

LEARNING DISPOSITIONS IN EARLY CHILDHOOD EDUCATION:  
HOW INTERACTIONS BETWEEN CHILDREN AND TEACHERS NURTURE AND  
SUPPORT YOUNG CHILDREN'S LEARNING DISPOSITIONS

by

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A Dissertation Submitted to the Faculty of the

DEPARTMENT OF TEACHING, LEARNING, AND SOCIOCULTURAL STUDIES

In Partial Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

2020

THE UNIVERSITY OF ARIZONA  
GRADUATE COLLEGE

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LEARNING DISPOSITIONS IN EARLY CHILDHOOD EDUCATION:  
HOW INTERACTIONS BETWEEN CHILDREN AND TEACHERS NURTURE AND  
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ACKNOWLEDGMENTS:

University of Arizona, for founding and funding an ECE graduate program

My husband and children, for their patience and support

David, Bradley, Elizabeth, and Sarah;

My siblings, for always believing in me

Mark, John, Rick, Tim and Carol;

Our parents who instilled a love of writing

Fredrick Arthur Potter and Jean Fenton Potter;

Joseph Potter Farrugia, for a vision of the future;

Dr. Raymond Taetle for his brilliance and hope;

And my Co-advisors

Marcy and Leah, and committee member Kathy

## DEDICATION

Thank you for your inspiration

To the Profession of Early Childhood Education including:  
Lillian Katz, Maria Montessori, Loris Malaguzzi, Fred Rogers, Dr. Barry Brazelton, Mimi  
Brodsky Chenfeld, Janet Gonzalez-Mena, Tom Hunter, Magda Gerber, and the  
Southern Arizona Association for the Education of Young Children  
with whom I have grown.

And to the many teachers who have influenced my learning.

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## **Abstract**

Early Childhood Education is a field experiencing rapid growth in professionalism and research. This growth places pressure upon schools and teachers to meet state standards and to use the criteria of Quality Rating Systems to evaluate teachers. This study offers expanded resources for the art of teaching through an examination of learning dispositions (also known as approaches to learning) to support teachers as they broaden their practice and relationship with students. It offers teaching strategies to influence the development of learning dispositions, tendencies or habits of thinking that influence behaving or speaking in a manner that satisfies or moves a person toward a learning goal (Katz, 1988, 1993b). This study specifically examines curiosity and new dispositions of risk-taking and voice. Strategies for influencing learning dispositions in teacher-child interactions are revealed through discourse analysis of a highly rated teacher of young children. An argument is made for the inclusion of risk-taking and voice. Risk-taking is a foundation for problem-solving. Voice, the right to be heard, contribute and have influence, is the foundation for expressing opinions and identity. The study suggests further research for risk-taking and voice as learning dispositions that empower frequently marginalized cultural, linguistic, and racial groups. Children who are supported in acquiring affective learning dispositions can experience enhanced learning trajectories.

## Chapter One: Introduction

What was it about that preschool teacher? There was learning occurring beyond the skills of painting, asking questions, and interacting. The teacher's proximity and attentive listening affirmed students' experimentation and discovery of print transfer and promoted creativity and curiosity. I observed as she moved around the classroom and how she talked with the children about the process of painting, encouraged the children's creativity, motivation, independence and curiosity. She affirmed persistence when she returned to a child for an engaging conversation regarding her painting. I witnessed powerful learning in action. It happened like this:

*"Teacher Look!" "We were just playing with paint, and look, it makes a double!" shouted two excited four-year olds about their paint transfer discovery. When they laid a second paper over their tempera painting and pressed, it transferred to a second paper. Near these two girls was another girl, who, rather than announce her pleasure at this event, tucked her chin down and continued to focus on the paint transfer discovery. This quieter preschooler finished two paintings, hung both pieces of art on the drying rack, and created another. After she completed the third, she looked toward the teacher, then stood quietly beside the teacher seeming to wait for the teacher to notice her. The teacher's attention was directed toward louder children who were either requesting attention or requiring attention for a disagreement or problem, but she did not ignore the quiet child beside her. After attending to the loud children, this teacher quietly turned to the girl and softly asked her about her art. At that moment, the little girl chattered away about her discovery of paint transfer and showed the teacher all the color combinations she had created.*

Through what she said and did, this teacher demonstrated support of learning dispositions, creativity and curiosity, and independence and persistence.

I have observed hundreds of teachers in my thirty years as director, principal, preservice supervisor, and research consultant. There were many preschool teachers with whom children developed skills and increased in knowledge. Then there were teachers who seemed to increase a child's ability to learn. What were those teachers doing and how did they do it?

### **Problem Statement**

As I explored the possibilities of how preschool teachers' practices may increase a child's ability to learn, I thought about other teachers whose work inspired learning dispositions. Teachers told me, "I listen deeply" (S. Lazaroff, personal communication, 2018) or "I really hear them" (M. Z. Cortina, personal communication, 2016).

When I was a research consultant, I visited over 40 preschool classrooms in Arizona and administered the Classroom Assessment Scoring System (CLASS) (Pianta, La Paro, & Hamre, 2008). This assessment tool focuses on interactions between teachers and students and what teachers do with the materials they have. It evaluates how teachers provide emotional and instructional support through positive climate, sensitivity, concept development, quality of feedback and language modeling (Pianta, La Paro, & Hamre, 2008). But it did not answer my question of how teachers influence learning dispositions. I wanted to better understand how the teacher-child interactions in early childhood education influence the development of learning dispositions. Through observation and close analysis of a single teacher, this study builds an understanding of how teacher discourse as seen and heard through the moment-by-moment interactions influences children's learning dispositions.

**Learning dispositions.** Learning dispositions (or the parallel term - approaches to learning) are a recognized domain in early childhood education (Barbu, Yaden Jr., Levine-Donnerstein, Marx, 2015; Kagan, 2002; McClellan & Katz, 2001). They are defined as the

tendencies or habits of thinking that influence behaving or speaking in a manner that satisfies or moves a person toward a learning goal (Katz, 1988, 1993b). Learning dispositions such as curiosity, persistence, independence, and resilience are indicative of an effective learner (Bertram & Pascal, 2002). They enable the enactment of knowledge and skill and act as an affective and cultural filter for learning trajectories (Carr, Jones, Lee, Smith, Marshal, & Duncan, 2010, p. 15). They are environmentally sensitive and acquired, supported, or weakened by interactive experiences in an environment with significant adults and peers (Bertram & Pascal, 2002). Experiences in early childhood education (ECE) programs can influence the development of learning dispositions whether by “intention or by default” (Katz, 1977, p. 66). Not to be confused with teaching dispositions, I define learning dispositions as observable behavior(s) or expressions of moving toward a learning goal. Learning dispositions describe *how* a child learns, as opposed to *what* a child learns. For young children, birth through age eight, learning to learn serves as a solid foundation for a lifetime of discovery, building knowledge and comprehension.

Research indicates the importance of both learning dispositions and qualities of teacher-child interactions to future academic success (Burchinal, Peisner-Feinberg, Pianta, & Howes, 2002; Katz, 1988; 2002; Pianta, 1997). Research also suggests that learning dispositions are potentially alterable via the teacher through either modeling or direct instruction (Fantuzzo, Perry, & McDermott, 2004). The communication system, or teacher discourse (Cazden, 2001), appeared as the place to examine the influence of the teacher on learning dispositions. I needed to look at both verbal and nonverbal communication in early childhood education. Peter Johnston (1991) says teacher discourse can ignite the *spark* to learn and I wondered if teacher discourse could also ignite learning dispositions. The purpose of this study is to better understand how

teacher-child interactions in early childhood education influence the development of learning dispositions.

**Early childhood education and learning dispositions.** The development of learning dispositions is important in ECE because birth to age five is viewed as a critical period for developing the foundations for thinking, behaving, and emotional well-being (Trawick-Smith, 2014; Woolfolk & Perry, 2012). By age five, a child's brain size is approximately 90% of adult size (Dekaban and Sadowsky, 1978) and 95% of maximum size by age 6 (Lenroot & Giedd, 2006). Learning dispositions developed in early education, in this period of rapid brain growth, can affect a child's lifetime learning trajectory (Hamre & Pianta, 2001; Daniels, 2013). Because learning dispositions are potentially alterable via the teacher through either modeling or direct instruction (Fantuzzo, Perry, & McDermott, 2004), teachers of young children are uniquely positioned to positively affect the development of learning dispositions. This study builds our understanding of how the teacher-child interactions in ECE are linked to learning dispositions.

Learning dispositions are named as an essential component of early childhood education (Kagan, 2000; Katz, 1998). Many in the field call for an increased emphasis on learning dispositions and diminishing the “focus on curriculum frameworks which view education as the injection of facts, subjects and disciplines of knowledge alone” (Bertram & Pascal, 2002. p 56). For example, the learning disposition of curiosity can be as important as the single task of learning the names of animals. Naming animals is a learning task in ECE; curiosity is a learning disposition generalizable to all learning tasks. Learning dispositions enable learning tasks (Bertram & Pascal, 2002). In this way, developing a behavior that supports learning (a learning disposition) is arguably more important than single task learning. Learning dispositions have been linked to motivation and engagement (Buchanan, McDermott, & Schaefer, 1998), and

improvements in academic and interpersonal skills, and therefore are foundational to all future learning and make a child ‘ready’ for their academic career.

**Readiness.** Research also reveals that learning dispositions strongly impact kindergarten readiness (Hamre & Pianta, 2001; Marx, 2011). Readiness is a commonly used educational term generally defined as the skillsets a child needs to attain to be *ready* for kindergarten – the official entry into formal education (grades K -12) and is defined independently by each U.S. state. Studies claim kindergarten readiness as an important reason for funding early childhood education because children’s experiences prior to kindergarten influence future educational experiences and attitudes (Heckman & Rubinstein, 2001, Marx, 2011).

Research includes learning dispositions as an important component of readiness (Biggs, 1987; Carr, 2001b). A child who is ready for kindergarten has not simply mastered skills of literacy, mathematical knowledge, social ability, and impulse-control (Claxton & Carr, 2002), but is fully exercising their learning dispositions and is ready, willing and able to learn (Carr et al., 2010). Readiness for kindergarten includes strategies for learning, basic early literacy skills, cognitive abilities, and learning dispositions, and research in kindergarten shows a link between early learning behaviors in kindergarten and improvements in annual grade transitions and long-term academic achievement (Li-Grining, Votruba-Drzal, Maldonado-Carrefio, & Haas, 2010; Matthews, Kizzie, Rowley, & Cortina, 2010; McDermott, Rikoon, & Fantuzzo, 2014; von Suchodoletz, Trommsdorff, Heikamp, Wieber, & Gollwitzer, 2009). In this way, learning dispositions established in early education can affect the learning trajectory.

## **Early Childhood Education versus Kindergarten-12 Education**

This section of the introduction describes the unique position of ECE in a lifetime of learning and builds the argument for the support of learning dispositions in the first five years of life.

**Overview of ECE versus K-12.** In the continuum of lifetime learning, ECE's most critical years are from birth to age five. From birth, a child is continuously learning from their parents and caregivers both implicitly and explicitly. In the United States, according to the 2000 census, 67% of children from birth until kindergarten experience care outside of the home environment. Care outside the home also occurs along a continuum, from small group home care to ECE centers with 20 or more classrooms of 15 or more children. These settings can range from places where a child is safe and fed to educational settings that are licensed and staffed with teachers expressly educated to teach young children. When a child is five years old, many options exist, and formal or explicit learning continues in the structure of a publicly or privately funded school from kindergarten through 12<sup>th</sup> grade (K-12). After 12<sup>th</sup> grade, formal education continues by choice in the form of higher education (Community College or University) or in the form of career/job/skill/art training. Throughout life, learning continues either implicitly or explicitly, formally or informally. This study focuses on early learning in an educational setting from birth to age five when learning is both explicit and implicit. Children develop learning dispositions in all stages of education, but the research cited above supports an emphasis on learning dispositions rather than skill and knowledge learning in the first five years of life.

ECE and K-12 education are specifically different and variably the same. ECE and K-12 are both conducted in age-based peer groups (with some exceptions), include a leader of education, and have a named curriculum or course of study. ECE diverges around philosophy of

education, assessment, teacher qualifications, funding, and group size. This discussion focuses on ECE philosophies grounded in developmentally oriented practices that attend to the whole child, and support the physical, social, and emotional development of young children (Copple & Bredekamp, 2008). In ECE, a child-centered approach focuses on the empowerment of the child, including developing skills for success by enabling children to be active and independent learners, helping parents to support the development of their children, and relying on effective teachers (Schweinhart & Weikart, 1995). The early childhood years are particularly positioned for the development of learning dispositions because at this age a child's brain is in a stage of rapid development and their drive toward learning dispositions may outpace their physical ability. Thus, they may be unable to complete tasks that involve certain skill types, such small motor ability for handwriting, ocular control for reading, and impulse control for the table work and rote assimilation of curriculum that is a hallmark of K-12 learning. Thus, this stage of early development is prime time for the development of tendencies or habits of thinking that influence behaving or speaking in a manner that satisfies or moves a person toward a learning goal – learning dispositions (Katz, 1988).

**Assessment.** Young children's learning and development is assessed through surveys (e.g., Ages and Stages, Teaching Strategies Gold, the Devereaux ECE assessment, and others), but there are no standardized tests as found in school and post-secondary school that answer to entities such as local and state school boards. These K-12 standardized tests are often high-stakes tests allowing the student to progress to the next level, gain entrance to another program, or influence funding for the school or salaries for the teachers. ECE programs keep anecdotal documentation of their children, checklists of developmental stages and skills, and coach social and emotional development, but these data are generally for internal use only. Through

observation and documentation, teachers can influence a child's motivation toward learning. Active documentation and the absence of high-stakes standardized testing is a trademark of early childhood education.

**Evaluation of centers and schools.** Rating systems exist for early childhood education, but they differ from K-12 schooling systems. ECE programs have external rating systems that evaluate the whole program, including items such as: sustainable business model, fitness of facility, quality of interactive materials, and quality and education level of the teachers. Highly rated ECE programs are similar yet different from highly rated elementary and secondary education programs. Each are rated, but each examines different data sets. Elementary and secondary schools measure the academic abilities of the students based on a standardized test, and these scores rank the teacher. ECE is measured on resources available to the child and the quality of the teacher is measured by observing the teacher in the act of teaching. The ECE ratings are designed to increase high quality education by measuring data that a teacher or school can possibly control and this includes child-teacher engagement influencing learning dispositions. Scoring teachers by the achievement of their students as found in K-12 education does not account for class size differentials, the effect of poverty and trauma on the students' mental fitness, or for educative resources available to the teacher. ECE documents growth of the child and fitness of the teacher; K-12 education assesses the academic output of each child.

**Teacher qualifications.** One glaring difference between ECE and elementary and secondary education is the required qualifications for teachers. Early education currently does not require that teachers be certificated to teach in a childcare center, as does K-12 education. Early educators who teach in a public-school setting must have state certification, but the entry-level requirement for basic childcare is a high school diploma, a fingerprint clearance card, and

18 hours documented experience with young children. Head Start provides professional development for their teachers and recently has required the attainment of an Associate of Art or Associate of Science degree in Early Childhood Education. Some ECE teachers intuitively influence children's learning dispositions by wondering aloud with children about their interests and promoting children's motivation to manage uncertain moments and develop curiosity, resilience, and voice. It is likely that a teacher with a specialized college degree is better able to influence learning dispositions than a high school graduate because they have greater knowledge and specialized teaching preparation. ECE teachers earn 60% less than K-12 teachers with fewer options for benefits. There is a movement in ECE to professionalize the field, require advanced degrees, and increase compensation.

**School funding.** Also missing in ECE is universal public funding. K-12 education is government-funded, but only a small sector of ECE receives government support. For example, the federally funded program, Head Start, provides free ECE to children whose families live below 200% of the poverty level (Office of Head Start, 2020). Highly competitive Federal Preschool Development Block Grants are issued to about 12 economically needy states every three year (First Five Years Fund, 2020). Additionally, there is governmental support for preschools in public schools to provide mandated early education for children with identified developmental delays including speech, cognitive, and physical delays (Individuals with Disabilities Education Act, 2020). Typically, the families of these children pay tuition at these public-school settings. In many states, the Department of Economic Security provides preschool subsidies for families who meet specific economic criteria. However, outside these economic supports for low income families and children needing developmental support, the funding does not meet the needs of all families who need or want to work outside the home, and thus need

childcare but can't afford quality care. The lack of governmental funding may contribute to the range in quality in early education. ECE centers which are in economic stress may be teaching at a level of safety and control and are less equipped to enter into children's discourse and engage their learning dispositions. Equitable funding is an issue in both ECE and K-12 education, but the variability in accessibility is greater in ECE.

**Curriculum choices.** Curriculum choices differ between K-12 education and ECE. K-12 curriculum is generally selected by a school board or superintendent for classroom use. ECE centers select their own curriculum and may adopt a commercial peer-reviewed curriculum. K-12 education tends to be designed for large blocks of students (generally state by state, district by district or school by school), and uniformity is also seen when a single textbook serves blocks of states or even the whole nation. Conversely, ECE is local education, with each learning site individualizing curriculum to meet the needs of their students. Preschools can select a curriculum and pedagogical style that meets their vision for the specific school. Some schools adopt philosophies such as Waldorf, Montessori or the Reggio Emilia Approach. Generally, each school (or Head Start grantee) can select their own philosophic framework and pedagogy.

**Classroom lessons.** ECE teachers tend to set the day-to-day curriculum to meet the needs of their specific children within a framework of early learning standards. These standards in Arizona name objectives for teachers to work toward (AZELS, 2018). ECE focuses on social and emotional development as a child learns to engage with peers and adults other than family members. Children engage in math concepts as they build with blocks and count groups of toys or objects. They engage in early literacy through conversations, using writing tools (crayons, pens, pencils) to communicate through symbols, shapes, or drawings. Some children begin writing their ideas in preschool, and most learn to write their name. Children learn to express

themselves through art experiences, singing, dancing, dramatic play, and communicating with the people in their school. Science is learned through noticing life in plants and animals, and noticing characteristics of various natural objects such as rocks, leaves, and formations in the sky. Physics learning begins with play at the water table, balancing blocks, using rope to pull, and testing their strength to leverage themselves onto climbing equipment. Story is included every day, including oral stories, read-aloud from books, and narrations of drawings. Throughout this broad array of curricular choices, the teacher can influence learning dispositions through careful observation for learning goals and engaging discourse to move them toward their learning goal.

**Group size.** Group size is also different along the continuum of education. Class size is determined by the number of children enrolled in each specific school district resulting in some districts with class sizes of fewer than 25 students, and other districts with class size swelling at over 32 per class. Early childhood education, however, benefits from state health department requirements for group size, and many choose even lower group sizes because research shows smaller group size and larger square footage per child positively effects learning (NAEYC, 2019). The lower the teacher-child ratio, the better situated the teacher is to engage in influencing learning dispositions. Each school site or care facility determines its own class size based on their resources. Because ECE is a business as well as a service, many centers must choose between making a profit or quality care with smaller class sizes.

**Philosophies of education.** While ECE remains independent from center to center, and often from teacher to teacher, the focus on the whole development of each child remains constant. This study focused on one teacher whose teaching philosophy was grounded in constructivism. Constructivism refers to the thinking of Piaget, Vygotsky, Dewey, and Bruner in

which learning is continuous, social, active and reflective. In constructivism, students transfer key concepts to new situations built upon prior knowledge. It is the foundation for the Reggio Emilia Approach, which is the one studied by the teacher I observed. This approach holds that the

learner possesses rights, is an active constructor of knowledge, and is a social being; the instructor is a collaborator and co-learner along with the child, a guide and facilitator, and a researcher; and knowledge is viewed as being socially constructed, encompassing multiple forms of knowing, and comprised of meaningful wholes (Hewett, 2001, p. 95) .

As a teacher in an early learning classroom, the subject of my study is uniquely positioned to influence children's construction of learning dispositions.

### **An Overview of this Study**

This study examined how a teacher influenced learning dispositions. A single case, qualitative analysis of a preschool teacher identified the words and actions that connected to the development of children's learning dispositions. Using grounded theory and open coding this discourse analysis investigated teacher discourse strategies for influencing learning dispositions.

This study observed an early educator in a classroom of 4-year olds over seven days. Video and audio recording across the school day included whole group direct teaching, small group instruction, and 1-1 interactions. Recordings were transcribed, coded and analyzed. Teacher discourse was gathered in direct observation (field notes), video transcripts, and two teacher interviews. The analysis utilized grounded theory to understand the relationship between teacher discourse and learning dispositions.

## **Overview of the Dissertation**

This dissertation is broken into three parts. The first part (Chapters 2-3) introduces the conceptual (analytic) framework and methods, the second part (Chapters 4 - 6) presents data analysis and findings, and Chapter 7 includes discussion and conclusion. References and appendixes (including complete coding tables) conclude the document.

