meaningful conversations, teachers can guide students to share their thinking and ideas regarding academic content knowledge. Often, questioning techniques are employed to encourage elaboration or clarification of ideas (Justice et al., 2008). Julie's use of questioning was frequently intended to encourage children to elaborate on their thinking. She used a variety of open-ended questions in order to get students to think deeply about the topics of conversation, and to a lesser extent, to clarify unclear thoughts. A prime example of Julie questioning students to prompt elaboration appears in Table 6.3, Butterfly Wings. In this conversation, Julie and her students consider what a predator might do if it were to see the eye spots on a butterfly. Charlotte has just stated that predators might think the butterfly is a larger creature, then Julie asks the students "What do you think it will do? What will he think when he comes along and sees this?" (Line 16). Julie's questions probes the students' thinking, asking them to expand on their idea of how predators might react to the camouflage spots on the butterfly. Her questioning not only prompts students to add further camouflage details to their butterfly drawings, but also encourages Charlotte and Liam to express their ideas in greater detail verbally as well.

Justice et al. (2008) point out that conversational techniques such as this also allow teachers to probe students' prior knowledge and developing schemas regarding the content under discussion. Julie's students had a large amount of background knowledge regarding butterflies as the conversation reported in Chapter 6 took place during an extended unit on butterflies. Because

students had a great deal of prior experience reading about and discussing butterflies, their artmaking experience was enriched as a direct result of their continued questions and curiosities.

In addition to improving specific content knowledge through conversation, research suggests that promoting reciprocal interactions with students can help improve their oral language (Landry et al., 1997; Cabell et al., 2011). Students in Julie's classroom frequently encounter responsive adults and peers who engage with them in complex conversations using sophisticated vocabulary and ideas. Evidence suggests that the more children engage in conversation with others, the more opportunities they have to hear sophisticated vocabulary and ideas and to rehearse their own thoughts and ideas. A good example of this occurs in Table 5.1, Making Blueprints, as Julie and Charlotte discuss her dislike for picking up toys. This conversation leads to the introduction of sophisticated vocabulary in the form of the word inherit, leading to multiple exchanges between the two as they navigate Charlotte's attempt to understand the significance of the term and how it relates to her current situation. The number of positive responsive interactions with teachers, such as the one described here, has been shown to have positive and significant associations on children's oral language development (Cabell et al., 2011).

In addition to oral language development, teacher discourse moves are also shown to influence oral language skills, specifically vocabulary. One surprising finding that came from this study appeared in Chapter 4, *Art and the Nature Walk.* Table 4.1 details the conversation "Ripples on the Pond" in which Julie attempts to teach students the word ripples, with little success. This finding suggests that teachers' discourse attempts do not always have a positive impact on students' learning, which is at odds with what most research suggests. It is often stated that teachers' instructional moves, including discourse moves, are highly important in guiding

children's conversations. However, that was not the case in this conversation. Students engaged in this conversation were not interested in learning the new vocabulary term Julie attempted to introduce. As they were satisfied with their description of "baby waves," the children saw no need for a new, more sophisticated word; rather, they were rightly much more interested in discovering possible origins of the ripples. Their curiosity was not centered on naming the phenomenon, but in discovering what caused it.

Cabell et al. (2011) suggest that such a finding may not be entirely unique, despite the long-held belief that teachers' instructional moves are highly important. They found that oral language interventions provided to students, along with professional development and training with access to instructional coaching, were statistically insignificant in improving children's oral language skills (Cabell et al., 2011). Cabell et al. (2011) suggested that their null finding could have been due to several factors. They point to a short time frame (six to eight months) over which the intervention took place, as well as infrequent use of the strategy with students. These explanations could explain the finding here as well. Though Julie did frequently take students to observe and describe changes at the pond, this was the first time she had attempted to introduce a new vocabulary term to students. With greater exposure to the new term, it is possible that some of the children will adopt it as a way to discuss what they saw. A single exposure in one visit to the pond was insufficient to affect children's word learning in this case.

Implications for ECE Practice and Teacher Preparation

Implications for Practice. The findings from this study advance understandings of the importance of language development in early childhood settings not only by describing how children use oral language opportunities for learning, but also by showcasing the actions and planning teachers can engage in to facilitate such learning. Much early literacy research has

established the value of using interactive book reading as a platform for teaching oral language and early literacy skills, but little is known about the significance of other portions of the school day, especially those portions which are not typically categorized as literacy – reading, writing, speaking, listening, and viewing (NAEYC, 2009). Regardless of how much time teachers dedicate to interactive read aloud, by confining oral language instruction to that instructional activity alone, teachers are losing significant opportunities to continue to scaffold and support children's language development.