Specifically, Chapter 2 reviews relevant literature surrounding many aspects of learning dispositions and more specifically curiosity, risk-taking, and voice. This chapter concludes with an explanation of the theoretical framework and research question. Drawing on socio-cognitive theory (Vygotsky, 1978), I argue that learning dispositions can be influenced in the relationship and engagement between the teacher and child. I draw specifically on Vygotsky's zone of proximal development and scaffolded learning (Vygotsky, 1978). Chapter 3 outlines my research process. First, I explain my study design and then describe the setting for the study, including the school setting, case study subject, and study group. Next, I provide my methods for collecting and analyzing data. Chapters 4, 5, and 6 present my findings focused on the learning dispositions of curiosity, risk-taking, and voice. Each chapter includes a brief introduction to the specific learning disposition followed by series of data excerpts in the form of tabled transcripts related to that learning disposition with analysis of the data. The analysis includes the discourse strategies the teacher utilized to influence that particular learning disposition. I conclude each chapter with a discussion of the gaps in the literature and arguments for the inclusion of this research. Finally, in Chapter 7, I discuss the addition of risk-taking and voice to the corpus of learning dispositions. This argument for two new learning dispositions is followed by my response to my research question, naming and describing teacher influences on the development of learning dispositions.

Multiple teacher strategies for supporting learning dispositions are revealed in this study. The chapter concludes with ideas for further research and limitations of this study.

## Chapter 2: Literature Review

This literature review establishes the relevance and critical importance of learning dispositions (LD) in early childhood education (ECE). The research suggests that teachers may be able to influence LDs through either modeling or direct instruction (Fantuzzo, Perry, & McDermott, 2004). However, what has not yet been explored is how teacher-child interactions are linked to learning dispositions. This review defines the purpose of this study – to examine the ways in which early educators can influence and develop, or conversely, diminish learning dispositions in ECE.

### Literature Sources

Studies, articles, and books for this review were identified through Google Scholar and the University of Arizona (UA) library searches of *learning dispositions* (commonly used in international research) and the related term *approaches to learning* (more commonly used in the U.S.). However, I did not reference *habits of the mind* (Costa & Kallick, 2008) because its definition did not fit my working definition of learning dispositions. I also searched specific dispositions including curiosity, persistence, independence, and resilience. These words were selected due to their prominence in the literature related to ECE. The UA research librarians and my advisors supported my search as well. The database ERIC.ed.gov produced some related topics. Additionally, a search of citations in selected articles yielded studies on effective learning, learning behaviors, task behaviors, and approaches to learning. Some research exists referencing the need for teacher-child relationships to motivate learning dispositions. The need for my study is demonstrated in the many articles that call for further research on learning dispositions in ECE and how teacher-child interactions relate to learning dispositions (Marx,

2001; Barbu, Yaden Jr., Levine-Donnerstein, & Marx, 2015; Claxton & Carr, 2004; Hyson, 2008; Kagan, Moore, & Bredekamp, 1998).

### **Learning Dispositions Definition**

Learning dispositions are observable behaviors, such as curiosity, persistence, creativity, or initiative, that display purposeful expression of movement toward a learning goal (Katz, 1988). These behaviors are the manifestations of personalized patterns of thinking that influence behavior and/or speech (McDermott, Rikoon, & Fantuzzo, 2014). Katz and Raths (1985) clarify the term ‘disposition’ by distinguishing it from other personal characteristics such as traits, skills, attitudes, and habits. Learning dispositions can describe children’s strategies for mastering skills and behaviors that indicate ways children become engaged in learning. They are observed when a child can recognize, express, use, or master behaviors that explicitly demonstrate movement toward learning goals they are developing as part of their learning dispositions.

**Observable behaviors.** Observable behaviors are children’s actions that can be noticed by careful observation of children engaged in work or play with their peers, materials, or learning engagements (group reading, assigned writing, teacher directed experiments, etc.). These behaviors include not only physical actions, such as painting a picture or arranging dolls, but also any verbal or nonverbal communication such as talk, pointing, or other gestures (Fantuzzo, Perry, & McDermott, 2014). For example, when a child says, “I’m going to see what happens when I place a piece of paper on my wet painting,” the child is engaging in the observable behavior of curiosity. This behavior and speech are an expression of curiosity because the words ‘going to see what happens’ indicate that the child is wondering or curious about what the effect of her action will be. The observable behaviors documented in this study are those that represent a purposeful expression of movement toward a learning goal.

**Purposeful expression.** Purposeful expression is an intentional communication or display of thinking. Purposeful expression can be observed directly when a child's spoken words indicate the child's intent toward a learning disposition. However, when the expression is an action or behavior, the intent of a child's behavior may not be explicitly known. At such times, it is essential to observe the child more carefully, noticing details such as eye gaze, non-verbal communication (Johnston, 2004), preceding statements or the results of behavior, or gaining information from multiple perspectives to understand the purpose of the action (Carr, et al. 2010). An observer can infer purposeful expression by noticing the strategies the child uses as well as the choices of words and actions that signal the child's intent of moving toward a learning goal (Carr, et al. 2010).

**Learning goal.** A learning goal is a skill, action, understanding, or idea that a child seeks to acquire or master (Carr, et al. 2010). The learning goals of young children are found in domains such as social learning, physical skills, auditory skills, verbal skills, and academic learning. Children's learning goals can include skills such as balancing on a beam, negotiating turn-taking with a peer, cutting with scissors, and pre-literacy skills such as identifying symbols, deciphering sounds, drawing or writing, and early math skills such as sorting by attribute, counting, ordering by scale, and manipulating geometric shapes (blocks). Learning goals are determined by the child, but teachers and policymakers also play a part in setting them for children. Teachers create learning objectives, and policymakers create learning standards. Children can move toward learning goals determined by anyone, but it is through the act of choosing a learning goal that a child makes it their own.

**Learning goals are not performance goals.** A learning goal differs from a performance goal. A learning goal as defined above is an internally motivated task (skill, action,

understanding, or idea) that a child seeks to acquire or master. How a teacher ignites a child’s internal motivation toward a learning goal supports the development of learning dispositions. In contrast, according to Dweck (1985), a performance goal, which is externally motivated, is concerned with how the task is accomplished and involves seeking to do the task well. A child’s motivation often is seated in accomplishing the task with the goal of an external reward. Dweck argued that an individual’s behavior in a particular situation displays their orientation toward a performance goal or a specific learning goal. This study examines how a teacher influences a child toward a learning goal.

### **Sample Learning Dispositions**

There is no one universally accepted group of learning dispositions. In fact, in the U.S., learning dispositions are often referred to as approaches to learning. Examples of various sources of learning dispositions are shown in Table 1.

Table 1

#### *Examples of Learning Dispositions*

<b>Source</b>	<b>Learning Dispositions</b>	<b>Purpose</b>	<b>Citation</b>
AZ Early Learning Standards	Independence, creativity, engagement, resilience, imagination, responsibility, risk taking and problem-solving	Critical to kindergarten readiness, and promotes their inclusion in ECE curriculum	AZ Early Learning Standards, 2018
Numerous studies	Independence, creativity, engagement, resilience, imagination, responsibility, and problem-solving	The key components to success in United States schools	Kagan, 2002; Copple & Bredekamp, 2009
Head Start	Independence, creativity, self-motivation, resilience	Names 3 domains of inborn, social and intellectual dispositions, establishing a link between effective learning and children’s dispositions	Head Start, Early Childhood Learning & Knowledge Center

Bertram & Pascal	Independence, creativity, engagement are three dispositions	Traits indicative of an effective learner	Bertram & Pascal (2002)
<i>Te Whāriki: He whāriki mātauranga mō ngā mokopuna o Aotearoa Early childhood curriculum</i>	Engagement, resilience, imagination	New Zealand's national ECE curriculum, as developed with the Maori people and the New Zealand Education Ministry	Carr, 2002
Arizona Study on Readiness	Persistence, problem-solving, independent decision making, risk taking in learning, and curiosity	A fluid understanding of LDs in ECE and their importance to learning.	Marx, 2011

### **‘Learning Disposition’ Qualified**

The table above demonstrates the range and variety of learning dispositions. These variables are related to the purpose of the author or agency in specifying these learning dispositions and the intent for their use. Numerous studies (AZ Early Learning Standards, 2018; Kagan, 2002; Copple & Bredekamp, 2009) naming learning dispositions as key components to success name dispositions that are more easily measured. For example, independence can be measured more objectively by the number of times and duration of time a child takes an independent action as opposed to imagination, which is an elusive and more subjective disposition to measure. There are also some dispositions seemingly agreed upon, such as independence, resilience, and creativity. Table 1 provides an understanding of the current fluidity in both understanding and research of learning dispositions.

Note that some sources refer to learning dispositions as approaches to learning; however, the two terms are not interchangeable because they vary some in their definitions and use. Approaches to learning are defined as distinct sets of behaviors that indicate ways that children

become engaged in classroom learning activities (Fantuzzo, Perry, & McDermott, 2004). The term ‘approaches to learning’ is frequently found in policy and teaching textbooks, especially in the U.S. (e.g., see Arizona Early Learning Standards [AzELS, 2013]). Research embracing approaches to learning observes the end product instead of the process of a child working toward a learning goal. Approaches to learning have a more quantitative viewpoint on children’s learning and tend to focus on a wide age range of students in a context of subject and clinician (McDermott, Rikoon, & Fantuzzo, 2014; Mokrova, Brien, Calkins, Leerkes, & Marcovitch, 2013). In contrast, the term learning dispositions (Carr, 2001; Fantuzzo, 2005; Katz, 1999) appears more frequently in ECE classroom qualitative research and focuses on the lived experience, “the result of any transaction between people and the world, emphasizing the subjective significance of the situation on the person” (Esteban-Guitart & Moll, 2014, p. 33). In other words, research on learning dispositions looks at children in the context of the totality of the confluence of their classroom experience and their social, cultural, and experiential world (DaRos-Voseles & Moss, 2007). The more qualitative view of learning dispositions makes it more appropriate for ECE research, for it enables a more holistic view of young children’s learning (Hamre & Pianta, 2001) and is an expression of a child’s thinking. Thus, in this study, I have elected to use the term learning dispositions in order to capture the process of learning as expressed in learning dispositions.

### **Specific Learning Dispositions**

Examples of some specific learning dispositions are described below:

- Curiosity – a view of self as interested, with the expectation that people, places, and things can be interesting; it demonstrates motivation to understand (Engel, 2011; Claxton & Carr, 2004; Katz, 1998).

- Independence – a view of self as competent to work toward a task with limited support – to self-manage (Claxton & Carr, 2004; Katz, 1998).
- Persistence – a view of self as someone who persists or continues working with a task past the expected time of completion or in spite of opposition (Claxton & Carr, 2004; Katz, 1998).
- Creativity – the view of self as a communicator (expressing ideas) or innovator in a wide range of contexts (speaking, painting, constructing, drawing, singing, dancing, etc.). This learning disposition is cross listed as imagination (Bertram & Pascal, 2002; New Zealand Ministry of Education, 1996).
- Resilience – a view of self as someone able to return to or persist with a problem despite setbacks. Similar yet different than persistence because resilience is an ability to recover from or adjust easily to misfortune or change (Claxton & Carr, 2002).
- Engagement – a view of self as someone who is attentive and gets involved and remains engrossed or focused. It is often linked with persistence when a child demonstrates the ability to attend to relevant stimuli and persevere with difficult tasks (New Zealand Ministry of Education, 1996).
- Problem-solving - the view of self as strategic with flexible approaches to a task or problem (Marx, 2011; McDermott, Green, Francis, & Stott, 1999).
- Responsibility – a view of self and others as people with rights; to take another point of view beyond self (Bertram & Pascal, 2002; Carr, 2001; DaRos-Voseles & Fowler-Haughey, 2007).
- Decision maker – a view of self as able to measure choices and make a decision (Claxton & Carr, 2004).

Other dispositions appearing in the literature are not included in this review as learning dispositions because these do not explicitly move a young child toward a learning goal. For example, social dispositions such as acceptance, friendliness, empathy, generosity or cooperativeness (Katz & McClellan, 1997) describe social behavior and are important dispositions for socialization but do not represent explicit movement toward a learning goal.

### **Three Learning Dispositions**

Three learning dispositions emerged from the analysis of this data: curiosity, risk-taking, and voice. A brief review of the literature associated with these learning dispositions follows.

**Curiosity.** Curiosity may be the most obvious learning disposition, and it is frequently associated with uncertainty. Jirout and Klahr (2012) specifically defined “curiosity as the preferred level of uncertainty – or the amount of uncertainty that will lead to question asking or exploratory behavior” (p. 5). They also reported that the child’s amount of uncertainty or cognitive conflict leads to question asking or exploratory behavior. Uncertainty is one of the factors that prompts curiosity (Berlyner, 1979; French & Woodring, 2013; Meta, 2016), but uncertainty alone does not prompt curiosity. Other studies indicated the degree or amount of uncertainty that prompts curiosity is also important (Shah, Weeks, Richards, & Kaciroti, 2018), while few have investigated how to apply the idea of the quantity of uncertainty to promote curiosity in early education.

Curiosity begins in infancy, when children test their theories about how things work by collecting data—trying out different actions on the world and watching to see what happens (Gopnik, Meltzoff, & Kuhl, 2000). Not only are they curious about people, but their curiosity is influenced by those around them (Engel, 2014). Toddlers with secure attachments (Bowlby, 1969) exhibit more curiosity as they get older (Saxe & Stollcock, 1971), and the importance of

attachment or relationship continues as children develop. Pre-kindergarten children studied in home settings who asked questions for factual information better remembered information received as a result of a question and continued seeking explanations as they grew older (Chouinard, Harris, & Maratsos, 2007). Perhaps this time of intense curiosity is due to a 90% increase in brain development occurring in the first five years, but that is a topic for another study.

***Known influences on curiosity.*** In a study of preschool and elementary school students, a direct link was found between how much the teacher smiled and talked in an encouraging manner and the expressed level of curiosity of the children (Hackman & Engle, 2002). Another study found smiling and making approving comments also positively influenced curiosity (Moore & Bulbulian, 1976). These friendly and approving ways of interacting influenced curiosity. In fact, Engle and Hackman (2002) used the terms ‘active interest cognition’ or ‘focusing condition’ to describe an experimenter who is extremely attentive and encouraging of the student’s behavior with smiles, eye contact, and occasional interjections (p. 634). Cues from preschool teachers therefore definitively influence curiosity, and when children go to school, their impulse to explore and inquire remains subject to subtle cues from adults about what is appropriate (Bassok & Engle, 2014). This research specifically illustrates the effect that teachers can have on curiosity.

Adult modeling of curiosity is critical in encouraging children to follow their hunches and questions in a productive manner (Bassok & Engle, 2014). Adults can encourage children’s curiosity, but preschool teachers often do not modify their questions to the ability level of the child and mainly ask low-level questions (Hestenes, Cassidy, & Niemeyer, 2004). When the quality of the questions is low, curiosity is minimally influenced. In a study of the teacher

questioning and feedback in 3,000 preschool classrooms, it was found that the interactive feedback lacked conceptual focus (Pianta, Howes, Burchinal, Bryant, Clifford, Early, & Barbarin, 2005). Clearly, teachers need strategies for creating classroom discourse and feedback, including question construction, that focus children on ideas and concepts they may be curious about. One can conclude that in these preschools with low-level questioning, curiosity is not being enhanced. Strategies for modifying questions to meet the ability level of young children needs further study.

The teacher's interest can become a figurative bridge of curiosity between uncertainty and knowing. In fact, according to Bar-Anan, Wilson, & Gilbert (2009), "Events that are either too familiar and easily understood, or too novel and difficult to understand, may not spark people's interest. A moderate degree of novelty and incomprehensibility may be most likely to induce curiosity" (p. 126). When a teacher wonders aloud with children, explores their questions and comments, and listens deeply, she induces a level of cognitive curiosity, that is, of children being curious about their own ideas.

With young children, cognitive conflict, or the noting of contradictions and process of equilibration (Resnick, 2017), is often induced by teachers' open-ended questions. This can then lead into activities addressing those questions, and modeling question-asking behavior can help children recognize uncertainty and ask questions themselves (Zimmerman & Pike, 1972). This strategy of not giving direct answers to questions is common in early education. Open-ended questions can lead to curiosity. The types of questions that prompt curiosity are studied in early education, but there is a gap in the literature regarding the role the teacher plays, actually being the question herself, positioning herself as uncertain, and spontaneously asking questions to prompt curiosity.

Curiosity is also influenced by the space and time for children to ‘mess around with’ materials (Claxton, Edwards, & Scale-Constantinou, 2006; Wasserman, 2009) or play with ‘loose parts’ (Maxwell, Mitchell, & Evans, 2008; Sutton, 2011). The types of objects a teacher selects to present or offer students can also influence curiosity. Similar to the findings related to novelty mentioned above by Bar-Anan et al. (2009), Renninger (1992) found that certain objects invited more exploration than others, concluding that interest and curiosity are closely related. Presenting an object, materials, or ideas that are uncertain can also influence curiosity. For example, in the Reggio Emilia Approach, a provocation (Rinaldi, 1998) is the presentation of a problem (object, materials, or task) that is big enough and hard enough to interest and challenge a child (Edwards, Gandini, & Forman, 1998). As found in the work of Dewey (1923, 1938) and Piaget (1976), knowledge is formed through direct experience, and experience requires time. This literature tells us a great deal about increasing children’s development of curiosity through open-ended, provocative materials and providing sufficient time to be curious. Few have investigated strategies for developing curiosity in a preschool teacher’s discourse.

**Risk-taking.** Risk-taking is an action or expression in which the child considers the outcome. Carr (2002) described risk-taking as “engaging with uncertainty, being prepared to be wrong, risking making a mistake—going on learning” (as cited in Stephenson, 2003, p. 41). Risk involves concern about the process or outcome. Risk-taking can also include cognitive and social risks in the form of expression. In other words, a child could perceive a cognitive risk of failing, of not succeeding, of making a mistake, or as not being seen as smart. They could also be concerned about feeling embarrassed in front of the class or making a mess. In this way, cognitive or social risks involve negotiating concern, uncertainty, or worry about the outcome and taking the risk regardless of perceived consequences.

Risk-taking appears in the literature of outdoor and nature play (Harper, 2017; Rivkin, 1995; Stephenson, 2003). In a traditional sense, the idea of ‘minimizing risk’ is an insurance and liability issue for schools, and it also invokes health and safety policy issues. Incorporating risk-taking as a learning disposition requires a positive understanding of risk. Stephenson stated that “undertaking ‘risky’ activities is an integral part of children’s drive to extend their physical prowess and so their independence,” and that children “hunger for physical challenge” (2003, p. 38). Malone & Ruder (2017) stated that taking risks is fundamental to independence; in fact, building independence may require mastering risk-taking experiences. Can that risk-taking be encouraged in classroom and playground engagements to enable children to experience the challenge and mastery that comes with risk-taking experiences? These researchers argued for the importance of undertaking ‘risky’ activities, but the literature does not focus on specific teacher strategies in school settings that influence risk-taking.

**Voice.** The word ‘voice’ has multiple meanings. Merriam-Webster (2019) defined it as communication, the sound or sounds uttered through the mouth of living creatures, especially human beings when speaking, shouting, singing, etc. The second dictionary definition of voice is a universal right that utilizes communication and facilitates the exchange of knowledge between individuals through a common system of symbols, signs, or behaviors (Merriam-Webster, 2019). A simple example of voice in an early education classroom is when a teacher gives children the opportunity to voice their opinion about which book to read through voting or tally making. The children are offered a system for expressing their opinion. This form of voice as an expression of opinion, will, choice, desire, or right is used in this study. It is foundational to participation, expression of ideas, and sense-making. In fact, the United Nations Convention on the Rights of

the Child names freedom of expression as a fundamental right in Article 13<sup>1</sup>, stating that children have the right to communicate, express their ideas, and be heard (Assembly, U.G., 1989). The development of voice is essential if we are to view children as citizens of the world and not view “children’s identity as citizens in waiting” (Malone & Rudner, 2016, p. 5). Young children who learn to voice their opinions and concerns become citizens of their classroom.

*Voice as learning disposition.* Voice can be named as a learning disposition because it enables the enactment of knowledge and skill. Voice can reside with commonly named learning dispositions such as curiosity, persistence, independence, and resilience (Bertram & Pascal, 2002; Katz, 1988) as well as confidence, courage and curiosity, trust and playfulness, perseverance, and responsibility (Carr, 1998). Voice can be incorporated in the pantheon of learning dispositions because it is an observable behavior that displays purposeful expression of movement toward a learning goal (Katz, 1988), and through voice, a child can make their knowledge or skill understood.

In this way, voice can serve as an affective and cultural filter for learning trajectories (Carr et al., 2010, p. 15) because expressions of opinion, will, choice, desire, or right are grounded in a child’s lived experience (Esteban-Guitart & Moll, 2014). Just as voice can be supported by interactive experiences in an environment with important adults, such as parents and educators, and peers, it can also be weakened by these same influences (Bertram & Pascal, 2002).

Couldry (2010) emphasized that voice is an ongoing social process of exchanging narratives that always involve speaking and listening. In this manner, voice can be understood as

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<sup>1</sup> **Article 13:** The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice

socially grounded, performed through exchange, and subject to power struggles and social roles (Noppiari, Uusitalo, & Kupiainen, 2017). These social or intellectual exchanges are often observed as the purposeful expression of movement toward a learning goal (Katz, 1988). Similarly, the enactment of social roles incorporates voice, and voice can resolve power struggles.

Voice also gives children the ability to influence and make decisions about what and how something is learned in order to expand their capabilities. Adair (2014) defined this ability to influence as agency, noting that young children can use their voice and agency to increase or diminish their capacity to make autonomous choices that help them determine unit topics; experiment and engage in open-ended exploration and conversation; plan projects or help their friends with ideas; explore materials, text, and other resources to generate content; and use their curiosity as motivation and inspiration for inventing, planning, designing, and problem-solving. Voice precedes agency, and their further development is entwined.

One issue to consider is whether or not children have real choices in preschool. The Danish researcher Gulløv (2003) formulated the ambiguity in preschool as the coexistence of both surveillance over children and acknowledgement of the notion of children's self-management (Markström & Halldén, 2008). These Scandinavian researchers focused on the agency of children and how they try to take control. The researchers not only observed how children appropriate power, but also how they are allowed the space and initiative to do so. The preschool is their space, but the time they spend there is regulated by decisions made by their parents and the staff. In what ways are children viewed as competent to negotiate activities and also to negotiate having some time and space of their own? As Corsaro (2017) and Danby and Baker (1998) showed, negotiation is a part of a child's daily interactions in preschool, between

children and between children and adults. The development of voice helps support the development of agency and the ability to negotiate. Once a child finds her voice, agency can emerge, and from her voice is the identity of agency. This literature skillfully illuminated the importance of agency; however, the significance of finding voice to enable agency has yet to be revealed.

Communication as a socially situated activity motivates voice as a child's social expression. Communication in preschool classrooms requires mutual participation (Sfard, 2015) between child and teacher or child and child. A study by Daniels (2013) described the child's learning as expressed in a book of photographs and narratives. This book served as a tool for communication and child-parent mutual participation, while reflecting on the book was an expression of voice. Related to Carr's (1989) concept of shared focus, when two or more people are focused and in dialogue about the same subject, the mutual participation facilitates learning as a socially mediated process. Through interactions and communication with the people in their classroom, young children develop the learning disposition of voice. This leads to communication that shares focus or encourages mutual participation, which engages children with ideas and tools that enable their voice and the social process of learning (Sfard, 2015; Vygotsky, 1978). Voice as the expression of ideas, opinions, and desires is the enactment of thinking, and it influences learning.

Having established that communication can be activated by voice, and communication is socially motivated and linked to learning, voice is therefore linked to learning. This connection is supported by Vygotsky's socio-cultural theory that cognition occurs through participation in culturally specific, tool-mediated, historically established ways of executing various life tasks (Vygotsky, 1978). Vygotsky focused on what people say and do together while participating in

daily activities. The saying and doing found in preschool classrooms through mutual participation in activities as observed in the teacher-student relationship is communication. Thus, by participating in communication, thinking and voice are developed. Forming opinions, expressing choices and rights, and having will are essential learning dispositions.

### **Policy Gap**

Learning dispositions have policy, socio-emotional, and academic implications. In policy, they are referenced in teacher preparation literature and early learning standards. The National Council for the Accreditation of Teacher Education (NCATE) requires documentation of how preservice teachers use, nurture, and assess children's dispositions (NCATE, 2006). As previously established, The Arizona Early Learning Standards and the New Zealand National early education curriculum, Te Whāriki (Carr, 2001), named the approaches to learning in their policy. The National Association for the Education of Young Children (NAEYC) identified approaches to learning (learning dispositions) as one of the five aspects of school readiness that "focused on the how rather than the what of learning" (Copple & Bredekamp, 2009, p 15).

While this literature clearly values learning dispositions, it reveals little about how to develop learning dispositions. They are called for (or named) in policy, but little guidance for teachers is offered. For example, the Arizona Early Learning Standards (AzELS) call for the development of learning dispositions in the form of approaches to learning. These standards state, "curiosity is a prerequisite of the scientist, and problem-solving is as necessary for social relationships as they are for mathematics" (AzELS, 2013, np). They stated that learning dispositions allow children to acquire "new knowledge, learn new skills, and set and achieve goals for themselves," and that they are "one of the most important domains of early childhood development" (AzELS, 2018, np). Nevertheless, in this 233-page document, there are only 25

pages describing them, while there are 41 detailed pages dedicated to Language and Literacy complete with teacher strategies for promoting Literacy. It does offer concise indicators and examples of approaches to learning, but no teaching strategies similar to those found in Literacy.

NAEYC promotes 12 principles of developmentally appropriate practice. Number 12 explains that “children’s experiences shape their motivation and approaches to learning ... [which]... affect their learning and development” (Copple & Bredekamp, 2009, p. 15), but this document fails to offer strategies to develop learning dispositions. Policy standards call for the inclusion of learning dispositions in early education, but they are weakly described and there is little offered in the way of guidance or strategies regarding enactment of LD’s.

### **Learning Dispositions’ Connection to Outcomes**

**Academic success.** A substantial body of research links learning dispositions to future student academic success. More specifically, a positive link has been shown between approaches to learning in kindergarten and individual trajectories of reading and math performance in first, third, and fifth grades (Li-Grining, Votruba-Drzal, Maldonado-Carreño, & Haas, 2010). For example, independence was found to be related to school success in a study of 70 longitudinal studies (Pianta & McCoy, 1997). Persistence was a driving factor in the development of early cognitive-linguistic skills in three-year olds’ academic skills two years later, over and above demographic factors (Mokrova, O’Brien, Calkins, Leerkes, & Marcovitch, 2013). Learning dispositions developed in early childhood are linked to future academic success.

The effects of learning dispositions on socio-emotional development are also linked to academic success. Children’s cooperation, independence, and classroom participation are important predictors of early school achievement (Ladd, Birch, & Buhs, 1999). The development of learning dispositions, such as assertiveness, leadership, and independence, influences socio-

emotional growth and impacts children's ability to participate in peer engagement in learning (Morrison, 2017). Independence, persistence, and focus or engagement influence the development of social-cognitive skills linked to social emotional development and set the trajectory to future academic success (Daniels, 2003).

Thijis and Koomen (2008) also positively linked learning dispositions with academic success through socio-emotional growth. For example, a child will often make use of persistence in pursuing a friendship instead of giving up after the first try. In a similar manner, a child who is independent of their parent can be curious about the world or engage in learning beyond their emotional needs. Young children whose teachers provide support in times of stress develop more emotional security and show more task persistence and independence (Davis & Peters, 2012; Klem & Connell, 2004; Thijis & Koomen, 2008). The importance of learning dispositions to socio-emotional development is foundational to both a child's social development and their academic achievement.

**Mitigating socio-economic factors.** Another study found that children's attention (the learning disposition of engagement or focus) in preschool partially mediated the link between specific family characteristics (family income as related to family size, maternal educational level, and child gender) and children's achievement (NICHD ECCRN, 2006). This research suggests that the learning dispositions of engagement and focus can support a child's learning and mitigate socio-economic factors such as low income and low education level of mother. Recent research suggests a plausible connection between the learning disposition of engagement and executive function, a predictor of academic success (Lawson, Hook, & Farah, 2018).

## **Development of Learning Dispositions**

**Non-teaching strategies.** As established earlier, learning dispositions are well defined, and policy calls for their enactment; however, teaching strategies for the development of LD's are few. The examples that follow demonstrate currently available research regarding the development of LDs in learning environments, classroom communities, and classroom materials. The learning environment influences the development of learning dispositions through the materials, the arrangement of physical space or classroom for learning, the choices of engagements (activities) the teacher establishes, and the types of access children have to the learning environment (Ellis, 2005; Edwards, Gandini, & Foreman, 1998; Strong-Wilson & Ellis, 2007). Within the learning environment, classroom communities (children, family, and teachers) stretch learning dispositions whenever multiple viewpoints of a child's learning dispositions are documented and shared with children and offer learning opportunities within relationships (Carr & Claxton, 2002).

In children's classrooms, research on learning dispositions in ECE reveals their presence in play (Claxton, 2008) and their enactment in peer relationships (McDermott, Rikoon, & Fantuzzo, 2014; Roorda, 2012; Thijs & Koomen, 2008). These environmental, physical, and social contributions to learning dispositions are available to teachers, but they fail to provide guidance on teacher discourse.

**Role of the teacher.** The early educator can support the enactment of learning dispositions. Not simply a conveyor of content and manager of children, the teacher's role is to value children's ideas, efforts, spaces, and work to maintain the child's enthusiasm toward their own learning (Futomo, 2002). Thus, teachers can influence the development of learning dispositions by making them visible to the community of learners (including the children

themselves) and by developing specific strategies and materials that influence learning dispositions.

According to Fantuzzo, Perry, & McDermott (2004), a teacher's discourse can be a significant influence in the development of learning dispositions. Additionally, teachers can influence learning dispositions by shaping the learning context to include interactive experiences, such as dyadic events that occur between teacher and child, and fully integrated learning in a peer pair or group. The teacher can explicitly influence learning dispositions through their actions and organization of the learning environment (both physical and social), and they can implicitly influence learning dispositions through their classroom discourse (Li-Grining et al., 2010; Thijs, Koomen, Roorda, & Hagen, 2011). In other words, a teacher can influence learning dispositions overtly by labeling the actions and ideas with the names of learning dispositions, or they can enact a learning disposition, thus modeling the disposition for children.

**A specific study.** An example of learning dispositions made visible is found in Daniels (2013) photographic project, 'Learning Journeys'. In this project, she created personalized books for each child, which were equally accessible to teachers, families, and children. Each book or journal featured photographs and narratives of the child engaged in learning (e.g., problem-solving a block building, exploring a bee in a flower with a magnifying glass, or persevering at hammering a nail). The Learning Journey documented evidence of a child's learning dispositions, and it created a context for the child and family to jointly reflect on the child as a learner – a communal act supportive of the child's thinking and self-esteem. When the child understood their learning disposition expressed in the journal, the parents and child could then jointly reflect (Bush, 2006) on the disposition through the journal. The Learning Journeys served as a tool for meta-cognition of learning through which families, teachers, and children discussed

the child's learning dispositions. Daniels (2013) showed the power of shared focus (joint viewpoint) to develop learning dispositions and demonstrated the empowering action of actively engaging children and families in discussions of learning dispositions. In this way, the role of the learning environment, classroom communities, and classroom materials influencing learning disposition development becomes visible. Through Learning Journeys, a classroom teacher conducted the orchestration and manifestation of environment, communities, and materials to make learning dispositions visible.

**The need to be intentional.** Cooper, Hedges, and Dixon (2014) intended to replicate Daniel's finding that teacher-parent interactions supported the development of learning dispositions. Cooper et al. (2014) set out to examine the teacher's role in learning disposition development as a visible component of New Zealand's early childhood education curriculum of Te Whāriki. The childcare center in this study implemented curricular guidance through both the Resources for Infant Educators (RIE) (Gerber, 1979) and Te Whāriki (NZ Ministry of Education, 1996). Cooper et al. (2014) found a contrast between teachers' roles in these two curricular approaches. The RIE approach, founded on the belief that every child has a right to be respected as a capable and competent individual (Gerber, 1979), emphasizes uninterrupted play without unnecessary interference from adults, while Te Whāriki informs teachers to view all children as competent, confident learners and to support and guide their learning through warm interactions (NZME, 1996). In short, Te Whāriki values community interactions, whereas RIE values independence.

In their study, the teachers supported the children's independent learning and in accordance with RIE, did not explicitly encourage curiosity, persistence, exploration, and autonomy. These learning dispositions were only stated in interviews and in children's

portfolios. In other words, the ‘Don’t interrupt’ philosophy of RIE led to limited dispositional learning through interactions with teachers. The teachers only communicated with parents about childcare related information (number of bottles, diapering, and temperament report for the day) with little evidence of parents’ reflection on, or participation in, dispositional development. The care providers wrote about the learning dispositions but did not work to enact them with children, nor did they talk with parents or offer shared reflections on learning dispositions.

The study by Cooper et al. (2014) raised the tension between naturally developing learning dispositions as stated in RIE, and teachers’ and parents’ interactional and relational experiences. There was little evidence of how the teachers were reflecting and shaping children’s orientations toward learning or learning dispositions as stated in Te Whāriki, or how teachers were sharing the children’s learning dispositions with parents. This limited sharing of learning between the teacher–family was a hindrance to the enactment of Te Whāriki and a barrier to nurturing learning dispositions. In this ECE center, the non-interrupting teacher, though following her interpretation of the assigned RIE curriculum, did not implicitly or explicitly influence learning dispositions. This study demonstrates the effect of minimal interactive relationships with children and their families. When these relationships are weak, learning dispositions are inhibited. The teacher-child interaction, engagement, and use of materials are all contexts for the development of learning dispositions.

**Theorized teacher strategies.** In addition to the empirical work cited above, Claxton and Carr (2004) theorize strategies early educators use in developing learning dispositions. They describe how teachers influence learning dispositions through expanded use of stories, interviews, video clips, photographs, and pedagogical documentation. Teachers in Claxton and Carr’s study clearly explained and made explicit the learning curriculum; they orchestrated the

resources and activities of the classroom creating an inviting and engaging environment; they commented on the learning process and the outcomes, which direct the child's attention toward a reflection of their learning; and, finally, they modeled the responses of an effective learner. In short, the teachers (Claxton and Carr, 2004) created learning opportunities for the meta-cognition of learning dispositions when they made the learning explicit, focused the children on their learning dispositions, and created opportunities for a shared view of learning dispositions with family, teacher, and child. These studies point to strategies teachers can use to develop learning dispositions, but these are big picture strategies not found at the level of teacher discourse. There is a gap in the literature regarding teacher behavior influencing or affecting learning dispositions. Further research is needed describing what teacher moves are best for particular dispositions. To my knowledge, there is no examination of how teacher discourse may affect learning discourse.

My dissertation looks at how teacher discourse influences children's learning dispositions. Teacher's words and actions can influence, affirm, nurture or diminish learning dispositions in early childhood education. That teachers can encourage student's learning dispositions is not disputed (Hamre et al., 2012), but research is limited regarding how teachers encourage, affirm, or possibly diminish children's learning dispositions.

## **Theoretical Framework**

**Socio-cultural theory of cognitive development.** Vygotsky's socio-cultural theory provides the theoretical framework for this dissertation because of the connection between social interaction and culture and cognitive growth in young children (Vygotsky, 1978). The theoretical framework for this study follows theoretical threads from various developments in socio-cultural theory and carries them to organizational learning processes and a socio-cultural perspective of cognitive development. This framework begins with Vygotsky, moves on to Luria's (1976) work

on semiotic mediation, to Bernstein's theory (2000) on the structuring of pedagogic discourse, to Wertsch's ideas (2010) about the juncture of cognitive processes shaped by social engagement and leading to higher level thinking. The framework ends with defining socio-cognition in the context of organizational theory. This is defined as similar but different from Bandura's (2001) socio-cognitive theory.

Socio-cultural theory affirms that the early years of ontogenesis involve the interaction of natural or biological development and the culture or context in which development occurs (Vygotsky, 1978). Considering the various ecological systems (Bronfenbrenner, 1977) or contexts in which children live, they experience a variety of social and cultural interactions. These include family (primarily in the early years), peers, neighbors, school, and social groups (religious practices, clubs, associations, etc.). In each context, children engage with the social and cultural experience of that context. The early education classroom is the context for this study. Children engage with the social and cultural experience of schooling as they are developing and growing cognitively. This study examines how learning dispositions are influenced in the subjective zone of children's experience and teacher discourse.

Luria took up Vygotsky's theory work on semiotic mediation (the use of signs and symbols as mediation tools for language) and advanced the idea of visible semiotic mediation. This was defined as conscious discourse aimed at a specific line of thinking related to classifying and categorizing within the context of the social experiences of the mediator and the mediate (Luria, 1976). These mediation tools could be writing, semaphores, objects, or images. Visible mediation stands in contrast to invisible mediation (Bernstein, 1990) which attended to "how the unself-conscious everyday discourse mediates mental dispositions" (Hassan, 2002, p. 12). Invisible mediation is mediation that occurs in discourse embedded in everyday ordinary

activities of a person's life and references language, body language, and other non-verbal systems or tools of communication. Discourse implies communication that is socially situated and that sustains social "positionings" or relations between participants in face-to-face interaction. Bernstein states that this code-regulated discourse is a regulator of cognitive functions and it is "also central to the shaping of dispositions, identities and practices" (Bernstein, 1990, p. 3). However, the analysis of social and class-regulated coding (Hassan, 2002) is not the focus of this study which uses discourse in terms of a 'small d' (Gee, 2010). This study examines the teacher discourse of words, actions and semiotic mediation, and how they influence learning. Central to the shaping of dispositions, visible and invisible mediation is foundational to the idea that the interactions and communication of a teacher with children influence learning dispositions. What a teacher says and does impacts children, and how and why they speak and act influences learning dispositions. Theoretically, a teacher's affect and discourse contribute to the shaping of a child's learning dispositions.

A teacher influences children's cognitive development as it occurs internally (invisibly) and in relationship with external influences (visibly). In the context of social relationships, or socio-cultural perspective, learning is a process of apprenticeship into social practices (Moll & Greenberg, 1990; Rogoff, 1990; VanDijk, 2001; Wertsch, Del Rio, & Alvarez, 1995). According to Wertsch (2010), when a cognitive process originates in social action and is shaped by semiotic mediation, the thinking is transferred to the individual plane and contributes to shaping higher mental processes. Looking at language use as an important semiotic system, Vygotsky emphasized human communication as critical to the development of cognitive processes (Wertsch, 2010). This study examines human communication as found in the

interactions of a teacher with her students, specifically how children participate in, and appropriate language and social processes.

The socio-cognitive perspective (Akgün, Lynn, & Byrne, 2003), developed within organizational learning, defines a process developed by, and manifested in, the web of individual interactions and cultural structures in the organization (Allard-Poesi, 1998). Social cognition investigates the cognitive mediators of social interaction to analyze the learning processes of people (Martin & Clark, 1990; Tory Higgins, 2000). The framework for this study is inclusive of socio-cultural theory of cognitive development, emphasizing visible and invisible mediation, adds social engagement as a mediator of cognitive development, and acknowledges the cognitive mediators of social engagement as contributors to the learning process.

In the social and physical context of ECE classrooms, the students, teacher, learning materials, and experiences provide the context for learning. These classroom engagements and interactions occur non-verbally, verbally, and socially. Focusing on the social and cognitive engagements between the teacher and child in the context of the classroom as zone for learning, this study examines teacher discourse and how it influences the development of learning dispositions in the socio-cognitive context of an ECE classroom.

The idea of social-cultural theory of cognitive development should not be confused with Bandura's (1986) social cognitive learning theory emphasizing an idea that learning occurs through watching other people (social) and is processed in the mind (cognitive). These theories are similar in how they both involve a learner and another person; however, Bandura's theory relies on observation and imitation, whereas Vygotsky's involves two people in relationship with one another. In 2009, Bandura said biology is not the only influence, and he emphasized that the pressures of social and technological innovation must not be ignored as influences shaping

human development and evolution. However, Bandura's behaviorist tendency does not fit in the constructivist framework of this study.

**Zone of proximal development.** Within socio-cultural theory, Vygotsky (1978) coined the term "zone of proximal development" to explain the relationship between learning and development. Commonly referred to as the ZPD, it is the area between what a child knows and can do alone and the area a child does not know but can reach with the assistance of a trusted other (Bodrova & Leong, 2007). The assistance given to a child may be in the form of clues and hints, rephrasing questions, or asking what they understand. The ZPD is not static and shifts as a child's thinking and knowledge increases. The framework of the ZPD works well for this study, which examines the influence of a teacher on the development of learning dispositions. This dissertation analyzes what a teacher, as a trusted other, says and does while interacting with children both inside and outside of the classroom. The teacher is the trusted other supporting the child's growth.

**Scaffolding.** Scaffolding is an appropriate concept to employ in this study to analyze the engagement between teacher and child. A trusted other or expert can offer scaffolding within a child's ZPD to assist the child in learning (Wood, Bruner, & Ross, 1976). According to this theory, as the teacher and child engage, the teacher physically structures the activity for the child or provides explicit verbal directions to direct the child. The child's understandings are shaped, and learning occurs through repeated joint participation in an activity, which is often mediated by discourse (Hicks, 1995). Additionally, the adult gradually does what Cazden (1983) terms *upping the ante*, (or increasing the amount of engagement). The teacher *ups the ante* or builds upon previous knowledge in a hierarchal manner adding more as the child learns. A key to scaffolding is enlisting the child's interest (Bodrova & Leong, 2007). Wood et al. (1976) also

suggested a teacher's provision of scaffolding may vary. The literature cited in this paragraph supports the use of the term scaffolding to analyze teacher discourse when considering how a teacher influences learning dispositions.