Results from this study imply that it is important for teachers to think about oral language skills and development throughout the school day. Largely, ECE teachers view oral language as something to be done in the course of interactive read aloud (Cabell et al., 2019). Teachers understand the importance of engaging children in discussion during this activity, but they do not translate that importance to facilitating conversations throughout the remaining portions of their school day. Conversations outside of interactive read aloud typically consist of teachers giving instructions (i.e. tie your shoe; put the crayons away; come sit down). Most utterances that occur in ECE classrooms do not inspire meaningful conversation; indeed, many do not even require responses (Goh, Yamauchi, & Ratliffe, 2012). The findings from this study show that when children are engaged in meaningful activities that allow them to ask their own questions, then seek answers to those questions, they are much more engaged in the learning process and their learning outcomes improve. More importantly, the findings from this study show that artmaking experiences are foremost among the meaningful and engaging activities that allow students to accomplish these things.

Additionally, by engaging children in conversations during other portions of the school day, children more readily learn new words. Students who are engaged in artmaking projects

which allow them to explore and rehearse academic content tend to use unique words and sophisticated (i.e. low frequency) vocabulary in their conversations. When teachers carefully observe the curiosities students exhibit and pay attention to the questions they ask, learning experiences can then be designed which provide the time, materials, and guidance for children to explore those curiosities. These explorations provide an opportunity for children to use new vocabulary words, develop their ideas about academic content, and try out new ways of thinking about that content. This in turn helps to increase the level of sophistication of ideas that children are able to grapple with as their learning increases and evolves.

One finding from this study, however, is at odds with some existing research. Multiple studies have shown that teacher talk moves and actions during instructional events are among the most important characteristics of a learning episode. This was not the experience that Julie had during one interaction with her students. As stated in the Findings section of Chapter 4: *Art and the Nature Walk*, Julie's attempts to draw her students' attention to a new vocabulary word that she wished for them to learn and use in their talk was largely unsuccessful. She introduced the term *ripples* to the students in multiple ways for the duration of that conversation, but students were simply not interested in learning that term. Instead, they used their own ideas and understandings, and their current vocabulary to describe, make suggestions, and discuss their understandings of the origins of the ripples. The students came to a satisfying conclusion to their conversation despite not taking up the new vocabulary learning Julie tried to facilitate; the children did not appear to meet her expectation. Julie's students showed a remarkable level of autonomy in this instance. Not only did they ignore the new word that she attempted to teach them, but they proved that they are not dependent on an adult to guide or facilitate their conversation. They are confident enough in their own learning abilities, and in their trust of one

another, to come to an accurate and satisfying answer to their inquiry with no reliance on an adult to help them learn at all.

Early Childhood Teacher Preparation. This study has implications for teacher preparation as well. Perhaps the most urgent implication for teacher preparation is moving toward an expanded view of the methods that can be employed to support children's oral language and language skills development. It is clear from the level of sophisticated conversations represented in Chapters Four through Six that artmaking experiences do support oral language development when children are encouraged to talk to one another and to their teachers about their ideas and understanding related to the academic content. Artmaking for the sake of artmaking does provide some oral language practice; however, when teachers thoughtfully prepare for the artmaking experiences they will offer to students, the kinds of questions and ideas children pose are characterized by a deep desire to explore or understand, and by imagination and creativity. These characteristics prompt students to be thoughtful about which pathways to solutions they will pursue and can provide unique opportunities for oral language practice and support.

Another implication for teacher preparation highlighted by this study is the need for a shift in the way that students are viewed. The students in this study provide teachers with a reminder of the importance of viewing young children as capable and thoughtful people, with abilities and interests of their own. As the Reggio Emilia curriculum states, it is vital that adults respect the thoughts and potentials of children (Edwards, Gandini, & Forman, 2012) and respect the child's right to actively participate in deciding what topics or ideas they will spend their time and energy to learn and explore. When students in this study were given the time and space to pursue answers to their own questions, their learning soared. From this example, teacher

preparation programs can learn that it is vital to help teachers envision ways in which they can provide the time, space, materials, and guidance which young children require to help them meet their potential.