### **Research Question**

Socio-cultural theory of cognitive development, including the concepts of ZPD and scaffolding, focuses on how people learn through interactions and engagements. This dissertation examines how children's learning dispositions are influenced through social engagement. Numerous studies (Baker, 2006; Bertram & Pascal, 2002; Cooper et al., 2012; Downer, Sabol, & Hamre, 2010; Cooper, Hedges, & Dixon, 2014) showed that teachers can encourage student's learning dispositions, but research is limited regarding how teachers accomplish this. This study will use a form of discourse analysis to examine how teacher discourse influences learning dispositions. Specifically, it asks the following: "In what ways do teachers of young children nurture and support learning dispositions?"

## Chapter 3: Methods

In this study, my data were the videos and transcripts of teacher discourse in an ECE classroom and playground for three and four-year olds in Arizona. I analyzed these data using thematic analysis (Glesne, 2011), looking for themes and patterns to create theories about ways in which this teacher influenced learning dispositions.

### Overview

This chapter describes my sequence of work exploring my research question. I begin by explaining my study design and then describe the research site, participants, data collection procedures, and data analysis. The chapter concludes with researcher perspective and limitations.

### Study Design

In this study, I observed a single preschool teacher and analyzed how her teaching discourse relates to children's learning dispositions. Specifically, I examined what she did and said in her role as teacher that supported or diminished learning dispositions. This examination of teacher discourse through direct observation, video, interviews, and thematic analysis (Glesne, 2011) seeks to understand how a teacher's interactions as well as direct and indirect communications are connected to children's learning dispositions.

**Context.** This study required a location where I was likely to observe learning dispositions being developed. My first criterion was to select a preschool teacher, followed by choosing a site with cultural diversity and low SES. Cultural diversity would minimize the chance that learning dispositions could be culturally specific. Observing a population with low SES would minimize the possibility of this study positioning learning dispositions as concurrent with economic privilege.

**Case study participant.** The teacher, MC (pseudonym) was selected because of the quality of her interactions and relationship with children. MC has a BA in psychology and a minor in education, with K-8 certification. She was awarded Outstanding Teacher of Young Children 2015 by the local affiliate of the National Association for the Education of Young Children. I noticed her engagements with students were based on the children's interests, and the teacher-child relationship appeared strong. I chose MC because of her indications of teaching in support of the development of learning dispositions.

**Site.** This study examined teacher-child relationships in a preschool classroom. This natural setting (Creswell, 2014) was a place where the interactions related to learning dispositions were observed as they occurred. The site was an early childhood education classroom located in an elementary school within a public-school district. The school is set within a demographic region in proximity to a major Southwestern University within 200 miles of the US/Mexico border. This school had a diverse student population. The school was 50% Hispanic, 19% White, 17% Black, 4% two or more races, 4% Hawaiian Native/Pacific Islander, and 1% Native American; 88% of the school was eligible for free or reduced lunch (Great Schools).

**Classroom.** The preschool classroom was licensed by the state and was participating in this state's Quality Improvement Rating System<sup>2</sup> (QIRS). This classification assures alignment to a set of state standards for curriculum and teacher qualifications. The year of my study, the class had 18 four-year-old children who spoke the following languages as L1: Farsi (2), Spanish (2), Nepali (2), Burmese (2), Mandarin (1), English (8), and Arabic (1) (teacher communication, 2018). MC, the lead teacher, was my primary subject, and she also had an assistant, both of

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<sup>2</sup> A state tax funded quality improvement rating system in which preschools/centers volunteer for enrollment.

whom spoke English as a first language, and some Spanish. The class had a 1:9 teacher to student ratio.

**Schedule of the day.** This preschool day started at 8:00 a.m. and ended at 11:00 a.m. Parents brought their children to the classroom, or the students arrived by bus. The first 15 minutes of arrival activities were followed by large group time (morning circle), when the teacher read to the group or taught. Next, the children went outside to a preschool playground for 30 to 40 minutes, then went back inside for snack time. The next part of the morning was called ‘investigations’, a small group time when the teacher interacted with groups of two to four children in a learning center (block area, painting easel, drawing, etc.) and there were occasional moments of one-to-one interactions. MC was observed both in the classroom and on the playground. The open classroom setting allowed many opportunities to observe her in teacher-child interactions.

### **Data Sources**

I collected or created five main sources of data: field notes, interviews, video recordings of the school day, video transcripts, and transcript tables. Additional information from the school webpage about the students in this school included race/ethnicity and the number of children who bought full price lunch; the latter allowed approximating those who receive free/reduced fee lunch. The teacher gave me anecdotal information about the children’s home language and educational support provided at school.

Data was collected from an ‘observer as participant’ perspective (Glesne, 2011). As an observer, I had some interaction with the study participants (the teacher and the students) and reacted and responded as appropriate in answering simple questions, helping hold a door, or smiling to a child who was watching me. By minimizing the observer effect (Ary, Jacobs, &

Sorensen, 2010), I could assume the role of authentic-observer-participant. It was my goal to enable the teacher-child interactions to proceed naturally.

**Field notes.** The first day of classroom observation only contained field entries documenting behavior and activities (Creswell, 2014). These notes were open-ended and helped me fine tune video and audio recording procedures. On filming days, the field entries were written in the same notebook and reviewed as needed for confirmation of engagements or sequence.

**Interviews.** Two semi-structured interviews (Creswell, 2014) were conducted with the teacher. The initial semi-structured interview, which took place before the first video, gathered background information and elicited views and opinions (Creswell, 2014). The closing interview, conducted at the conclusion of the filming, further expanded on MC's initial views and opinions. Both occurred in the familiar space of the teacher's classroom to establish a conversational atmosphere. These interviews established familiarity and provided direct and indirect information (Prokos & Fontana, 2007). The pre-interview structure gave me the opportunity to better understand MC's background, philosophy of education, and sense of her view on this group's strengths and challenges (See Appendix A, Pre-Interview). The post interview was an opportunity for further insights and understandings about early education. (See Appendix B, post-interview).

**On-site data collection schedule.** Data collection began with meeting the parents, explaining the study, and obtaining consent (Appendix C). MC welcomed me into the class and introduced me to the parents as a trusted colleague. I introduced myself, explained the research project, and distributed consent forms in English, Spanish, and Arabic. Two days later, I visited the classroom, collected the forms, and observed the group for the remainder of the day without

filming. This day of observing allowed me to chat with parents and children to develop a basic level of rapport.

Simultaneous video and audio recording occurred on Monday, Tuesday, Thursday and Friday (teacher planning day occurred every Wednesday) for two weeks during the preschool day from 8:30 -11:00 a.m. for a total of seven days. The entire morning was recorded to capture the directed teaching and the moments of informal learning. Events during the school day included the following: arrival when the teacher-child relationship begins for that day, direct teaching or ‘circle time’, investigations (a time of free choice of engagements), snack time, outdoor play, and formal and informal one-to-one conversations.

All video content was reviewed on the day it was recorded to check the accuracy of the recording and inform decision-making about future filming locations, lighting issues, and voice recording issues. All teacher-child interactions and engagements were considered for transcription. The interactions I did not transcribe were those that were directive during a transition, had voice quality too poor to be understood, or were private. Examples of private conversations had to do with a child’s anxiety at home, the loss of yet the third pair of glasses, and the scheduling of special services. Conversations between MC and other adults were not transcribed, and conversations with a person without consent were not included in the data.

The camera ran for specific sections or events of the day and not continuously for the whole time. I turned the camera off to avoid filming during the moving transitions between activities or location (inside or outside) when video quality would be poor. For example, I filmed whole engagements around spin art, the whole morning circle, and specific events on the playground. In this manner, the continuous flow of each engagement was recorded. These sections became the transcripts that then became the position coding Tables.

**Video recordings of the school day.** The visual recording documented verbal and non-verbal communication (Neill, 1991) as well as proxemics, or how people use the space around others (Glesne, 2011, p. 69). The video and audio data recorded classroom interactions using a Bluetooth microphone on the teacher and a video camera. The Bluetooth lapel microphone allowed the teacher a full range of motion because there is no cord. It also recorded ambient voices in specific situations, such as one-to-one interactions with a child or in a small group. In small group situations, it was important to pick up the children's words that were part of the dialogue. I moved with the camera when the teacher was moving and placed the camera on a tripod when she was stationary. I viewed the videos the evening they were recorded in case I had follow-up questions. There was a total of 549.64 minutes of video.

**Video transcripts.** The largest body of data consisted of the transcripts generated by the video and audio recordings of the teacher in the course of the school day. I transcribed the early recordings then created audio files that were sent to REV ([www.REV.com](http://www.REV.com)) for transcription to expedite the process. I reviewed the transcripts, added action or non-verbal data, and changed all the names to pseudonyms. I also revised REV's transcriptions for accuracy regarding children's language they missed or misunderstood, to assure accuracy of the transcripts.

The transcriptions of the verbal communication along with non-verbal communication became the corpus for the theme analysis. Additional communication with the teacher in the form of member checking occurred through email or in person to determine the accuracy of the data and findings (Creswell, 2014). This data set was designed to provide the opportunity for close analysis of the teacher-child interactions that influenced learning dispositions.

## Analysis

**Overview.** This research study used coded theory method (Creswell, 2014; Marshall & Rossman, 2006). From an inductive analysis of the data, I constructed concepts around the development of learning dispositions (Ary, Jacobs, & Sorensen, 2010). The overall sequence included: data analysis beginning with organizing the transcripts, creating tables for coding each transcript (Appendix D), reading and writing about the data, coding, data reduction through connecting the themes, and interpretation. Each chapter in this study focuses on a different theme or learning disposition. The data is represented in Tables with closely inserted analysis followed by an analysis discussion of the theme represented by each specific set of data.

**Data analysis.** Data analysis occurred in six major steps: transcript transfer to a table for coding, memo writing for underlying meaning, open coding for learning dispositions, chunking themes, cross-checking themes, identifying three significant themes, and interpretation of these themes.

First, I transferred each transcription to a table to better identify learning dispositions.

This table included:

- who was speaking;
- what they said, what happened, and other descriptors such as facial expressions, voice tone, and body position;
- learning disposition possibly being developed at this moment;
- notes, other details, or thoughts about this event or subtle actions.

The tables for coding each transcript are found in Appendix D. The initial open coding occurred after tabling each transcript using a systematic approach (Strauss & Corbin, 1998).

Using the definitions for each learning disposition as listed on page 21, I reviewed each tabled

transcript, coded, labeled and categorized chunks of transcript whenever that specific chunk indicated an enactment or encouragement of a learning disposition. Using this format, I identified chunks when the teacher influenced or affirmed the learning dispositions of:

- Creativity – the view of self as a communicator (expressing ideas) or innovator in a wide range of contexts (speaking, painting, constructing, drawing, singing, dancing, etc.). This learning disposition is cross-listed as imagination (Bertram & Pascal, 2002; Te Whāriki, 2001).
- Independence – a view of self as competent to work toward a task with limited support – to self-manage (Claxton & Carr, 2004; Katz, 1998).
- Curiosity - a view of self as interested, with the expectation that people, places, and things can be interesting; it demonstrates motivation to understand (Claxton & Carr, 2004; Katz, 1998).
- Persistence – a view of self as someone who persists or continues working with a task past the expected time of completion or in spite of opposition (Claxton & Carr, 2004; Katz, 1998).

The themes of curiosity, independence, persistence, and creativity were based on the learning dispositions I had identified in the outset of this study because they appeared most frequently in the literature. The coding table used in this study enabled me to not only identify the explicit words and delivery the teacher used, but also the teacher's overt and subtle actions and their possible implied meanings. Below is a sample of a transcript and its corresponding coding table

Table 3.1

**Sample transcript.**

- 5 MC: [to Tasneem] Do you want to jump down? Jump down. Jump down. *Tasneem is hanging and swinging her legs. MC moves closer.*
- 6 Tasneem: I'm scared. *MC is loosely holding her body seeming to provide stability and a sense of security.*
- 7 MC: Put your feet straight. Okay, jumping. Wow! What a trick. *Tasneem lets go and lands on her feet on the ground. Tasneem jumps up and down with a big smile on her face and quickly brushes her clothes.*
- 8 MC: [to Tasneem after she had landed] And go back up and around. Good job. *Motioning to go up the other side and come back to the starting platform via the stairs to the bridge.*

Table 3.2

*Sample Coding Table (corresponding to Sample Transcript above)*

Line	Agent	Utterance	Nonverbal	Learning Disposition
5	MC	Do you want to jump down? Jump down. Jump down.	<i>Tasneem is hanging and swinging her legs.</i>	risk taking
6	Tasneem	I'm scared.	<i>MC is loosely holding her body seeming to provide stability and a sense of security.</i>	risk taking

7	MC	Put your feet straight. Okay, jumping. Wow! What a trick.	<i>Tasneem lets go and lands on her feet on the ground. T jumps up and down with a big smile on her face.</i>
8	MC	And go back up and around. Good job.	<i>Motioning to go up the other side and come back to starting</i>
9	MC	All right. Are you going to try it again?	<i>To Irene who is standing on the platform ready to use the ladder.</i>

In step two, I also wrote memos on sections of the transcript to familiarize myself with the data and significant teaching events. This writing process occurred simultaneously with the transcript transfer and served to focus my analysis on learning dispositions. Next, I reduced the data (Guest, MacQueen, & Namey, 2012) by grouping chunks from all the Tables into the major themes (Marshall & Rossman, 2006) of curiosity, independence, persistence, and creativity. In step four, these chunks of transcripts were hand-coded (Creswell, 2014) against the definition of each of these four learning dispositions by placing each chunk with its matching theme according to my code definitions (Appendix D). This step provided particular as opposed to generalizable analysis (Greene & Caracelli, 1997) of each chunk. A written definition of each learning disposition physically posted to my computer helped avoid code drift (Creswell, 2014). Finally, I cross-checked the coding (Creswell, 2014) with experienced researchers to assure agreement on the codes associated with each transcript chunk. At this point, I assumed the findings would be interpretations of the data supporting each of these four learning dispositions; however, except

for curiosity, the data did not fit these learning dispositions. Curiosity remained as a theme for analysis, but through my analysis the learning dispositions of risk-taking and voice emerged.

**Three learning dispositions analyzed for findings.** Ultimately three learning dispositions were selected for analyzation and interpretation with the goal of determining how the teacher was influencing the development of learning dispositions. The selection process for these three learning dispositions is explained in the following three sections. Future research could examine the influence of other learning dispositions, but I selected curiosity, risk-taking, and voice.

*Curiosity.* Curiosity was the disposition with the most data. I cross-checked the evidence against the code observation for curiosity - when a child seeks to increase their knowledge about a novel or uncertain object (French & Woodring, 2013; Tea, 2016; Berlyner, 1979). The data revealed evidence of curiosity as a view of self as interested, with the expectation that people, places, and things can be interesting, which demonstrates motivation to understand (Claxton & Carr, 2004; Katz, 1998). Data showing MC's support of children's interests were selected for interpretation in the findings.

Close examination of the text identified markers for curiosity as both the use of questioning words, and identification of silent moments (4-10 seconds) when MC and a child considered an idea. Events that were excluded for curiosity included question-asking for guidance or information moving toward completing a task rather than building understanding, exchanges of only 2-3 utterances demonstrating minimal interest, and questioning by MC to elicit an action such as, "Why don't you come along now with the class?". In the selection of data for curiosity, it was important to examine the level of interest and the duration of the engagement.

***Risk-taking.*** Risk-taking emerged through the process of cross-checking (Creswell, 2014) coding tables with fellow researchers at my university as we raised questions concerning the learning dispositions of independence and persistence. The data did not exactly fit either independence or persistence. Claxton and Carr (2004) offered independence as a view of self as competent to work toward a task with limited support or to self-manage. They describe persistence as a view of self as someone able to return to or persist with a problem despite setbacks. Furthermore, the data was not a good fit with resilience, defined as the ability to recover from or adjust easily to misfortune or change. These three learning dispositions are important for learning, yet there was something occurring between MC and her students that did not fit these dispositions. She was doing and saying things before independence, persistence, or resilience could occur. Before a child could demonstrate independence, persistence, or resilience, the child had to be courageous and take a risk. These three associated dispositions could only occur after a child had taken a risk. Therefore, I considered risk-taking as a learning disposition.

The data that resulted in independence, persistence, or resilience were grounded in risk-taking. These data chunks for risk-taking were identified by language use and/or nonverbal communication when the child expressed fear or concern about the unknown or in response to uncertainty. Data was sorted for risk-taking when MC supported or assisted a child from a place of fear or concern to a place of knowing and comfort or contentment. Risk-taking was defined as engaging in act with an uncertain outcome that could be perceived as dangerous or embodying some level of fear for the child (Stephenson, 2003).

Examples of risk-taking include children saying they are scared of a task such as jumping from a high place or playing in a large box. But it is not risk-taking when they are concerned a friend is taking a toy and they hit, or when they are scared of a loud sound and shout out. These

actions do not take the child to a place of comfort. Equally, an enactment that they have been asked not to do such as take an extra turn on the swing does contain an element of risk (the teacher may be angry), but it does not achieve a level of contentment for the child. Risk-taking was identified when the child was concerned, scared or worried about the act, MC influenced them to take the risk, and the child was pleased with the results.

*Voice.* Similar sorting problems as found in risk-taking were encountered with creativity. Defined by Bertram and Pascal (2002) as the view of self as a communicator (expressing ideas) or innovator in a wide range of contexts (speaking, painting, constructing, drawing, singing, dancing, etc.), this learning disposition is cross listed as imagination (New Zealand Ministry of Education, 1996). Therefore, identifying it in the transcripts would require knowledge of the child's imaginative or cognitive intent. How did they view themselves? Were they simply creating, or were they being creative? From this consideration of creativity as a self-view as a communicator, I cross-checked the evidence in the data coded as creative and sorted out creative acts that demonstrated communication. Experienced researchers reviewed my work for reliability. There were many chunks in which MC supported children's communication, but 'communication' and 'communicator' were not learning dispositions because these terms did not motivate a child toward a learning goal. Communication is a specific act or action. It is a task or act loaded with meaning. I struggled to identify the expression of creativity and examined it through the lens of communication. In the process of reconciling the prominence of communication with the characteristics of learning dispositions, the idea of voice emerged.

Voice is defined in this dissertation as the child's expression of an idea, question, or opinion. It is a term that represents a behavior a child can exhibit. The data demonstrated how MC supported the development of voice in her teaching engagements. Voice was observed as a

child considered an act that might be considered creative. In the chapter on voice, when Sarah repositioned her finger-painting hands to create a spider and named it, her voice was expressed in this novel creation. When a child was resilient, they were using their voice to express their need or opinion. When, in the same chapter, Carrie said she couldn't sit down when her socks were wet, she was expressing a specific need. MC supported her voice by responding with language directed toward a solution. Likewise, the expression of independence was verbal or physical as seen when Irene used voice to share her drawing and writing with the class. Voice is not simply asking for permission, stating a routine need, or talking among peers. Voice is a specific form of expression of a child's desires – of their learning goals.

This analysis process worked not to count the data, but to break apart the data and rearrange it into categories that facilitate comparisons within and between data chunks and to develop concepts about ways a teacher may influence learning dispositions. Information emerged that I expected to find, as well as information I did not expect to find. This led me to name two new categories for learning dispositions — risk-taking and voice.

### **Researcher's Position**

I believe in the power of early childhood education to empower thinking in young children and create equity in education. Learning to be social and developing learning dispositions are the essential elements of early childhood education. These are the conduits for academic learning. When I am with young children, I look for the totality of the child – their interests and strengths. I believe that they can actively construct their knowledge through direct sensory and intellectual experience and be empowered by their knowledge and skill.

Entering a teacher's classroom to examine her teaching is an act of trust. I am grateful to MC for allowing me to look closely at her teaching, especially since we first met when I was

assessing her with the CLASS instrument. Immediately following that assessment, we had a rich conversation about teacher assessment, early education, and the qualities of an outstanding teacher. Shared ideas, including our view of children as capable human beings, helped build our mutual trust. The initial interview further bonded us as teachers who want to learn more about teaching and learning. We are both women about the same age with over 30 years of experience in the field of elementary and early childhood education. The shared experience of migrating to the Southwest from New England also connected us. Establishing this relationship before I met the children enabled me to be introduced to the children and parents as a trusted colleague.

From another viewpoint, there were a number of reasons I could be viewed as an expert in the room with those whom MC wanted to impress. I have held leadership positions in this city in early education, and at that time, I was an appointed professor. I have also served as a former school director, CLASS assessor, and student teacher supervisor. In these roles, where a critical eye for improvement is helpful, subjectivity has been useful. The CLASS assessment was a tool used by this state's quality improvement rating system (QRIS) and was a powerful source of recognition and funding. The role of CLASS assessor placed me initially in a position of power. MC and I have mutual professional colleagues, and we both were invested in creating a positive research experience. As a researcher, I had to set aside subjectivity and be as objective as possible. I had to minimize my expert effect with MC. The assessor role was eliminated before research began to diminish my position of power. I worked to establish and maintain a colleague relationship through frequent friendly conversations, dressing casually yet respectfully, helping prepare the classroom for the afternoon class, and returning to the room after the last day of school for 'end of year clean-up.'