For example, helping teachers recognize the importance of allowing students to negotiate the kinds of materials that are available during a learning episode can help support children's oral language growth by providing them with opportunities to pose suggestions, offer alternative ideas, and negotiate with peers as they decide who gets to use each material and for how long or in what ways. As stated above, students often have very specific ideas about which materials best convey the ideas they want to include in their artmaking. As students' understanding of concepts improve and grow more sophisticated, the types of materials or media they use to convey those ideas also improve and grow. In order to successfully complete such negotiations, children must have a firm grasp of academic vocabulary which will allow them to communicate ideas such as sharing, comparing, prioritizing and delegating tasks in order to fairly and efficiently complete a shared task.

In addition to helping teachers recognize the importance of allowing students autonomy over learning experiences and how materials will be used, this study suggests that if teachers wish to support children's oral language development, the ways oral language scaffolding is understood must shift. While there is much research that shows the positive benefits of interactive read aloud as a method for teaching oral language, this study shows that there are other portions of the ECE school day which can provide equally successful results. Artmaking experiences are particularly useful for supporting children's oral language because artwork often shows children's thinking in progress, and can serve as a visual model for the evolution of a child's learning. The characteristics of children's conversation during artmaking experiences

share some of the important characteristics of conversations that happen during interactive read aloud: they are deep, meaningful, and they allow students space to explore new ideas and new academic content. In terms of implications for teacher preparation, it is important that preparation programs help teacher candidates and practicing teachers to view additional portions of the school day as equally rich in opportunities for oral language development.

What Can Teachers Do? Given the implications for teacher practice that arise from this research, there are several things that practitioners can do immediately to engage their students in meaningful conversations about art and artmaking experiences. In this section, I offer three suggestions for practitioners.

First, *encourage children to engage in conversations regarding the materials and processes they use to create their projects*. This will allow children to consider art for its own sake, rather than just as a medium through which to learn other skills. Practitioners can encourage students to think about why they made the choices they did regarding their project. For example, posing questions that require students to think about why they chose specific colors, or why they drew heavy lines instead of thin lines, might prompt students to think about the emotion their artwork evokes in them. Teachers can help students discuss how their color choices in a drawing or painting affect the overall composition of the work as well.

In addition, teachers can involve students in the selection of available artmaking materials. By making available a wide selection of artmaking materials, teachers can engage students in talk about the features or characteristics of the materials. To illustrate, imagine providing students with different types of textiles such as cloth, denim, lace, or felt. Each has its own texture that children can explore and consider as they select materials to represent elements in their artwork. Lace or cotton could become clouds, and with guidance, students might discuss

the characteristics of the textile they select, such as the sheerness of lace or the downy, satiny texture of balls of cotton. Introducing such artmaking materials provides practitioners with opportunities to introduce new vocabulary to students and to coach them to find innovative ways to think about and describe the artwork they have created and the processes they used to arrive at their final product. Skills such as these fostered by artmaking conversations are vital to language development.

A second suggestion for practitioners is to *take advantage of the opportunities presented by the community surrounding the school*. Kensington Pines is surrounded by acres of wooded land and has easy access to many natural landforms such as ponds, waterfalls, and rivers. The teachers in this study took advantage of what their surrounding area had to offer and engaged children in observations. Schools located in other geographic areas also have much available for students to observe. Imagine, for example, a school located within a large city. Teachers and students could observe different kinds of automobiles that use the streets surrounding their school, noting the cars, trucks, and service vehicles that engage with their community. They could also take advantage of the various businesses and shops that are in their local area, comparing the products available and discussing where those products come from and how they are used. Students at Kensington Pines took nature journals with them when they went on nature walks, in order to create drawings and sketches of the things they saw. However, the setting was not as important as the tasks the children accomplished with their drawings. Students making observations in stores or museums could easily complete similar kinds of sketches to represent their own observations. These "field notes" could then be used to create more complex art when students and teachers return to their classrooms.

In addition to the physical characteristics of the location of a school, there are also a variety of cultural experiences offered in many communities which students could include in their artmaking experiences. Students can explore historical sites and learn about how people in the area lived in the past, and make comparisons with their own experiences there. Taking advantage of the resources available in the community helps give students – and their families – deeper connections to the neighborhood in which they reside.

Finally, a third suggestion is for *practitioners to create space within conversations for children to speak more.* This could mean that children are encouraged to have longer turns in which they speak more words, or it could mean that they have more turns at talk. In either case, encouraging children to speak more provides them with the opportunity to have more practice with language. They can explain their ideas in more detail, which often helps children to learn material deeply. When students explain things to others, they are able to revise or revisit their own ideas, deepening their understanding of the content. One way she accomplished this was by encouraging children to ask one another questions about the artwork they were creating.

Encouraging students to ask questions of their peers about their artmaking engages students in meaningful talk while also making the art itself a focus of conversation. Students can describe why they included specific elements in their drawings. For example, Liam and Amanda used their fire truck drawings to help one another understand why items such as the fire hose or the ax that appeared in their work were important, not just to firefighters in the community, but to the story they told with their artwork. Julie encouraged both students to say more about the elements in their drawings, which prompted their storytelling and also helped both students confirm their understanding of content knowledge.

Limitations

There are, of course, limitations to this study, including limitations related to the context and participants, and the school's unique location.

Context and Participants. This study was conducted in one early childhood learning center, in one classroom. The students in this classroom were largely from middle class families who lived in suburban areas. Just two students families self-identified as other than Caucasian. This study also did not include children with special needs. Students' families all paid tuition in order for them to attend preschool at Kensington Pines. Many families whose children attend this school place high value on education and have the means to provide their children with enrichment activities such as trips to museums, farms, nature preserves, and cultural centers. Consequently, one limitation of this study is that the population was not diverse in culture, race, or socioeconomic status.

In addition to the population, this context is unique in that it has a dedicated space in the school for an art studio. Teachers are able to take large or small groups of students to the art studio at any time to work on complex projects. In the art studio they have access to a wider variety of materials than is available in the classroom art center. They also have access to a light table in the art studio. Having access to dedicated artmaking space provides the teachers at Kensington Pines with opportunities to engage children in more complex projects, and to provide them with a wide variety of artmaking materials; when children ask for specific materials, teachers are frequently able to find what the children want within the art studio.

Another limitation of the study related to context is that Kensington Pines frequently provides assistant teachers beyond the number required by state law. Julie's classroom is always staffed by at least one lead teacher and at least two assistant teachers, regardless of the number of

students in attendance. This means that the ratio of children to adults is frequently much lower than is required by state law, and usually lower than would typically be found in ECE programs whose available staffing is determined by student attendance or enrollment.

Unique Location. Kensington Pines is a unique early learning center due to its location and because of its location and other characteristics, it offers insights into early childhood education that other settings may not as easily provide. An instrumental case study, particularly one that is a "best case scenario" or a case that illustrates an ideal situation, allows researchers and practitioners to see what can be achieved. The school itself is situated on a significant portion of land owned by the school's director. In addition, teachers and students have free access to a large portion of state owned land which is used for public recreation. The school's location is such that students and teachers are able to safely walk to the large park. They have access to this park year-round and frequently make use of it, regardless of season. Access to the park is useful for examining children's science conversations and understandings, but hardly a necessity. Teachers working in contexts where parks are not readily accessible can still engage children in science conversations, encouraging them to observe and record changes in several ways. Activities such as bringing animals into the classroom, or having students grown and observe plants which they can care for in the classroom allow children some of the same experiences of observing animals or plants in a park setting. Schools can also incorporate small gardens into their settings by dedicating a small portion of playground space, or by installing raised garden beds, in which they can allow students to plant seeds or plants. Though Kensington Pines is situated in a location which allows the staff to utilize the parks and gardens, schools who are located in other locations can take advantage of the unique characteristics of their

neighborhoods – there are interesting things for children to see and observe in cities and suburbs as well as rural areas.

Further Research

Possibilities for future research stem from this study. For example, a similar study could be conducted in schools and classrooms that have more diverse populations than were described in the context limitations above. By conducting this study in more diverse contexts, it would be possible to see how children with different life experiences, being raised in families with various cultural or socioeconomic circumstances, use artmaking materials to scaffold their learning of academic content.[5] A similar kind of study could also be conducted with students who have special learning needs, including students with speech and language needs.

In addition to examining different populations of students with their own unique experiences and needs, this study could be conducted in alternate settings as well. The current study took place in a preschool classroom that has several rural environmental characteristics, including large portions of land dedicated to recreation, and sparse development. However, this kind of setting is not a requirement for helping children to observe and note changes in their environment. Such exercises could easily be conducted in cities and suburbs as well. By providing artmaking materials and encouraging students to draw sketches of their observations, similar kinds of artmaking conversations may occur, allowing researchers to observe the uses of conversation as well as the level of sophistication of ideas and vocabulary.