How my position as researcher relates to the children is impossible to know fully. I am a White, monolingual English-speaking woman of middle income and a homeowner, which sets me apart from these multilingual children of color who live in an area with many apartments and rental homes. I worked to exhibit humility and kindness. Having lived in the Southwest for 40 years, I have come to understand the richness of multiple cultures coexisting. When I failed to understand the children's expression of culture and Funds of Knowledge (González, Moll, and Amanti, 2006), I asked the teacher to explain any references I did not understand. For example, some girls were more reserved, so I sought clarity for understanding their responses to MC's discourse. However, the children mainly ignored me because they are accustomed to unfamiliar adults in the room as therapists, QRIS evaluators and coaches, and parents. I strove to be friendly and helpful.

My job in this research was to be reflective about my role in the data collection and analysis. As an interpretivist researcher (Geertz, 1973), I worked to make sense of teacher-child interactions. As a former director of an early learning center, conference presenter, student teacher supervisor, and advocate for the rights of young children, my research interest focuses on teachers of young children and how they affirm the developing child. I seek to understand issues of social justice embedded in teacher discourse. This data gave me the opportunity to closely analyze a teacher whose educational philosophy is grounded in social justice and constructivism. Her affirmation of children opened viewpoints beyond simply observing interactions and enabled me to see multiple meanings and interpretations of teacher- child relationships.

### **Protection of Human Subjects**

This study included 18 children under the age of five. I maintained the anonymity of all the subjects. I was a friendly 'fly on the wall', maintaining a pleasant and friendly appearance at

all times. I have a state-issued fingerprint card and was never alone in a room with the children or a child.

## Chapter 4: Curiosity

### Introduction

Curiosity as a learning disposition can be defined as the intense desire to know or understand. It is defined by Jirout and Klahr (2012) “as the preferred level of uncertainty – or the amount of uncertainty that will lead to question asking or exploratory behavior” (p. 5). Using this definition, curiosity is viewed in this study as inquisitiveness, or the desire to learn or know about anything. In early education, curiosity conveys interest, eagerness, inquisitiveness, questioning, investigation, and marveling. Curiosity seeks to increase knowledge and is frequently associated with uncertainty (Berlyner, 1979; French & Woodring, 2013; Meta, 2016). Other scholars define it as the motivational construct (Vidler, 1977) underlying “exploratory behaviors applied to novel objects, situations, or events that function to acquire information” (Weisler & McCall, 1976, p. 493). Exploratory behaviors motivate or influence a child’s movement toward a learning goal. Therefore, curiosity can be defined as a learning disposition (Katz, 1988; AZ Early Learning Standards, 2018).

This chapter analyzes three vignettes from this study. They were video recorded, transcribed, and coded. The analysis discusses the strategies this teacher of young children used to influence children’s curiosity. The chapter concludes with a discussion arguing for the use of these strategies to influence curiosity in early education.

In this chapter and the two that follow, the data is represented in tables with five columns. The first column is for the line in the transcript from the video. The next column identifies who is speaking or doing (agent), followed by what they are saying (utterance) in the third column, then what they are doing (nonverbal) in the fourth column, and what learning disposition is being influenced in that line in the fifth column. The scripts in tables are presented sequentially in

order to align their ideas to the LD of the section, but some scripts have lines removed for efficiency. Therefore, there are occasional gaps in the line numbers. The learning disposition may not be yet evident in the children’s words or actions, but the lines indicated signify a strategy used by the teacher to influence a learning disposition.

### **Curiosity Developed with Novel Materials**

MC presented novel materials for exploration, and these materials often influenced curiosity or sought to increase the children’s knowledge about a novel or uncertain object (Berlyner, 1979; French & Woodring, 2013; Meta, 2016;). The following examples demonstrate two strategies of cultivating curiosity through presenting novel materials to explore and directing attention to the novel object, and introducing the material without explanation. The focus of the first example is an item made by Lakeshore® called a Hide & Seek Discovery Ball (see Figure 1), and the second example is new playground equipment.



*Figure 1.* Hide & Seek Discovery Ball<sup>3</sup>

**Scaffolded exploration of novel materials.** MC rolled a large storage cart of play materials into the playground for the children to access each day. From this cart, they took balls, buckets and shovels for sand, superhero capes, or other materials or tools for outdoor play. One day, MC brought a new object, the Discovery Ball, to the playground. The ten-inch ball’s open

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<sup>3</sup> Retrieved from [www.lakeshorelearning.com](http://www.lakeshorelearning.com)

weave construction of flocked plastic strips made it easy to hold. Alfred and Kyle were tugging on the ball. MC squatted down, had a conversation with the children, used various strategies to engage their curiosity, and started a throwing circle.

Table 4.1

*Discovery Ball Introduction*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
			<i>Children are grabbing at the ball and talking loudly about who has this new object.</i>	
25	MC	So, this is a new ball.	<i>MC is squatting down, lower than the children's faces showing a new kind of ball, the Discovery Ball.</i>	Curiosity
26	MC	And it's a throwing ball.	<i>Children are looking on and listening with intensity.</i>	
27	MC	And it has spaces for you.	<i>MC hands the ball to Kyle.</i>	
28	MC	What do you think these places are for?	<i>Kyle reaches out and is given the ball.</i>	

This vignette began when MC noticed the children pulling on the new ball she had placed on the playground cart. The children were clearly interested in this new object and were wanting to hold the novel Discovery Ball. Their curiosity was observed as they sought to increase their knowledge about a novel or uncertain object (Berlyner, 1979; French & Woodring, 2013; Meta, 2016). The act of squatting down to be face-to-face with the children in a position of equity and understanding drew in the children's interest as MC wondered aloud, expressing uncertainty with them about the ball. She gently described the ball to the children and asked them to think about the spaces and their possible use. The children were reaching for the ball to gain first-hand knowledge about the ball.

Table 4.2

*Noticing Details of Discovery Balls*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
29	Alfred	So, you can, uh, put things in the holes	<i>Kyle puts his hands in and through the ball as MC holds it.</i>	Curiosity
30	Alfred	And it falls down		
31	MC	So, if you are throwing it... what do you think is going in the hole?	<i>Kyle has his arm through the ball and has it on his shoulder.</i>	Curiosity
32	Alfred	Umm		
33	MC	Your?	<i>Motioning her hands and fingers open and shut.</i>	
34	Alfred	hands?		
35	MC	Your hands and fingers. It's a way to <u>catch</u> the ball easily.	<i>Tone of acknowledgement of Alfred's comment.</i>	
36	MC	So if you could...	<i>Kyle puts the ball on like a bracelet and slides it up to his shoulder.</i>	Curiosity
37	MC	You can put your arm in it.		

In lines 29-37, MC further engaged curious thinking with questions about how to use the ball and how the holes could be used. The children had been grabbing the ball, so she was meeting that exploratory behavior with questions and experience. In both Tables 4.1 and 4.2, she called upon the children's interest to evoke curiosity when she asked them to notice details about the ball. MC pointed out the spaces and holes in the ball – novel features of the ball. This strategy for asking open-ended questions about the features worked to create an invitation for curiosity. She was not asking these questions to check the children's knowledge but asking using a strategy that made space for the children to wonder about the ball and make sense of it. The children tested

their ideas about the ball, and in line 28, Kyle put his hand in the ball, and then Alfred stated his theory that things put in the holes will fall out.

MC’s questioning strategy encourages curiosity. When MC asked, “What do you think is going in the hole?” in line 31 and prompted “your?” in line 33, she extracted Alfred’s comment about using your hands to throw the ball. This illustrated a moment of tension between the children’s genuine curiosity and MC guiding them toward her predetermined response. A moment of genuine curiosity occurred when Kyle demonstrated that he could put his arm through the hole. The children were engaged with exploring the ball, an act of curiosity, and they were responding to her teaching about the ball. She was leading them to learning about throwing. Moments of tension occurred in these lines between strategies for curiosity and the teacher’s agenda, as shown by Kyle putting his arm through the ball and MC’s tension expressed as wanting the children to learn to hold and throw this novel ball. At this point, MC guided the children to hold the ball with their hands and make a circle.

Table 4.3

*Forming a Throwing Circle*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
44	MC	Throw to Alfred because I know he’s interested in it.		
45	MC	Are you interested? /// Oh see. Oh, catch it	<i>Louder, excited tone</i>	
46	MC	Catch it.	<i>Jesus, Alex, and Castro run to the group. MC nods and smiles at them.</i>	Curiosity
47		Let him have a throw. Catch it. Oh!		

48 MC Would you like to play catch? *To Jesus*

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49 MC This is a new ball, Jesus

Table 4.3 demonstrated using an excited and interested tone to elicit curiosity about a group event. In line 46, Jesus, Alex, and Castro left where they were previously playing and came running to MC, Kyle, and Alfred when they heard her excited voice. They were exhibiting an intense desire to know or understand something about this new object. Their attention was drawn by the teacher’s voice tone and volume, and she focused them toward the ball. This is the definition of curiosity. MC’s discourse elicited curiosity.

Table 4.4

*Throwing in a Circle*

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<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
50	MC	Alfred! Casey’s waiting, and Jesus, and Aldo.		
51	MC	Casey is waiting.		
52	MC	So, Castro look at Jesus and say here it comes.		
53	MC	So, if we stand in a circle, we can throw the ball.	<i>MC is organizing the group while maintaining their curiosity.</i>	
54	MC	Casey, look at Kyle and throw.		
55	MC	To Alfred		
56	MC	Yeah	<i>Alfred rolls it instead of throwing</i>	Curiosity
57	MC	You want to throw it. This is a throwing game.		
58	MC	Throw it, Castro		
59	MC	To Jesus		
60	MC	Look at Jesus and say here it comes.		

61	MC	Now look at Kyle	<i>Jesus throws to Kyle and he catches it.</i>
61a	MC	Hoo hoo!	

In line 50, MC included children in the group by verbally acknowledging them as they joined the throwing circle. Here, the focus on the uncertainty of the throwing game elicited the curiosity of Jesus, Alex, and Castro, who joined the game with interest about both how to throw and how to throw with the goal of throwing to a peer. MC’s discourse of supportive words, excited reaction with each successful catch, and energy focused on maintaining the circle attracted the children to the Discovery Ball and this catching game. They worked on throwing and catching the ball. Alfred exhibited curiosity when he tested a new theory, experimenting with rolling the ball.

In Table 4.4, MC influences the children’s interest in the ball toward an uncertain social engagement with the ball. After initially gathering the children’s interests (Table 4.1), she focused their attention on the properties of the ball (Table 4.2). She then expanded their knowledge of the ball (Table 4.3) to an action with the ball (Table 4.4). Learning to engage in group games is frequently teacher-guided because of the uncertainty of the task and skills needed. This excerpt demonstrates MC guiding children’s uncertainty with specific statements, including spatial relationships (see Table 4.4, lines 53 and 61), awareness of gaze (see Table 4.4, lines 52, 54, 60), and timing (see Table 4.4, lines 50, 51, 55, 58, 59). Her exuberant comments such as “yeah” and “Hoo, hoo” matched her cheerful voice tone, smiling face, proximity, and high energy level. She influenced physical and social curiosity with a novel object, developing the situation into a social-physical engagement.

***Discussion surrounding the introduction of novel materials.*** In the vignette above, MC placed materials – the Discovery Ball – within a child’s access. This action is a form of nonverbal questioning and these examples with both the Discovery Ball and the upcoming

Magnet Wall created an unspoken question or *provocation* (Rinaldi, 1998). The presence of these novel materials created uncertainty. What is this? What should we do with it? How should we engage with it? The question is not asked verbally, but the novel materials provoked the child and the teacher's engaged presence encouraged the child to be curious. Initially, the children's engagement with the novel object was disagreeable and they were tugging with each other for possession of the ball. MC entered the dialogue with the children, adding focus and uncertainty about how to use the ball. The non-verbal question of the provocation was responded to with interest, and MC focused the interest with questions about the ball.

In this vignette, MC is observed noticing children's interest in a novel object and she influences their curiosity. She noticed the interest and tugging on the novel object – the ball – and interjected information about the ball in the form of questions and answers. She first focused the children's attention on the properties of the ball and away from possession of the ball. Through questions, she guided them to noticing uncertain or unusual features of the ball. These questions elicited curious thinking, as seen in their comments about the ball. When she moved the children to a throwing game, the children moved with her to the uncertainty of a task with the ball. Scaffolding upon their curiosity about the ball, she moved them to the social uncertainty of throwing the ball to each other. The questions about the ball were introduced and motivated the children to participate in a throwing circle. This vignette sets an example of providing an uncertain object, noticing interest, and scaffolding information and guidance to create a social engagement.



Figure 2. Kodo® Outdoor Magnet Wall Kit<sup>4</sup>

**Introducing Novel Materials without Explanation.** This second example used a different novel object to influence children’s curiosity on the playground. MC had a planned a new object for the playground for this day. She had an unopened, large, long cardboard box on the cart. It was a box containing 4- and 2-foot half tubes and rings with magnetized attachments designed to stick to a metal surface. The school had mounted a 5’ x 7’ white metal panel “Magnet Wall” on an exterior wall in the playground, and MC planned to use the half tubes against this wall. MC had obtained this interactive Outdoor Magnet Wall Kit through a grant, and she told me her plan was to put the materials out on this first day with no explanation. After she helped a few children find their chosen toys, tools, and capes from the cart, she took the box down and carried it to the Magnet Wall.

MC opened the box of magnetized tubes and rings and 1½-inch balls. She attached a few magnetized half tubes called “ramps” to the Magnet Wall. Andres rode a tricycle close to her and watched her for 25 seconds. At this point, the excerpt begins.

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<sup>4</sup><https://kodokids.com/outdoor-magnet-wall>

Table 4.5

*Placement of the Magnet Wall Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning disposition</b>
25	Andres	How are you going to put it back together?	<i>After watching for 25 s</i>	Curiosity
26	MC	How are we going to do it?	<i>Interested tone</i>	Curiosity
27	MC	What's your idea? I think we need your help.	<i>Standing and pointing to the box and the wall</i>	Curiosity
28	MC	How are we gonna do it?	<i>Asking Andres directly</i>	Curiosity
29	Andres	How are you going to fix it?	<i>Looking at the box</i>	Curiosity
30	MC	I don't know	<i>Looking at the box</i>	
31	MC	What do think we can do?	<i>Looking at Andres</i>	Curiosity
32a	Andres	Tape it? Ok.	<i>MC starts placing a ring on the magnetic white board.</i>	

MC noticed Andres' curiosity about the opened box and how to fix it. She responded with open-ended questions about how the box would be put together. Andres' question-asking or exploratory behavior, observed in his long gaze at the box, reflected an amount of uncertainty signaling his curiosity (Jirout & Klahr, 2012). His voice tone conveyed interest and curiosity, not worry. She elicited his ideas in lines 27 and 31, and asked 'how' in line 26, 28, and 29. In line 25, Andres asked, "How are you gonna put it back together?" MC changed the pronoun to "we" in line 26, then asked for his specific ideas in line 27. This shift of pronoun in line 27 shifted responsibility to include Andres in creating an idea about how it would be fixed. This shift of pronoun also indicates a tension regarding teacher control. She was inclusive of his ideas but did not give him complete responsibility for putting the box together again. He was interested in the

box, not in the tubes and rings. MC made a teaching decision to stick with her plan of working with the Magnet Wall, not rebuilding the box. MC was planning on children being curious about the contents of the box, but Andres' curiosity was not dismissed. He was concerned about the box being opened and how to fix it. MC met his thinking with questions and welcomed his solution. She did not act on his solution, and she also did not say, "That's not what we're doing right now." She noticed and commented about his interest, even though fixing the box was not her goal for opening the box. His idea about fixing the box was heard, and his curiosity diminished because he rode away. Even though she did not actively engage in his curious question about the box because her goal was exploring the tubes and rings, it was significant that she did not discourage him from asking questions to satisfy his uncertainty about the box. This represents a teacher tension between children's curiosity and teacher intent.

Table 4.6

*Children Start Playing with the Pipes*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning disposition</b>
33			<i>Steven and Castro come over and pick up the half pipes and imitate MC's actions of attaching them to the magnetic white board.</i>	Curiosity
34	MC	Should we try and see if the magnets work?	<i>Watching the children place the half pipes on the wall.</i>	Curiosity
35	MC	Those stick	<i>Affirming</i>	
36	MC	Do you need help lifting them up?	<i>Castro and Steven start picking up the ramps that are about 4 feet long and placing them on the magnetic board.</i>	Curiosity
37	MC	You have to walk around, walk around.	<i>Motioning to move around one another.</i>	

38	MC	Do you need help moving them around?	<i>Standing near the wall and the children to be of assistance.</i>	Curiosity
39	Castro	I don't need help!	<i>Said with emphasis on the word 'need' as he lifted a four-foot half-tube.</i>	Curiosity
40	MC	You don't need help because you're so strong, Ok	<i>Affirming Castro's ability.</i>	

The excerpt above (see Table 4.6) featured two children lifting the half pipes, tubes, and rings and placing them on the wall. Line 34 is the first time MC used the word “magnet” associated with the word “stick” in lines 34 and 35. It is unclear if her intent was to further explore the idea of magnetism as the force making the pipes stick to the wall. They continued to explore the materials and lifted and placed various sized pieces, demonstrating curiosity about manipulating the pipes and rings in positions on the wall. MC coached the children in line 37 to move around each other without bumping. Castro tested his strength in line 39 when he lifted a long half tube and refused help. In line 40 MC affirmed his strength. The learning disposition observed here is curiosity because the children explored new materials and tested their abilities to lift, maneuver, to stick the pipes to the wall. MC elicited curiosity by introducing a provocation of novel materials. She supported the children’s exploration (as seen below in Table 4.7).

Table 4.7

*Children Generate Ideas*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning disposition</b>
41	MC	So, what are you guys...what's your idea?	<i>She is standing behind them as they attach the ramps to the magnetic board.</i>	Curiosity
42	Castro	We can make it bigger!	<i>In an excited voice in elevated ending pitch</i>	
43	MC	Make it big?	<i>Repeating Castro's statement</i>	
44	MC	This might help hold that.	<i>MC adds a magnetic ring to the board.</i>	Curiosity
45	MC	Ok that's got it.	<i>Stating that the ring is in place.</i>	

MC maintained the conversation about the work with the magnetic ball wall in the excerpt above. She asked, "What's your idea?" in line 41, embodying the thought that the children have ideas. This open-ended question is broader than a question such as, "what are you building?" or "what are you doing?". MC's choice of words states that they have an idea and she seemed to urge them to explain their thinking. She influenced curiosity by supporting their statements, rephrasing their comments, and offering open suggestions. She engaged them by asking them to explain their explorations.

MC influenced curiosity when she noticed ideas and offered statements, questions, or additional materials. Castro had an idea about size in line 42, and MC responded by repeating his statement and offered an uncertain statement, "this might help hold that," in line 44. She stated a ring could support a tube toward the goal of making it bigger. The strategy of supplying uncertain statements such as "what's your idea?" and "this might help hold that" supports a child's thinking but doesn't supply the answer. The move of adding the ring near Castro made space for his curiosity to answer the question. Implied in her statement is, "do you think this will

work?” She supported his learning goal of building the ring and pipe structure bigger through supporting his curiosity about how to do it. Teachers influence curiosity with well-worded questions and information pertinent to a child’s interest or curiosity.

Table 4.8

*MC Asks Questions*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning disposition</b>
46	MC	What about this one that doesn’t have a magnet?	<i>Question asked to Steven.</i>	Curiosity
47	MC		<i>Adding rings and moving them around.</i>	
48			<i>Steven working with two half pipes.</i>	
49	MC	Oops, fell down	<i>Steven pushes a ramp that is in the way of the one he is putting up. MC responds with ‘Oops’</i>	
50	MC	So, Steven you’re putting a big one up there?		

Table 4.8 shows MC’s continued use of open-ended questions and modeling experimentation.

Line 46 is an example of MC eliciting curiosity through open-ended questions, and modeling experimentation as she placed the rings and tried them in various positions. As she explored features of the Ball Wall materials, she talked about them and used them in a manner that caused the children to intensely explore the materials, try new ways of placing the rings and tubes, and in the excerpt below (see Table 4.9), try a solution MC said would not work. The children’s exploration of the Ball Wall materials occurred following her questions and comments, suggesting that MC’s discourse influenced their curiosity.

The excerpt below (see Table 4.9) includes the learning disposition of problem solving defined earlier (see Chapter 2, Specific Learning Dispositions) as the view of self as strategic

with flexible approaches to a task or problem (Marx, 2011; McDermott, Green, Francis, & Stott, 1999). As seen in this vignette, a child’s curiosity led them to exploration, and exploration led to problems that needed solutions.