Alternatively, another research path that emerges from this study involves the development of literacy pedagogies that further support students' oral language development throughout all portions of the school day. By conducting design-based, experimental studies in

[5] See Gerde et al., 2019 for an example of how teachers are currently using high-quality early childhood practices to promote child-centered learning using culturally relevant materials.

ECE classrooms, researchers could identify instructional strategies that support students' development of oral language and language skills beyond interactive read aloud. These strategies would help teachers improve children's oral language abilities and reach higher levels of academic achievement.

Conclusion

This study examined the ways in which oral language is scaffolded in ECE settings, specifically addressing the ways in which children's artmaking and related experiences provide space for sophisticated conversation. There is an urgent need to improve the kinds and amounts of literacy instruction which take place in ECE classrooms. While teachers, overall, are comfortable and confident with using interactive read aloud as a method for oral language instruction, this is only one small portion of the school day. The current study has shown that there are additional portions of the school day – in this case, artmaking activities – which provide equally rich and stimulating opportunities for conversation. It is imperative that these additional portions of the day are used to their full and complete potential. Engaging young children in discourse related to the topics of study and of their interests is a highly effective method for increasing academic learning in both content and vocabulary.

As I consider the role of talk within this classroom, I am drawn to the sophistication of children's ideas when they are provided with time and materials to study topics that are of interest to them. When children's motivations to learn are respected, the kinds of ideas and the amount of meaning-making they are able to accomplish together, with or without influence from an adult, is surprising. Charlotte's question to her peers regarding the origins of the "baby waves" began a conversation that the children were able to conduct almost entirely without facilitation from Julie. The same is true of Shemar and Louise's storytelling regarding their bird

family. These three- and four-year-old students, when provided with materials which drew their interest, and topics in which they saw value and importance, were able to conduct highly meaningful conversations, frequently on their own or with little help from adults. These conversations suggest that young children are able to discover and discuss content related material; are mindful of the needs of their peers and themselves; and are able to accept challenging learning tasks. When they have the scaffolding and support of a teacher who is conscious of their learning needs and allows them the time and space to fully interact with materials and with each other, as they become learners prepared to take on new and exciting literacy challenges.

APPENDICES

Appendix A: Organizational System

The table appearing in Appendix A represents my organizational system for storing the audio and video files which were collected between October 2017 and March 2018. This table served as a Table of Contents for the folder into which the raw data was transferred and stored. The table lists the date the conversation took place and names the participants of each conversation. To protect the identities of my participants, the focal students are named by their pseudonyms; all other students are referred to by their first initial. The remaining columns describe the general topic or academic content area with enough detail for me to distinguish the conversations from one another, and the final column provides comments about the important details of the conversation or the artmaking associated with it.

Table 7.1: Organizational System

Date	Participants	Academic Content Area or General Topic	Comments
23 October 2017	Amanda, Julie	Science: Looking at Fog	
	Liam, Amanda, Julie	Social Studies: Fire truck	Drawing with crayons and markers, lots of storytelling, which leads to more drawn elements
	K, JA, Shemar, Julie	Science: Color Hunt	Looking for leaves for collage
24 October 2017	J,C, Julie	Science: Compare and Contrast	Looking for leaves for fall drawings
	Alice, M, Julie	Science: Turtles and Other Animals that Lay Eggs	Drawing found objects, Nature journals

Table 7.1 (cont'd)

	M, JA, K, K, L, Julie, Natalie	What Do We Hear?	The road grader was fixing the road and students were attempting to figure out what the sound was
	Amanda, Julie	Spelling Our Names	This happens almost every time they finish a project
	Alice, Julie	Why Did the Markers Melt?	Cleaning up after artmaking, confusion between melted crayons and markers with caps left off
26 October 2017	W, O, A, E, Julie, Alexandra	Drawing Giraffes	Which is tallest, which is smallest
	Henry, Charlotte, Amanda, Liam, Shemar	Ripples on the Pond	Where do the "baby waves" come from?
30 October 2017	T, R, C, Julie	Dogs Chase Cats	Painting things that they know about animals
1 November 2017	Henry, Charlotte, Eli, Julie	Creating Blueprints	What is in your house? Where is it at? What does it look like?
6 November 2017	Shemar, Julie	Map Making	Extension of blueprints, making a map of his whole neighborhood
15 November 2017	Henry, Liam, A, W, Alexandra	Forests and Butterflies, Airplanes and Other Things that Fly	Modeling clay
16 November 2017	Alice, Daniel, Shemar, Louise, Julie	Cooking a Thanksgiving Turkey	!!!!!!
	A, L, C, Julie	Doing Laundry	When does your mom do laundry? Drawing crayons
4 December 2017	M, O, A, Julie	Allergic to Flowers	Drawing, markers & crayons
7 December 2017	Shemar, M, C, K, Julie	What Do Animals Eat?	Painting – dogs, cats, fish, bears, tigers, butterflies

Table 7.1 (cont'd)

8 December 2017	Alice, Amanda, Julie	Bunnies	Sketching, gathering ideas for artmaking
	Shemar, Louise, Julie	Discovering Kinds of Birdseed	Birdseed and glue
12 December 2017	Liam, Julie	Collage	Liam's collage making experience, how did friends learn to use supplies
	Shemar, Liam, Amanda, Julie	Science: What Happened to the Fog?	Drawing changes at the pond, the fog is gone
	Shemar, Julie	Beautiful Dress Party	Drawing pictures of mom to help us miss her less
13 December 2017	M, O, L, JA, Julie	Making Birthday Cards	Make believe birthday party
	Charlotte, Alice, Alexandra	It Snowed!	Painting scenes of snowmen and sledding
18 December 2017	M, O, JA, Julie	Things That are Red	All kinds of red art materials
	Daniel, Shemar, M, O, Julie	What My Yard Looks Like at Night	Black paper, white and yellow crayons
8 January 2018	Liam, Daniel, K, C, JA, Julie	Sketching Block Formations	First they built with blocks, then sketched their buildings Screencaps needed
12 February 2018	Most of the class	Painting Pictures for Someone You Love	
15 February 2018	Liam, Daniel, Shemar, Julie	Dump Truck Tracks	Created roads and buildings in the sand area, then made maps of their truck routes
19 February 2018	O, Julie	I Saw Five Ducks	
20 February 2018	E, O, Julie	The Tree Fell Into the Pond	Tree branch fell in the storm
23 February 2018	Most of the class at one point or another!	Things That are Orange	Orange art supplies

Table 7.1 (cont'd)

	Liam, Daniel, Alice, Amanda, Julie	What Did You See On Your Way to School?	Shared in whole group, then some chose to draw representations of their morning commute Screencaps needed
26 February 2018	Louise, Amanda, Alice, Julie	Pizza Restaurant Menu	Drew pictures of pizzas to include in a play center
	Daniel, JA, O, M, Julie	The Fire Truck Drove Past the Playground	Another "what did you see?" artmaking experience
27 February 2018	Louise, Amanda, Julie, M, O, A	Which One Has More?	Lots of feathers glued to a paper
	K, JA, L, O, M, Julie	Things that Are Yellow	Yellow artmaking materials
28 February 2018	K, C, A, Julie	How Many Squares Can You Make?	Scissor skills Screencaps needed
	Liam, Julie	Painting a Tree on Fire	The tree and the fireman image gets lost in the flames
	Shemar, Daniel, Louise, C, Julie	The Farmer's Market	Paintings created after a field trip
2 March, 2018	Amanda, M, L, Julie	Grocery Store Signs	How do you know what's for sale in the grocery store? They have signs of food to help you find items.
	Most of the class	Things That are Green	Green artmaking materials
	Daniel, M, Julie	Cleaning Up My House	Drawing pictures of bedrooms
5 March 2018	T, N, O, Julie	Drawing Weather	Snow and rain
	Most of the class	What Did You Eat for Dinner Last Night? What Will You Eat for Lunch Today?	Collages of food pictures and stickers Screencaps needed
7 March 2018	N, T, A, Julie	Paintings of the Doctor's Office	

Table 7.1 (cont'd)