Table 4.9

*Problem-Solving Questions that don’t Influence Curiosity*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning disposition</b>
57	MC	So, Steven, how is the ball going to go down it vertically?	<i>Jesus is watching as well as the 2 children, Casey and Ali, wearing dramatic play capes,</i>	Problem - Solving
58	MC	I think it has to be horizontal. See this one is down on the ground.	<i>Jesus increases the intensity of his gaze and steps closer. Jesus had said in line 23 that he did not want to help with the ball wall.</i>	Problem-Solving
59	MC	You got 3 balls. Do you want to put up another ramp?	<i>To Jesus who just picked up the ping pong balls</i>	Problem-solving

Table 4.9 has been included in this study because it demonstrated a moment when the teacher illustratively deviated from influencing curiosity in her comments and questions. MC’s comments were suggestive (line 58). The questions in lines 57 and 59 were directive. The learning disposition in this Table 4.9 was reasoning and problem-solving, not curiosity, because the questions are not open-ended. MC gave specific observations and solutions to Steven. She offered flexible approaches and solutions to her problem of the ball just dropping through the pipe and not traveling horizontally. It is unclear if Steven saw this as a problem needing a solution. Jesus followed up on the idea of how to work with the balls and the ramps. It seems that MC had pictured balls rolling horizontally through the half pipes across the wall. This is a

moment when the teacher's ideas superseded a child's experimentations and serves as a counter example for influencing curiosity.

Table 4.10

*Further Questions*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning disposition</b>
60	MC	What are these for?	<i>She puts her hand through the ring that is magnetized to the board, seeming to show the children that something could go through this ring.</i>	Curiosity
61	MC	[Interaction with a teacher about the plan for later this week] (23s)	<i>Castro taps MC to show her how he can put a ball through the ring she just asked about. He is ignored.</i>	
			<i>Aldo walks to the magnetic board.</i>	Curiosity
62	MC	Oh, so you are...		
63	MC	So, Castro...		Problem-Solving
64	MC	So, I think Castro is trying to put the ball through the circles	<i>MC is bending over pointing out Castro's thinking to Casey. 20 sec. of shared interest, and no utterance.</i>	Problem-Solving
65	MC	What do you think Aldo? Where do you want to put those?	<i>Aldo walks up holding two – foot ramps.</i>	Curiosity
66	MC	Where do you think those would connect?	<i>Aldo, Casey, Jesus, and Castro continue working on the ball wall</i>	Curiosity

The excerpt above (see Table 4.10) featured a broad range of interactions. MC evoked curiosity in line 60 when she asked about the rings. This interaction was interrupted when a colleague entered the scene for 23 seconds to discuss a plan for the following week. During this

conversation another child walked up to the new apparatus (the magnet wall). The children maintained their engagement with the magnet wall and did not seem distracted by the conversation. As MC rejoined the group, she interrupted herself in lines 62 and 63 with two incomplete sentences. By line 64 she had observed the children's work and had identified Castro's action as a topic of conversation. MC described Castro's approach to a learning goal when she described his work of putting the balls through the circles (rings) to Casey. Thus, the learning disposition in line 64 is problem-solving because she talked about specific observations and solutions. She returned to influencing curiosity with open-ended questions, like "What do you think?" in lines 65 and 66.

As MC maintained interest in the children's work, she continued to influence their curiosity. She was no longer focused on the solutions she envisioned but was instead focused on the children's solutions. The excerpt ends when her focus shifted to an injured child and she had to direct her attention away from the Magnet Wall and to the injured child.

***Discussion of exploration of novel materials.*** The vignette above features effective and ineffective moves made by MC to influence curiosity. First, she introduced the materials in an open-ended fashion, and gave no instructions. She set the box of materials on the ground by the Magnet Wall, opened the box, and started placing the tubes on the board. Children saw her working and investigated this unknown phenomenon of white ramps sticking to the Magnet Wall. Steven and Castro ran over and picked up the half tubes and imitated MC's actions of attaching them to the magnetic wall in line 33. Then Jesus and Casey joined them. There was no verbal explanation of how to use the materials. MC was interested in the Magnet Wall and she modeled curiosity or invention as she attached the ramps and rings to the magnetic wall.

Throughout the learning environment, both indoors and outdoors, MC invited the children's curiosity by providing access to open-ended materials with minimal instruction. Materials were always accessible from the cart, and indoors during 'investigations', children used legos, building blocks, and dramatic play and art materials according to their interest and intent. Open-ended access seemed to influence curiosity because of the choice and options it afforded to explore the unknown.

In this vignette, the novel Magnet Wall caused two waves of children to run over: first Steven and Castro, then Jesus and Casey. MC never said, "Come over and see this new toy", nor did she say to the group before outside time, "I have a surprise for you to play with outside today." Not introducing the ball wall contributed an amount of uncertainty that led to question-asking or exploratory behavior (Jirout & Klahr, 2012). She also used open-access language. In both lines 27 and 41, she said, "What is your idea"? Children responded to this question based on their interest. Andres said, "Tape it", as his interest was in putting the box back together, and Castro responded, "we can make it bigger", indicating an interest in building. She did give them some information in line 34, "Should we try and see if the magnets work?", informing them of the presence of magnets. Up to this point, the children were randomly experimenting with various attempts to attach the ramps to the wall. Steven observed MC sticking a ring to the wall using the magnetic contact, and then he placed the magnet side of his ramp against the wall. Castro noticed how to stick a ring or pipe to the wall and stuck his ramp to the wall as well. The children watched MC and each other's work to attach the ramps. Children were observing and experimenting with this novel material because MC had ignited their curiosity.



Figure 3. MC verbally responsive and proximate

*Teacher focus.* Teacher focus is a strategy that influences curiosity because it motivates or enhances children's engagement with materials. MC focused on the children's interest and was responsive to the children's ideas verbally and physically. Responding to children's ideas with supportive language, smiling, and making approving comments influences curiosity (Hackman & Engle, 2002). For example, she said, "what is your idea?" in lines 27 and 41. This language was open and encouraging, as was her enthusiastic interest and proximity to the activity (See Figure 3). MC worked to maintain focus on the Magnet Wall rather than other possibilities on the playground, thus sustaining curiosity in this engagement.

*Shared interest.* Shared interest influences curiosity and signals enthusiasm (Hackman & Engle, 2001). In fact, as MC was opening the box, Andres sat on a tricycle and asked how she was going to put it together again. It was a question about the box, not a question about her intended subject, the Magnet Wall. In lines 26- 32, MC asked Andres, "How are we going to do it?", "What's your idea?". She then said, "I think we need your help", pointed to the box and the wall, and said, "How are we gonna do it?" He responded with, "How are *you* going to fix it?" [my emphasis]. From his position of wondering about the box, the wall was MC's problem, and

she responded, “I don’t know.” She did not dismiss Andres’ curiosity (or worry) when she engaged him in conversation about the box, but she did not take up his interest. She held her focus and continued to work with the ramps. A key component of developing curiosity is sustained focus or interest rather than scattershot thinking about multiple items (Engel, 2015; Hackman & Engel, 2002). She valued his idea by listening but refocused her interest on the Magnet Wall when she made a choice to continue pursuing the engagement with the tubes and the Magnet Wall.

This teacher action represents the tension at the intersection of the child’s interest with the teacher’s interest. In this moment, MC maintained focus on the task at hand and did not take up Andres’ curiosity about box reconstruction. She shared interest with the children who were curious about the Magnet Wall. Taking up the questions from the interested children and dismissing Andres’ questions demonstrated an intentional choice of focus. It is not uncommon in any classroom for a teacher to make choices about which interests to take up. In this vignette, MC met the children at the intersection of interests, and did not take Andres’ interest, but chose the interest that connected with her intent.

Teachers are making decisions constantly and don’t take up every moment of curiosity. How does a teacher choose to stay with a question or move on with a child? Children, students, and all people need space to think and figure out whether to follow their curiosity or give it up. A teacher must decide whether to follow a tangent or stay with her intended lesson. When a teacher supports the exploration, the child’s interest is reinforced and liable to reoccur.

In the vignette in Table 4.6, MC established the children as building assistants with their own ideas about how to arrange ramps in formations for rolling balls. She made various comments demonstrating their shared interest in ideas about the magnet wall. They were invited

in line 34: “Should *we* try and see if the magnets work?” The emphasis on ‘we’ positioned the children as experts, which empowered them and motivated their curiosity. They were offered support in line 36, and their strength and competence are noted in line 40. MC asked them about their ideas, and she supported their thinking with technical assistance (line 44), not advice. In line 41, MC asked, “What’s your idea?” This approach signaled to the children the value of their ideas, which seemed to motivate their curious investigation of the ramps and balls. When they tried an attachment, she noticed their actions and commented on their ideas. This demonstrated shared interest, and in this case, how valuing children’s curiosity and emerging expertise can encourage their explorations.

*Expanding or limiting curiosity.* This open-ended time with materials privileged the children as experts and influenced curiosity, but after 2 minutes, MC’s language with the children shifted to statements that influenced problem-solving. She offered unsolicited (unwanted) information. When she said, “what about this one that doesn’t have a magnet?” in line 46, she offered information about a hoop that didn’t have a magnet and removed the possibility of discovery. In lines 57 and 58, she said, “So, Steven, how is the ball going to go down it vertically? I think it has to be horizontal” seemed to critique Steven’s vertical placement of a tube. He then picked up a watering can and went away. In line 66, she asked, “Where do you think those would connect?” which brought in the idea of connecting the ramps when the children were still working on figuring out how to attach them to the wall and investigating all the various pieces. There were other lines that suggested what to do with the materials that could actually limit their curiosity, such as line 59: “You got 3 balls, do you want to put up another ramp?” and line 65, “What do you think Aldo? Where do you want to put those? Where do you think those would connect?” This ‘add on’ language may have had the intent of expanding their

curiosity, but it may have a limiting effect on their curiosity. These lines seem to be conflicts between the learning dispositions of curiosity and problem-solving. These were her questions, not the children's. These questions may have moved children's thinking about the materials away from curiosity with unsolicited information related to problem-solving. The questions did seem to diminish the children's sense of being an expert.

If children learn best from their own questions (Chouinard, 2007), then too many teacher questions or unsolicited information may dampen curiosity. Conversely, when MC moved away from the Magnet Wall and was not commenting to Jesus about his ramp, he independently figured out how to place a ramp so a ball would roll down it (see Figure 4). He also seemed to flourish when allowed to express his ideas about the materials without the limitations of close direction from the teacher. So, while the placement of the materials was open-ended, MC's questions may have become limiting. Some of those questions offered judgement and suggested what to do with the tubes. While she did not do the work for them, it seemed the teacher's ideas may have crowded out the children's thinking.



*Figure 4.* Jesus (on the right) rolling a ball on his own timeline, without MC.

These novel materials, the Discovery Ball and Magnet Wall, sparked children's curiosity, supported their question-asking, and contained resources to explore. Children need to satisfy

curiosity about new materials first before being asked to solve problems with the materials. Once their curiosity is satisfied, they can move to problem-solving. In addition to allowing time for the children, this teacher added focusing language to the provocative nature of this novel material. In these two vignettes, the open presentation of novel materials of the Magnet Wall and the explained presentation of the Discovery Ball focused the children's interest to spark and maintain curiosity.

MC noticed children's curiosity and enhanced it with ideas and interest through questions or comments. This teacher was a close observer of children, which she used to expand children's thinking about expressed curiosity. MC noticed curiosity with great acuity. Her verbal exchanges often expanded a child's knowledge or thinking about a subject, and in this way, she built upon their expressed curiosity.

### **Noticing Children's Interest**

In addition to presenting novel materials designed to provoke curiosity, MC also was interested in children's curiosity when it arose in other circumstances. In the following vignette, MC noticed a child's exploratory behavior during an art activity and encouraged him to extend it. This next vignette features a group of five children at a water Table, a 2 x4 foot raised tub typically used for water play. Today, MC was working with children to create spin art. They put on smocks to prepare themselves for painting, and, one at a time, each child placed a small paper plate in a salad spinner, squirted paint on the plate, placed the lid on the spinner, and spun the salad spinner to create an image of blended paint. Steven (see Figure 5, the child on the right) was one of these children waiting for a turn to spin paint in the salad spinner. MC noticed his intense interest in the spinner mechanism in the lid of the salad spinner and she encouraged his exploration with her interest and language.



Figure 5. Children Spin-art Painting in the Water Table

Table 4.11

*Children Waiting to Paint while One Child Paints*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
1	Casey		<i>Casey is having a turn choosing colors.</i>	
2			<i>Castro and Sarah look on as they wait their turn.</i>	
3	Steven		<i>Steven is holding the top to the salad spinner and working at making it spin while holding it.</i>	Curiosity
4-6			<i>Painting</i>	
7	MC	Thank you for putting that back on	<i>Casey is squeezing paint into the salad spinner and put the lid back on the paint bottle.</i>	

The learning disposition of curiosity defined earlier in this chapter by Jirout and Klahr (2012) as “the preferred level of uncertainty – or the amount of uncertainty that will lead to question asking or exploratory behavior” (p. 5) is found in this vignette (see Table 4.11) of children creating spin art. Steven’s curiosity about the mechanism that makes the salad spinner spin is most prominent. In line 7, Steven picked up the lid of the salad spinner and looked at the moving parts of the lid, the handle on the top side and the gears on the underside that engage with the container.

Table 4.12

*The Spinner Falls the First Time*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
8	MC	What color did you put on now?	<i>To Casey</i>	
9,10	Steven		<i>The spinner lid falls from Steven's hands and clatters to the ground. He makes a face at the camera and bends down to pick it up. MC notices his interest.</i>	Curiosity
11- 16	painting			
16	MC	Whoopsie!	<i>In relation to the lid falling on the ground.</i>	Curiosity
17			<i>Shared gaze at the lid on the ground.</i>	
18	Steven		<i>Steven picks the spinning lid up and is manipulating it in the water Table.</i>	Curiosity

MC's discourse influenced curiosity in the excerpt above when she noticed Steven's initial interest in the lid. Steven continued to have her support investigating the mechanics of the lid, even when he dropped it and picked it up. Dropping it was observed when MC said, "Whoopsie!", and it signaled to Steven that the lid was an uncertainty worth following. His curiosity was not interrupted with instructions from MC about being careful, or 'don't drop'. She supported his curiosity by giving him space to pick up the lid and explore it. This support of his interest in the lid influenced the response in the following Table, Table 4.13.

Table 4.13

*MC Needs the Spinner*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
21	MC and Steven		<i>MC holds the spinning lid and takes possession of it with a gentle transfer of possession.</i>	
22	MC and Steven		<i>Steven puts both hands in the water Table and looks on at Casey squeezing.</i>	
23	MC	Here's your top.	<i>MC hands the spinner top to Casey.</i>	

Line 21 was a moment when the lid was needed for Casey to spin his paint. Steven had had access to the spinner in lines 3-21, and now gave it up to MC. Steven released the lid to MC when she put her hand on it. This is another moment when the teacher's agenda (making spin art) superseded curiosity, yet she wanted Steven to remain curious and stay at the water Table. MC had influenced curiosity in Tables 3.1 and 3.2 and now when the spinner was needed to actually spin paint, the curiosity Steven had developed maintained his interest even when the spinner was not in his hands. When Steven put his hands in the residual water in the water Table MC had an unsure look on her face about what he was going to do with his hands in the water, but she did not give him any directives. MC and Casey put the lid on the container and spun the paper inside the container to create his art. Steven watched.

Table 4.14

*Steven Waits while Casey Spins*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
33 34	MC	Ok, put the top it on and spin, spin, spin, spin	<i>Casey holds the spinner with one hand, spins with the other, and MC holds the spinner container still.</i>	
35	MC	Steven has been really good waiting?	<i>Looking at Steven and then to Sarah as Casey spins</i>	
36	MC	Isn't he?	<i>MC is looking at Sarah and giving her an affirmative nod, Sarah nods too.</i>	

The excerpt above showed MC keeping Steven interested in the lid through conversation. She was bridging the time while Casey used the spinner to maintain Steven's curiosity while he did not have the spinner. Steven stayed at the water Table, watching Casey painting, and looked intently at Casey use the spinner. Even though he could not actively explore the spinning mechanism, she brought attention to the fact he was waiting and watching the spinning lid work. Then Steven shouted out an exuberant "ahhh" in line 41 below (see Table 4.15) when the spinner was spinning rapidly.

Table 4.15

*Steven is Excited about the Spinning*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
41	Steven	Ahhhh (loudly)	<i>With the vigorousness of the spinning, Steven shakes his head vigorously and calls out.</i>	
42	MC	Ahhh, what is it?	<i>Opening the lid and taking the plate out.</i>	Curiosity

The child who was painting shifted in lines 43 – 65 (described here in text but not represented in the tables) and Steven wanted his turn, but it was Castro’s turn next. When Casey’s painting was taken out of the spinner, Steven made excited noises and moved to grab paint containers. MC moved the containers out of his reach in what seemed to be an act of control, so Steven could not touch the paints. She attempted to influence curiosity when she asked, “Ahh, what is it” in line 42. When she moved the lid away from him and Castro started his painting, Steven grabbed the lid quickly and strongly. They both held the lid. They were not tugging against each other but holding it firmly and looking at each other face to face. The possession of the lid was unclear. There was tension as both MC and Steven held the lid. Then MC paused for five seconds. She maneuvered the lid and held it so Steven could spin it as she held it and talked with Castro. She did not say, “Give me the lid, Steven”, or some other authoritarian statement. The pause in line gave Steven a moment to relax his grip and as MC held the lid, he began exploring the spinning mechanism with his fingers again.

Steven did not give up his curiosity; instead, it was encouraged with the opportunity for further exploration. MC’s choice to hold the lid so Steven could touch it represents a moment of

understanding with Steven. The pause possibly reminded Steven of his curiosity and encouraged him to explore the spinning mechanism. In this moment in which the teacher seemed to be considering taking control of the moment by gathering all the materials, she instead chose to let Steven continue his exploration of the spinner lid rather than taking it from him. This moment highlights another teacher move for supporting curiosity: allowing exploration to continue even when it is inconvenient.

Table 4.16

*Steven Spins the Lid while MC Holds It*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
76			<i>MC enables Steven to constructively spin the lid.</i>	Curiosity
77	MC	And I want you to put it all over your plate	<i>Spinning with Steven and giving directions to Castro</i>	
78	MC		<i>Uses the spinner top with Steven; MC holding, Steven spinning</i>	
79	MC	Good spinning Steven, good spinning.	<i>Steven is settled and waiting while spinning.</i>	
80			<i>Steven is touching the spinner under and over feeling for the motion.</i>	Curiosity
81	MC	Why doesn't it go?	<i>MC to Steven about the spinner.</i>	Curiosity

In the excerpt above (see Table 4.16), while Castro was painting, MC continued to hold the lid with Steven as he explored the mechanism on the underside with his fingers. She held it in such a way that he could run his fingers along the bottom and could use the handle to engage the

spinning mechanism. He could spin the lid and feel the gears work. When the spinner stopped spinning, she asked him why. She actively engaged Steven’s curiosity in the spinner with her words and actions.

Table 4.17

*Steven Pinches his Fingers*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
82			<i>Steven grins at the camera.</i>	
83	MC	Gotta get your hands off of it.	<i>Gently said to Steven when he winces as his finger became pinched in the mechanism as he tried to turn the handle on the top side.</i>	curiosity
84	MC	Put your hands on the side.	<i>MC to Steven to guide him where to place his hands on the lid so the mechanism will spin.</i>	

The excerpt above in line 83 (see Table 4.17) shows MC’s guidance to Steven to enable the mechanism to keep spinning. As he explored the mechanism, he caught his fingers in the plastic gears. She noticed his dilemma and suggested holding the spinner on the side so his fingers would not be stuck in the gears. He was engaged in exploring the spinning mechanism, and her words enabled the spinning to continue.

MC seemed to be keenly aware of Steven’s frustration threshold. MC anticipated Steven reaching his threshold quickly and was quick to give him answers to his problems. Alternatively, she may have given another child more time to figure, try, or perhaps struggle and find the answer on their own. In this way with Steven, she influenced curiosity by assisting him with information before he became disinterested.

Table 4.18

*Steven Feels the Mechanism*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
96	MC	Do you feel it on your fingers?	<i>To Steven as he is still manipulating the lid as MC holds it.</i>	curiosity
97			<i>Steven looks at the camera and is inaudible.</i>	
98			<i>Then blinks his eyes slowly.</i>	
99			<i>Castro puts the red bottle out in front of MC</i>	
100 101	MC	Steven, what color is Castro going to...?	<i>Focusing Steven's attention on the group.</i>	

In the excerpt above, MC acknowledged Steven's interest when she asked if he still felt the mechanism with his fingers. She enabled his use of the spinner, holding it for him so he could spin it independently of the salad spinner container. During the filming of this event, it appeared to me initially that MC was constraining Steven's actions by holding the lid, but she was actually supporting his exploration, guiding his fingers, and asking how it felt. He looked inquisitively down at the spinning handle and under the lid with intense interest (curiosity) about the relationship of his action and the gears that engaged with the salad spinner. She let him explore the lid for a full two minutes as Castro was working on painting.