8 March 2018	Everyone in the class	Baking Muffins for Mom	Drawing what the muffins will look like
	Everyone in the class	Planning for Muffins with Mom	Creating paper placemats for breakfast
12 March 2018	Everyone in the class	Thank You Cards for Mom	
13 March 2018	Alice, Louise, Henry, Julie	What Did You Eat for Breakfast Today?	Collages of food pictures and stickers
	Charlotte, Amanda, Julie	Things That are Blue	Blue artmaking materials
	Charlotte, Liam, Shemar, Julie	Squirrels Ate the Corncobs	Sketches on the playground
16 March 2018	Shemar, Daniel, Eli, Julie	What Does a Snake Look Like?	Paper strips to create snakes
	Eli, Charlotte, Julie	What Can I Make With Shapes?	Circles, squares and triangles pre cut
	Eli, Daniel, M, O, Julie	Trains and Tractors	Modeling Clay
20 March 2018	Louise, Henry, Julie	People Who Help	Collage
21 March 2018	Daniel, M, A, JA, Julie	What Bakers Like to Make	
23 March 2018	Most of the class	Things to Feed to Snakes	Paper snakes they made in the past, glue pictures of snake foods to them. Screencaps needed
27 March 2018	Most of the class	Things That are Purple	Purple artmaking materials.
	Liam, Henry, Julie	Abstract Art	Squeeze bottles of paint
28 March 2018	Charlotte, Alice, Eli, Daniel, Julie	Going to the Dentist	Painting and drawing after a field trip to the dentist
30 March 2018	M, O, JA, C, K, Julie	Things That are Black	Black artmaking materials

Appendix B: Application of Analysis Method

The table appearing in Appendix B is an excerpt of the application of the analysis table to a portion of data. In this excerpt, I examine discussion between Liam and Amanda as they attempt to make sense of their understanding of fire (see Chapter 5 for complete discussion). This excerpt consists of several lines of conversation from the transcript "The Firemen's Visit" and includes the art products students created as they narrated their understanding of fire safety.

Table 7.2: Analysis Chart – The Firemen's Visit

Speaker	Utterance	Student interactional moves	Sophisticated Language (ideas)	Teacher talk and actions	Prior Planning	Connections to other events
		Try to get these into very short phrases (1-2 words if possible)	What is the word, why do I consider it "sophisticated" for these students	What is Julie doing, what does she say. Does it have an influence/impact on the children's actions/conversation	Look back at interviews and lesson plans (if available)	What have they already done in regards to this event? (i.e. how does this conversation at the pond connect to previous conversations about the pond)
Liam	Fire is red.	Statement	What he knows about fire, how he understands it to look.			

Table 7.2 (cont'd)

Amanda	Mine is sort of red. And I have some yellow. [Adds yellow flames]	Statement, addition to idea	She sees different colors in the fire. Does she understand that hotter fires burn different colors?			The fire department's visit had occurred the week prior. Students were taught how to escape from a burning building, allowed to wear firefighter's gear, and see the truck.
Julie	I see. Liam, I see your house and your fire truck, but then I see some…wh at are these down here?			Pointing at elements of Liam's painting, tapping with her finger.		

What the Analysis Shows. The conversation depicted here took place as Liam and Amanda were drawing images of fires with crayons. The class had recently had a visit from the local fire department, which served as the basis for their drawing and the storytelling that went along with it. The analysis chart begins by asking of the data, what are the interactional moves the speakers are making. In both lines 1 and 2, Liam and Amanda make statements. Liam's statement opens the conversation, but it also gives some indication of what he understands to be true of the situation in which he finds himself. That is, after learning about fire safety, Liam believes that one way to represent fire is through the color red. Amanda also makes a statement. She indicates the colors she has used in her picture to represent fire. Her statement is appropriate because it is related to the topic and expands on the idea that Liam introduced when he began the conversation.

The next question the chart puts to the data, what sophisticated language is being used, allows me to see the nuances in what Liam and Amanda understand about fire and how they think about its representation. Liam's statement that fire is red is indeed true. However, it does not take into consideration the different shades and colors that fire can appear in addition to red. Amanda's statement, therefore, shows that she has a more nuanced understanding of how fire can be and the ways in which she can represent it in her work.

Later in the conversation when Julie begins to probe Liam's work, the chart questions the data to determine what talk moves and actions she takes which influence the children's talk. In this case, Julie uses nonverbal cues to draw his attention to the portion of his artwork which she wishes to know more about. In this way, she influences the comments which Liam can make in his next turn at talk; there are only a limited number of responses he could make that would

accurately respond to her question, while other responses would cause a breakdown in the conversation.

By asking these questions of the data, I was able to get a clearer understanding of what the children were attempting to accomplish, how they interact with one another and with the academic content, and how they interact with one another and their teachers in social situations.

Figure 7.1: Example from Liam

Figure 7.2: Example from Amanda

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