In this sensitive manner, MC transformed what could have been an annoying interest (Steven grabbing the spinning lid) to an extension of his curiosity. At this time, she had dual focus on both Castro creating spin art, and Steven exploring the spinner. Her questions were consistent with what he was actually exploring, as seen in line 81 (see Table 4.16) "Why doesn't

it go?”, line 84 (see Table 4.17) “Put your hands on the side”, and line 96 (see Table 4.18), “Do you feel it on your fingers?” As she guided him in thinking about his ideas about the mechanics of a salad spinner, she influenced his curiosity in a positive direction.

It is unclear why she then directed Steven’s attention toward painting with the question, “Steven, what color is Castro going to....?” She was engaging curiosity about the spinner, and perhaps wanted to keep him engaged with the idea of using the spinner to create a spin-art painting.

Table 4.19

*Steven is Curious about Water*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
118			<i>Castro chose pink paint and is squeezing it on the paper.</i>	Creativity
119	MC	Putting it all over.	<i>Descriptive tone</i>	
120	MC	Castro is putting in the pink		
121	MC	and you’re spinning,	<i>Steven is spinning the lid that MC is holding.</i>	
122	MC	Steven’s spinning	<i>Steven leaves the lid and is splashing is some residual water in the tub.</i>	Curiosity
123	MC	Steven is Splashing.		
124			<i>He glances at the camera.</i>	
125			<i>Steven holds up his wet hands.</i>	
126			<i>He watches them drip.</i>	Curiosity

In Table 4.19, Steven was spinning the lid and then began to explore the puddle of water in the water. MC supported both Steven and the painter with her spoken words. Steven’s exploratory behavior shifted from the lid to the puddle of water in the water. He dipped his hands in and splashed. MC acknowledged his use of water to splash with a narrative tone. MC’s discourse shifted with him and she talked about splashing. He held his hands up and observed the water dripping from his fingers. MC did not dissuade his curiosity. He was given unspoken permission to splash, drip, and then (in the excerpt below, See Table 4.20) turn and print wet handprints on the wall behind him. His curiosity about the spinner had shifted to curiosity about water, and MC moved with him in full support of his curiosity.

Table 4.20

*Maintaining Curiosity through Sound*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
127			<i>Steven turns and makes wet handprints on the brick school wall.</i>	Curiosity
128	MC	Spinning and splashing, and	<i>Steven is splashing in the tub after leaving the spinning with MC</i>	
129	MC	Steven and	<i>Said with emphasis on the ‘S’ sound.</i>	
130	MC	Sarah	<i>Said with emphasis on the ‘S’ sound.</i>	
131	MC	I hear a Ssssssound.		
132	MC	Ssss, Sarah, I hear S sounds	<i>MC is exaggerating the S sounds of each word</i>	
133	MC	Spinning and splashing	<i>MC is exaggerating the S sounds of each word and expanding the rhythm</i>	
134	MC	So you already put in yellow	<i>Castro picks up a yellow bottle, and teacher has an idea for another color.</i>	
135	MC	So do you want to put in some cyan?	<i>Castro squeezes a lot of yellow.</i>	

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137    MC    ‘cause Steven is  
              waiting and so is  
              Sarah.

MC acknowledged spinning and splashing in the ten-line excerpt above. She added sound elements to Steven’s exploration of the water when she emphasized the ‘S’ sound, and then generalized the ‘S’ sound to Steven and Sarah. This move helped Steven and Sarah stay engaged with the painting as they waited for their turn. She chose a task Steven was curious about, splashing, and expanded the discourse by adding phonological elements (hearing the ‘s’ sound). She added a literacy moment of emphasizing “s” as the initial consonant and she maintained Steven’s attention influencing his curiosity. She injected sound elements that continued his time exploring the spinner. Following this direct attention from MC, Steven picked up the spinning lid once again.

Table 4.21

*Steven Pinches his Fingers Again*

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<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
142	MC	Do you feel it? When you put your hand there it doesn’t spin.	<i>To Steven who is holding the spinning lid again and feeling the spinning apparatus.</i>	Curiosity
143	MC	I think that’s enough	<i>MC to Castro who is squeezing cyan</i>	
144	MC	You want your friends to have some too.		
145	MC	You want your friends to have some too.	<i>Repeated for emphasis</i>	
146	Steven	Wash out [sic]	<i>Steven is saying watch out as he pinched his fingers in the spinner.</i>	

147	MC	Hurts your fingers.	<i>Steven squats down behind the water Table.</i>
148			<i>Steven comes up from squatting down.</i>
149	Steven	Wash out [sic]	<i>Repeating, "I was injured"</i>
150	MC	Watch out	<i>Steven's injury is noticed by teacher</i>
151	MC	Steven's spinning	<i>And Steven pulls the paint tub near him. MC pulls it back and takes control of the top.</i>
152	MC	Put the top on	<i>Putting the top on so Castro can spin his paint.</i>
153	MC	OK, take it off and put it on again	

The excerpt above (see Table 4.21) is a busy moment. Steven caught his fingers in the plastic mechanism of the salad spinner, and it seemed to hurt. This visceral moment seemed to emphasize Steven's engagement with the spinning mechanism and is punctuated by Steven saying, "Wash out [sic]", meaning "watch out, this thing hurt me." MC talked with him about the injury as she moved the lid to spin Castro's art. MC noticed how Steven's curiosity caused a pinch, and when the lid was "stuck" reminded him to take his fingers away so it could spin. Throughout this vignette, her multi-tasking she maintained Steven's curiosity in the spinning lid and engaged the children in spin-art.

**Discussion of noticing a child's interest.** This excerpt demonstrates MC noticing curiosity and using discourse to influence and expand it. In line 24 (see Table 4.13), she held the lid so Steven could spin the handle and watch the gears mesh on the underside of the lid. She acknowledged his 'good spinning' in line 79 (see Table 4.16), and he subsequently explored the gears. She returned back to his exploration of the gears in line 96 (see Table 4.18) when she acknowledged and focused on his curiosity. Her acknowledgement of curiosity seemed to

expand its expression. And while she maintained a supervisory role with the paint, she also supported Steven's exploration of the spinner top. It is interesting to note that several days later when the spin art was used indoors, he resumed his quiet exploration of the spinning mechanism.

The next day when the spin art came out, Steven further explored the spinner and this time he and MC took a deeper look at how it worked, turning over the lid and examining the gears. This repeat of the previous day seemed to demonstrate that initially noticing a curious moment resulted in further exploration. Had she said, "No, wait your turn," the day before, would he have been curious the next day? Noticing Steven's curiosity about gears on one day created what I am calling a *zone of proximal interest* in which this trusted adult supported Steven's curiosity (Vygotsky, 1978), and it continued into the next day. Therefore, not only does noticing curiosity support its development, in this example, it creates opportunities for the expansion of curiosity over multiple days.

### **General Discussion of Curiosity**

**Curiosity across the curriculum.** Curiosity is a learning disposition which can be influenced in all aspects of education, as seen above with art, physics (magnet wall), and physical activity (discovery ball). Unfortunately, it is most frequently related to science curriculum. Literature discussing curiosity often centers on topics associated with science, as it is easy to observe children's curiosity about the natural world, how things work, and how to make things move (Chaille & Britain, 2003; DeVries & Sales, 2011). The unknown or uncertain can appear more obvious in the natural world; however, cognitive curiosity - the ways we wonder - can be influenced in areas beyond scientific investigation (Engle & Hackman, 2002). While the examples in this study of the magnet wall and the spinner mechanism are science-oriented,

education – especially early childhood education -- should consider ways of influencing curiosity with language and social relationships.

The current emphasis on STEM<sup>4</sup> or STEAM<sup>5</sup> is important to children’s learning experiences, but we should not limit curiosity to these fields alone because curiosity can be developed beyond complex science investigation. Not all children are interested in science, but all children can further develop their curiosity. This can be done through a physical environment that facilitates children’s experimentation with the placement of books, images, creative tools, and materials accompanied by supported time to explore them. Additionally, a teacher can create a social environment that ignites curiosity by presenting novel experiences with relationship building as well as pose curiosity-provoking questions in the context of those experiences. In literature, a teacher could wonder about and discuss words, authors, art, etc. to influence curiosity about words, reading, and the power of expression. We should consider further exploration of cognitive curiosity in the preschool setting - wondering about ideas and the ways we wonder. Curiosity should be engaged across the curriculum to explore written and oral language, literature, social relationships, and worlds of engagement with relationships.

**Timing and use of time.** Timing and the use of time also influences curiosity. MC noticed children’s ideas, allowing their curiosity to lead them. She planned each day with open times for thinking and exploring. Children arrived at school and worked with their parents on various tasks, and she used this time to talk with children and parents. “Investigations” was a time of 30 - 45 minutes after snack for exploring the materials in the classroom. During this time, she moved to where children were working and discussed and wondered with them about their work,

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<sup>4</sup> Science, Technology, Engineering, and Mathematics

<sup>5</sup> Science, Technology, Engineering, Art, and Mathematics

continuously engaged with the children and providing appropriate guidance. Children were constantly puzzling, testing, and probing ideas, and this classroom gave them both a physical and social environment conducive to developing curiosity. At Circle Time, she probed individual interests and wondered aloud with children. For the most part, MC rarely enabled time or procedural details to set boundaries on curiosity and learning. Throughout the day she recognized or created opportunities to influence curiosity.

There were times of the school day that had time and space limitations such as handwashing, using the toilet, or transitioning from outside to inside, and in those times, MC was frequently conversing and wondering with children. However, there were also moments of tension between a child's idea and her intention, as seen at the Magnet Wall when MC wanted children to move ahead with rolling the balls and they were still exploring the properties of magnets. There were other times when a child's curiosity was possibly not safe or was simply too messy, such as later in spin art when Steven wanted to print paint on the wall instead of water. The tension between a teachers' plan or learning goal and a child's curiosity sometimes thwarts the child's curiosity. It is a balance that teachers must continually evaluate.

**Noticing and supporting children's interests.** In these findings, teacher actions that influenced curiosity included noticing and expanding a child's interest and a sense of timing that neither hurries nor disinterests a child. Maintaining a respectful and genuine teaching temperament also engages curiosity. The adult's or teacher's discourse are important components influencing curiosity. For this reason, early education teacher development should include what Hackman & Engel (2002) call "active interest cognition or focusing condition" (p. 634), in which the teacher is extremely attentive and encourages student behavior with smiles, eye contact, and occasional interjections. CLASS research names teacher-child relationship as critical toward a

positive classroom climate (Pianta, LaParo, Hamre, 2008) but it should include how this relationship influences learning dispositions such as curiosity. Lillian Katz (1998) wrote the following:

In the United States, we are not as likely as we could be to help children sense that their intellectual quest is of deep interest and importance to us... I suspect that because, on the whole, we overestimate children academically and underestimate them intellectually, we miss moments when our attention could convey to children that their ideas are important. (p. 38)

Genuine interest is essential because young children can be masters at detecting false interest and will disengage. Questions must be asked respectfully and honestly with intent for the child to respond. If we do not respect young children's intelligence, we could hinder them to wonder with us. A teacher has to convey that they truly care about the child's interests. Then, without interrupting their thinking, such as when a child pauses or appears to be about to leave, the teacher poses questions that encourage the child to probe at a more complex level. For example, when Steven reached out and grabbed the lid to the spinner, MC respected his curiosity. At this moment, she posed questions in an atmosphere of mutual respect by holding the spinner to facilitate his exploration of it. Similarly, at the magnet wall, MC asked context-appropriate questions without making direct suggestions that alleviated Steven's frustration and offered him some ideas, which encouraged him to continue exploring. However, a minute later, after some direct comments Steven walked away possibly in reaction to these comments. The literature needs to discuss the finesse (the practice) of active interest cognition more deeply. As curiosity is often a venture into uncertainty, a child seems more likely to enter an uncertain place if

accompanied by a respectful, deeply interested teacher. Noticing and reifying children's interests are teaching skills that influence curiosity.

Additionally, teacher development programs need teach *how* to engage with children to influence curiosity. Pre-service teachers learn how to observe a child's interest, but they need to learn how to reflect that interest to influence a child's developing curiosity. All teachers can engage in active interest cognition to influence curiosity.

**Novel materials as a provocation.** Provocations can be both attention-grabbing events with novel material and subtle events in the course of the school day. The Reggio Emilia Approach (Edward, Gandini & Forman, 1998; Malaguzzi, 1998; Rinaldi, 2004) frequently references provocations as curiosity inducing events when a teacher places novel material in the classroom without explanation. The material is present for the children to explore. The Magnet Wall in this chapter gives an example of a classic provocation; however, provocations can be subtler. Questions such as: "What is the green shoot in the garden?", or "what did the birds use to build their nest?" can serve as provocations. These simple questions name an object (green shoot or materials used by birds) to influence curiosity. These discrete provocations are as valuable as the flashy novel material of a Magnet Wall and equally as important. Curiosity is developed in the obvious engaging provocations carefully planned by a teacher, and a curiosity inducing provocation can also occur in a short interaction in the course of the day. Question eliciting provocations can be planned and they can be spontaneous.

**The asking of open-ended questions.** This study emphasizes teacher discourse, specifically language use and non-verbal communication. How MC asked open-ended questions with, not to, these preschool children influenced curiosity. Open-ended questions are the opposite of closed questions, and require complex responses instead of one-word answers like

yes, no, a number, a color, etc. (Pianta, LaParo & Hamre, 2008). Instead, the use of open-ended questions encourages problem-solving, perspective taking, and/or consideration of feelings. Questions such as “Can you think of a way to...”, “What would happen if ....?”, and “How do you feel about...?” expand curiosity and cognitive development. However, the literature does not discuss teacher discourse in the asking of open-ended questions to young children. The value of open-ended questioning is discussed (Burchinal et al., 2002; French & Woodring, 2013; Pianta, LaParo, & Hamre, 2008) and teacher discourse is discussed (Engel & Randall, 2009; Johnston, 2004). Teacher discourse related to asking open-ended questions is not, however; this research adds to the literature about teacher discourse and the asking of open-ended questions.

Uncertainty can be induced with open-ended questions. The use of open-ended questions in early education is not unusual, but I observe that the manner in which the questions are asked is significant. MC is notable in *how* she asked open-ended questions. MC’s use of language and non-verbal communication through body position, facial expression, voice tone and volume, and proximity demonstrated a use of open-ended questions that may need further research. She did not ask a question in passing without the appearance of genuine intent. She was proximate, leaned in, and she paused to wait for a response. Her actions, her smiling face, and up-tone phrasing of her question reflected a positive interaction and a genuine interest. These observations place importance on more than simply asking open-ended questions, but also on how the question is asked and how it is supported.

This study demonstrates the importance of *how* open-ended questions are asked. The literature discusses the importance of open-ended questions, but more information/instruction is needed about how to pose them. First, the question must be of interest to the child. A teacher must be an observant and careful listener to know the interests of each child. Additionally, a

teacher should be proximate to the child, leaning in, and when appropriate, pause to wait for a response. These actions, and a positive and energetic tone of voice, serve to reflect a genuine interest in the child's exploration.

**Questioning within the zone of proximal interest.** Teachers' questions must be within the child's interest. Using my own phrase, *zone of proximal interest* (derived from Vygotsky's 1978 'zone of proximal development'), a teacher's questions must be within the child's interest, neither beyond their interest, nor below or something they have already worked out. Zone of proximal interest (ZPI) is observed when a teacher notices a child's interest and adds either focus or challenging questions expanding their interest, without moving the child beyond the ZPI. ZPI includes creating space for a child's curiosity through responding to questions, but not summarily supplying the answer. A teacher operating with a child's ZPI is non-judgmental. As observed with the Magnet Wall, when Jesus was told his vertical ramp would not work, he walked away. I suggest teachers of young children work to place importance on how the question is asked and how it is supported. When teachers ensure they are staying within or gently pushing the child's ZPI, children will be more likely to be engaged and stay engaged with learning.

Teaching through a children's ZPI creates space for children to decide what they hold as important. It allows them to be active participants in the learning process when their interests are the focus. This requires teachers to be curious themselves and learn about children's interests. They also need to be creative in considering how to use the platform of a child's interest as a content area for skill development.

**Differentiated engagement.** A teacher generally engages with children according to the children's knowledge and skill level. Many teachers in early childhood education also embrace developmentally appropriate practice (Copple & Bredekamp, 2009), which refers to designing

the curriculum according to the developmental level of the children. I also see the need for differentiated engagement according to the development of a specific learning disposition within the child's ZPI. Differentiated engagement involves the teacher and student in a dialogic process of learning in which the teacher is considering the expressed learning disposition and the child's interest and is engaging at the intersection of these two areas. Teaching through a child's existing interests holds meaning for the child and demonstrates respect for their existing knowledge.

This chapter argues that the learning disposition of curiosity can be developed or enhanced through and teacher discourse (actions and language). Children's motivations toward curiosity were found in this teacher's presented provocations, through her actions and words, and how she modeled curiosity by asking questions and wondering aloud with children. She presented novel materials, connected new ideas with known ideas, noticed children's curiosity, and wondered with them. Her strategy of question asking throughout the school day piqued curiosity as she engaged with the children. Curiosity was developed through the learning environment created by this teacher.

**Curiosity throughout the school day.** A teacher can influence curiosity during the 'in-between times' in a school day and throughout the day with intentional interest, enthusiasm for the questions, and wait time during direct instruction, small group time, 1-1 instruction, and during the casual time between these 'official' teaching blocks. The teacher in this study influenced the development of curiosity throughout the school day with a strategy of question-asking that piqued curiosity. During the transitional times when children were waiting for a turn to wash hands, use the restroom, or receive snack, they were engaged in conversations that developed curiosity. These transitional times are important to teachers enrolled in a Quality Rating System because in many states the CLASS tool is used to rate teachers on how learning

or engagement occurs throughout all segments of the school day. Many teachers demonstrate strategies similar to the ones MC used, such as singing with children in transition or repeating an engaging rhyme. The examples in this chapter illustrate a deep, meaningful engagement with children that followed and expanded their interests and curiosity, conveying a level of teacher discourse with three and four-year-olds warranting further research. As Katz (1998) said, relationships have to have “content of mutual interest or concern that can provide pretexts and texts for the interaction between them and not be dominated by information about the child's conduct and level of performance” (p. 36). Early educators can be intent on listening closely to the children's suggestions and questions, probing their thinking, making suggestions, and encouraging children to respond to each other's ideas. These actions can occur throughout the day, and not simply in times of direct teaching or guided engagement.

MC noticed curious moments as they occurred. She chose which moments to pursue because these moments are not always convenient, and she had to balance her agenda with the children's curiosity. In the Magnet Wall, MC noticed and acknowledged Andres' curiosity about putting the box back together but moved forward with her agenda. The Magnet Wall differed from the Spin Art vignette because she noticed Steven's curiosity about the spinner and pursued his agenda and the painting with the other children simultaneously, positioning him as an explorer and herself as guide and paint supervisor. MC anticipated curiosity when she presented the Magnet Wall as an intentional provocation. Curiousness does not only come at times when it is convenient for the teacher to notice. The teacher must notice the curiosity when it happens for the children, and decide whether to expand it or not, and if so, how. The teacher's strategies or moves can expand (or diminish) curiosity.

## Chapter 5: Risk-Taking

This chapter discusses how a teacher influences the learning disposition of risk-taking. For this study, risk-taking is identified as an act with an uncertain outcome that could be perceived as dangerous or embodying some level of fear (Stephenson, 2003). While some define risk as an exposure to danger, I wish to emphasize that a teacher would never intentionally expose a child to actual physical or psychological danger. Instead, what potentially feels dangerous to a child is the uncertainty in the outcome. What a teacher says and does can influence productive risk-taking in children.

The elements of physical experiences that seem ‘risky’ to a 4-year-old are identified by Stephenson (2003) as attempting something never done before or feeling on the borderline of ‘out of control’ often because of height, speed, or overcoming fear. Common in early education are acts that include height or speed, such as climbing, balancing, bike riding, swings, and slides. Risk-taking includes a feeling of fear, novelty, or being on the edge of control. This study examines productive ways of managing the learning disposition of risk-taking.

The vignettes presented in this chapter illustrate ways in which this teacher enables and supports risk-taking. For coding purposes, risk-taking was defined as an action or expression in which the child considers the outcome. Risk-taking has been described as “engaging with uncertainty, being prepared to be wrong, risking making a mistake—going on learning” (Stephenson, 2003, p. 41). Risk involves concern about the process or outcome.

### Teacher Discourse Influencing Risk-Taking

**Three primary strategies influencing risk-taking.** MC, the teacher in this study, influenced the learning disposition of risk-taking with three primary strategies: giving attention verbally and through proximity, guiding the children’s safety (or sense of safety), and affirming

their actions with a voice of confidence. MC varied her discourse (her moves and verbal engagement) to match the needs of each child.

Table 5.1

*Tasneem Jumps*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
5	MC	Do you want to jump down? Jump down. Jump down.	<i>MC is talking to Tasneem who is hanging and swinging her legs. MC moves closer.</i>	
6	Tasneem	I'm scared.	<i>MC has her hands extended toward Tasneem.</i>	
7	MC	Put your feet straight.		
7a		Okay, jumping.	<i>Tasneem lets go and lands on her feet on the ground. Tasneem jumps up and down with a big smile on her face and quickly brushes her clothes.</i>	Risk-taking
8	MC	And go back up and around. Good job.	<i>Motioning to go up the other side and come back to starting platform via the stairs to the bridge</i>	

This first vignette (see Table 5.1) took place outdoors at the school playground on a commercial playground climber. Tasneem, a four-year-old girl, was hanging from the horizontal ladder section of the climbing structure. MC was standing and watching.

In the vignette above, MC influenced the learning disposition of risk-taking using three primary verbal and non-verbal communication strategies. She gave attention verbally and through proximity, guided Tasneem's safety, and affirmed her actions with a voice of confidence. MC's observed goal was for Tasneem to successfully complete the child's chosen

goal of hanging and letting go. For Tasneem, success was hanging from the bar, letting go, and landing on the ground without hurting herself. She had chosen to use the climber, and we know it was a risk for her because she said that she was scared. MC positioned herself to support Tasneem's plan on the climber and work through her sense of risk. Tasneem jumped from the platform and took a risk. MC customized her discourse to this child's level of risk-taking.

***Attention and proximity.*** Tasneem did not verbally engage the teacher for attention. She stood on the platform, gazed at the teacher, and then looked down. As she held the bar in line 5, MC moved closer, noticed a pause in Tasneem's action, and encouragingly asked if she wanted to jump. When she stood beside Tasneem, MC held out her arms and almost held her body. MC's proximity supported Tasneem's risk-taking because it reinforced their relationship, and the proximity signaled safety through the presence of an adult. MC moved physically closer to her when Tasneem said, "I'm scared." MC did not affirm her fear but instead gave her guidance on landing safely saying, "Put your feet straight." MC's affirmation and gentle voice were attention-giving moves that seemed to influence Tasneem to take this risk. In this vignette, Tasneem received and responded to physical proximity, verbal attention, and affirmation of her risk-taking act.

***Establishing a sense of safety.*** A teacher is responsible for maintaining safety for all children. Another type of discursive move supporting risk-taking was guiding safety and establishing emotional security. MC influences risk-taking through encouraging and guiding children. This responsible and authoritative style is the opposite of an authoritarian teaching style, in which children are so fearful of the possibility of getting hurt (or getting reprimanded) that they risk nothing. Tasneem felt uncertain and looked to MC with anticipation as she

prepared to jump. MC gave specific safety guidance in line 7, “Put your feet straight.” Through MC’s words and actions, Tasneem felt a sense of safety.

***Vocally affirming their actions.*** Throughout the day, MC guided safety and security, for example, when she gently moved a child out from under the bars and said, “Thank you. This way she can go on the monkey bars and you don't get hurt,” or when she moved the ‘pretend ice cream sand’ away saying, “Oops. It looks like we're going to have ice cream spilling. Here's some ice cream. Here's your ice cream.” This line acknowledged the value of pretend play and maintained safety by moving away a pile of sand on the climber. MC was also observed supportively moving a child pretending to be a crab out of the climbing/jumping zone, while simultaneously giving attention to the children on the monkey bars. These examples demonstrate teacher discourse that encouraged risk-taking through discourse, or her voice and actions. When the children looked to MC before trying a new move, she did not embed caution or fear in her language, voice tone, or moves. She was instructive, engaging, and encouraged risk-taking while maintaining safety.

**Extending tone of voice, safety, proximity.** Three discursive moves – confident tone of voice, assurance of safety, and proximity—are used again in a prolonged manner in the next two sequential vignettes, ‘Box as a Car’ and ‘Aldo in the Box’. These vignettes feature the children pretending a four-by-four by three-foot cardboard box was a car on two different days. In the first vignette (beginning with table 5.2), the box is introduced to Aldo, and in the second (beginning with table 5.20), he enters the box. ‘Box as a Car’ began when MC found Aldo disengaged on the playground. He rejected ball play, watering the garden, or riding trikes, but he was interested in the large box in the playground storage area. MC had an idea about the box she had placed in storage with a console that had been salvaged from a car. She knew Aldo was

interested in cars. Together they went in the storage area to find these items. They ultimately took the console and the cardboard box out of storage, worked together to move the box onto the playground, and made a pretend car. This was an idea developed by MC based on her knowledge of the children, specifically Aldo.

Table 5.2

*Box as a Car*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
116	MC	You know what else we have here?	<i>She is reaching into the cart and pulling out a plastic console from a car. The tachometer, speedometer and temperature gauge are prominent.</i>	<i>Risk-taking</i>
117	MC	We have... (4s pause)		

The pause in line 117 was intentional to give Aldo time and space to look at the console, hold it if he wished, and to respond to MC's question. The look on his face was one of uncertainty.

Perhaps he was wondering about the console. He stood still with straight posture. His gaze was held on the console as she continued.

Table 5.3

*Should We Make a Car?*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
118	MC	We have part of a car!	<i>Aldo looks expectantly at the console MC is holding.</i>	
119	MC	Should we go make a car?	<i>Aldo smiles and nods yes.</i>	<i>Risk-taking</i>
120	MC	ok		

MC and Aldo have entered the playground storage area and he is interested in MC's exploration of the contents of the box. When he accepted her invitation to make a car, he was entering into an agreement for which he did not know the outcome. He was safe, and was taking a risk to agree to build a car with MC.

Table 5.4

*Finding the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning disposition</b>
121	MC	Do you want to carry that?	<i>She is holding the console in front of him and he shakes his head no.</i>	Invitation to risk-taking
123	MC	NO? Ok.		
124	MC	What else do we need for the car?	<i>Standing up holding the console</i>	
125	MC	(3s pause) We have a box over here. Shall we bring the box?	<i>Walking back to the gate.</i>	
126	MC	Maybe a box to help us?	<i>She pushes the latch on the gate and pulls a 4-foot-high cardboard box through the gate.</i>	

MC invited Aldo to carry the console, but he did not accept this invitation (see Table 5.4). She exclaimed, "NO?" but MC accepted his decision with "ok". This instance signified the opportunity to refuse risk without repercussion. MC immediately moved to another possible risk - getting the box out of storage. She offered this uncertain choice coupled with a trusting relationship marked by her proximity, his willingness to stay present, and his interest in her questions.

Table 5.5

*Beginning to Move the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
130	MC	Do you want to push it?		
131	MC	uh, people... we have put things in the box.	<i>Aldo looks in the box to see the things people have put in it.</i>	
132	MC	Maybe we could use these things.		
133	MC	Let's push it over and we'll see what we have.		
134	MC	Hello Mr. Padilla. Do you want to help push?	<i>Talking to Aldo</i>	Invitation to risk-taking
135	MC	You don't want to help me?	<i>Said loudly and with a surprised tone.</i>	
136	MC	I'm carrying, and I'm pushing.	<i>Said slightly indignantly.</i>	
137	MC	Come on over here and push	<i>Said with a gentle but insistent tone.</i>	Risk-taking
138	MC	You want to pull?	<i>He walks up and grabs the box and walks backwards.</i>	
139	MC	Ok, you're pulling. (3s pause) Aldo is pulling.		

MC was strongly encouraging Aldo to participate in moving the box or carrying the console (see Table 5.5). She influenced his risk-taking using a playful but insistent voice. He chose to pull the box instead of pushing it and took on the risk of moving the box.

Table 5.6

*Moving the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning disposition</b>
140	MC	Watch out for the car [a child's tricycle]	<i>Aldo is walking backwards on the sidewalk.</i>	
141	MC	Pulling! Big job!	<i>MC takes her hand off the box and Aldo pulls it alone.</i>	
141 a	Alice	What cha'doin'?[sic]	<i>Alice is riding on a tricycle and stops.</i>	
142	MC	We're gonna try to build a car.	<i>To Alice on a tricycle.</i>	

In moving the box (see Table 5.6), MC shifted additional responsibility to Aldo when she removed her hand and let him pull the box by himself. When she told Alice of the plan, her statement subtly served to announce her collaboration with Aldo to build a car.

Table 5.7

*Where to Put the Box?*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
146	MC	Should we do it right here?	<i>Stopping in the middle of the sidewalk where tricycles ride.</i>	
146a		ok	<i>MC moves 2 feet away from the box.</i>	
147	MC	So, let's.... What should we do with the box? (3s pause)	<i>To Aldo who is standing beside the box not touching it.</i>	
148	MC	Should we move it off the road?	<i>Aldo smiles at MC.</i>	
149	MC	Ok, move it off the road.	<i>Aldo grabs the box and starts moving it all by himself.</i>	Risk-taking
150	MC	Ok, Auto mechanic	<i>Playful voice</i>	

151	MC	All right. Move it over.	<i>Playful and confident voice</i>
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This excerpt (see Table 5.7) engaged Aldo in decision making about where to build the car. MC asked him questions and read his face and gestures for responses. MC used the pronoun *we* throughout this excerpt, signifying their collaboration and her support of him. At line 149, he had taken the risk of moving the box off the sidewalk and onto the sAndie play area. I wonder if she knew something of this family’s funds of knowledge (Gonzalez, Moll, Amanti, 1985) that caused her to reference Aldo as an auto mechanic.

Table 5.8

*MC Talks about Tipping over the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
152	MC	You can move it over whatever you want.	<i>Holding strongly, Aldo tries to move the box.</i>	Risk-taking
153	MC	Do you want to tip it?		
154	MC	Do you need some help?	<i>MC gently holds one corner of the box to initiate the tipping of the box.</i>	
155	MC	OK, tip it over.	<i>MC puts her hand on it and helps pull it off the sidewalk.</i>	
156	MC	Ok tip it.	<i>MC gives a strong assist and with Aldo they lift and move the box off the sidewalk.</i>	

In lines 152 – 154 (see Table 5.8), MC was still standing two feet from the box (from line 146a, see Table 5.7), and Aldo is taking on all the risk of moving the box by himself. When she noticed Aldo struggling to move the box off the sidewalk, she modeled tipping it over, then lifted the box onto the sand beside the sidewalk. She seemed to be balancing his risk-taking with

sustainability of his risk-taking disposition. How much risk is Aldo willing to take on before he walks away?

Table 5.9

*MC and Aldo Tip Over the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
157	MC	Now how shall we drive it?	<i>MC's question to Aldo.</i>	
158-159			<i>[interaction with assistant teacher]</i>	
160	MC	What shall we do?	<i>MC engaging Aldo in action.</i>	
161	MC	What shall we do?	<i>Continued engagement.</i>	
161a	MC	Shall we, shall we tip it over?	<i>Aldo smiles at MC</i>	
163	MC	Come on and help me tip it over (playful voice).	<i>MC tips the box just to the tipping point.</i>	Risk-taking
165	MC	Tip it over.	<i>Rising tone of anticipation, and Aldo tips the box over and can now look inside.</i>	

The box was on the sand with the open side facing toward the sky. The box had to be tipped over to make use of it as a car. MC continuously encouraged Aldo to do something with the box (see Table 5.9): drive it (line 157), what to do (lines 160 and 161), and tip it over (line 163). With all this encouragement, Aldo trusted that tipping the box over was an acceptable or safe risk. MC tipped it over far enough so that with a little exertion, Aldo could tip the box over completely. At this moment, she made the risk-taking task less difficult by simplifying the task. Aldo managed this risk-taking because the task was not too big for him.

Table 5.10

*Looking Inside the Box*

Line	Agent	Utterance	Nonverbal	Learning Disposition
166	MC	Oh my goodness.	<i>Looking inside the tipped over box.</i>	
167	MC	Do you want to see what's inside?	<i>To Aldo</i>	
168	MC		<i>Aldo runs around the box to see.</i>	Risk-taking
169	MC	Maybe we could use some of these things?	<i>Looking in the box and commenting to Aldo</i>	
170	MC	Shall we see what these are?	<i>MC sticks her head in the box.</i>	

This excerpt (see Table 5.10) is five lines that transitioned from the risk of tipping the box over to the risk of taking the items out of the box. MC supported Aldo as he took the small risk of looking in the box.



Figure 6. Aldo listened to MC talk about taking items out of the box.

Table 5.11

*MC Begins to Empty the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
171	<i>MC</i>	Do you want to help me take these out?	<i>MC reaches in and pulls things out. Aldo watches.</i>	
172	<i>MC</i>	Let's take these out.	<i>Aldo bends over and looks in and MC pulls out packing materials.</i>	Modeling risk-taking
173	<i>MC</i>	Come on, you can get in there.		
174	<i>MC</i>	Oh, we got some, some....	<i>Aldo stands back and away from the box.</i>	
175	<i>MC</i>	What should we do for a steering wheel?		
176	<i>MC</i>	Get in there and get those things out of there.	<i>MC holds the flaps on the box open for Aldo to go in the box easily.</i>	
177	<i>MC</i>	It's ok. You're safe.	<i>He is shaking his head no, holding his hands together.</i>	

In this excerpt (see Table 5.11), MC began taking items out of the box. Aldo did not participate. He only watched her pull items out (see Figure 6). MC noticed his reluctance and reminded him that he was safe. At this moment, reaching in the box was too big a risk for Aldo.

Table 5.12

*MC encourages Aldo to Take Things Out*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
178	<i>MC</i>	Do you want to get em out?	<i>Aldo nods, "no," cautiously.</i>	
179	<i>MC</i>	You don't want to get them out?	<i>Aldo nods, "no," again.</i>	
180	<i>MC</i>	Do you want them in your car?		
181			<i>Aldo nods no.</i>	
182	<i>MC</i>	Well, you'll have to take them out if you don't want them in your car.		Motivating risk-taking

MC made a strong case for Aldo to get the packing material out of the box (see Table 5.12). She acknowledged that he did not want to do it but repeated the statement that if he didn't want them in his car, he would have to get them out. She influenced risk-taking by connecting to Aldo's desire to have an empty box so he could create a car.

Table 5.13

*Aldo Pulls an Item from MC's Hand*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
182a	<i>MC</i>	You want to get in there?	<i>Aldo only looks at MC with no response.</i>	
183	<i>MC</i>	What's this one?	<i>MC bends over and reaches in again.</i>	
185	<i>MC</i>	Here, pull this one out.	<i>MC hands him a piece of plastic strapping tape.</i>	
186	<i>MC</i>	You can pull this one.	<i>Aldo grabs the tape that MC hands him.</i>	Risk-taking
187	<i>MC</i>	Pull, pull, pull	<i>He pulls out a long green tape and backs away with it.</i>	

188	MC	What about this one, can you pull this one out?	MC hands out another item, a piece of paper.	
189	MC	Get this one. Pull this one out.	He drops the green tape on the ground.	
190	MC	What about this one?	He darts in and grabs a piece of paper and drops it on the ground.	Risk-taking
191	MC	And what about those ones back in there?	Aldo reaches in 6 inches and pulls a piece of paper out.	

Aldo began to accept the risk-taking invitation from MC (see Table 5.13). She was in the box and handing items to him. This approximation of risk helped Aldo be successful. Aldo was not going in the box as MC asked, but he did move material out of the box. His nervousness about this action was evident in how he darted in and out without making a commitment to going in the box. He was taking on risk, but at his comfort level.

Table 5.14

*Aldo Grabs an Item from the Ground by Himself*

Line	Agent	Utterance	Nonverbal	Learning Disposition
192	MC	Go back and get those things. What are they doing in there?	MC is using a silly voice tone emphasis. MC pulls a 4' x 4" piece of foam to the mouth of the box for Aldo to grab.	Risk-taking
193		5 s	Aldo pulls the foam out. And pulls out a piece of packing paper MC has moved near him.	

These two lines were significant because Aldo took on a higher level of risk. He picked up packing materials on his own. MC did not hand the packing material to Aldo; she simply moved the foam and piece of packing paper to the mouth of the box. He bent over, picked it up, and moved it out of the way.

Table 5.15

*Aldo will not Reach in the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
194			<i>Aldo leans toward the box and looks in with MC.</i>	
195	<i>MC</i>	And there's another box.	<i>curious voice</i>	
196			<i>MC moves the box closer to Aldo, but he won't extend himself beyond his arm's reach.</i>	
197	<i>MC</i>	Oh, and is that green one trying to catch you?		
198	<i>MC</i>	Can you pull another box out?	<i>Aldo shakes his head no.</i>	
199			<i>Aldo does not want to put any part of his body in the box</i>	

This excerpt in Table 5.15 showed MC working on moving a box out of the box and enticing Aldo to participate, but he did not go in the box. He would pick up pieces handed to him, and pieces from the ground, but he was unwilling to go in the box to pull out materials.

Table 5.16

*Further Encouragement to go in the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
200	<i>MC</i>	Let's see, I'm gonna go in	<i>MC bends over and goes in the box.</i>	<i>Verbalizing and modeling risk-taking.</i>
201	<i>MC</i>	Here's some more.	<i>Up tone voice from inside the box.</i>	

MC continued to talk about going in the box to clear it out, as seen in Table 5.16.

Table 5.17

*MC Elicits other Children to Help*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
202	<i>MC</i>		<i>Alice comes over</i>	
203	<i>MC</i>	Alice, can you help pull those out?	<i>MC moved more materials near the entrance of the box. Aldo stands to one side.</i>	
204	Alice	What are you doing?	<i>Alice holds and drops silver lined packing foam.</i>	
205	<i>MC</i>	We're making a car.	<i>Alice is looking at the box, Aldo, and glancing inside the box.</i>	
206	<i>MC</i>	We're trying to figure out how to make a car.	<i>MC talks and bends the flaps on the box back.</i>	
207	<i>MC</i>	Do you have any ideas?	<i>To Alice</i>	
208	<i>MC</i>	What can we do?		
209	Kyle	What is that?	<i>Picking up a piece of foam.</i>	
210	<i>MC</i>	That looks like something that might go where? in a car		
211	<i>MC</i>	We're trying to make a car Kyle, want to help us?		

In Table 5.17, Alice and Kyle were becoming interested in the box and creating a car. MC continued to use the pronoun, 'we', thus signaling this car project as something she and Aldo were doing together. Aldo watched these children fluidly go in and out of the box. MC asked Alice for her ideas and invited Kyle to help as well. Aldo was cautious, but MC influenced Aldo's risk-taking by inviting other children to participate in the act of entering the box.

Table 5.18

*MC Sets Boundaries*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
218	MC	What do you think Andres?	<i>Aldo holds the box with his hand and looks in.</i>	Risk-taking
219	Andres	I want to have this at my home	<i>Andres picks up the console as he watches the activity at the box.</i>	
220	MC	Oh, well, we're gonna play with this here at school.	<i>MC sits down beside the opening to the box.</i>	

As Aldo was taking the risk to stand close to the box and hold it, MC seemed to be setting some boundaries (see Table 5.18). Three new children joined the car building, and Andres learned that the console stays at school.

Table 5.19

*Aldo Reaches in and Removes an Item*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
221			<i>Aldo comes over to the box, takes one step in, and pulls out a piece of foam from the back of the box.</i>	Risk-taking
222	MC	Whoohoo, joyful laughter, you got it out.	<i>MC is truly excited that Aldo reached in.</i>	
222a	MC	Nice job!	<i>Aldo drops the foam.</i>	
223	MC	Now what are we going to do with that box? with laughter	<i>Aldo is standing, smiling, and swinging his arms.</i>	

Table 5.18 shows the culmination of the vignette. While the other children were conversing with MC, Aldo decided to take a risk. He stepped in the box, reached in, and pulled out a piece of foam. MC was genuinely delighted. Aldo seemed pleased with himself. The various steps of

simplifying and approximating risk culminated with Aldo taking a risk on his own. He reached in the box and removed a piece of foam.

The vignette in Table 5.20 took place the next day. Interest in the box as a car remained high. Children were going in the box pretending it was a car. Aldo was waiting his turn.

Table 5.20

*Taking turns in the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
155	MC	It's Aldo's turn and then Carrie's.	<i>To Castro who is eager for another turn in the box.</i>	
157	MC	Aldo can sit right there.	<i>MC points to a spot inside the box. Aldo gets right in and sits down.</i>	Risk-taking
162	MC	That trunk [cardboard flap] will stay open because we have a staple through it.	<i>She is referring to a flap that has a packing staple in it and when it remains open, no one will be scratched.</i>	
163	MC	Alright, how are you doing in there Aldo?	<i>She opens one flap so he can see her.</i>	

MC intentionally set the situation for Aldo. She knew he had watched other children go in and out of the box, now the pretend car, many times. Aldo had noticed the timer ringing for turns in the box and knew his turn was next. MC pointed to exactly the spot where Aldo could sit, so he would not have to make a choice about where to sit. She identified the staple in the box as a good reason for the box flaps to stay open for Aldo. He might be scared if a child said, “close the doors.” MC influenced risk-taking by making this grand risk of going in the car as achievable as possible for Aldo.

Table 5.21

*Talking with Aldo in the Box*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
164	MC	Where are you going? Where are you going, Aldo?	<i>MC looking in the box at Aldo</i>	
165	Aldo	I go to McDonald's.	<i>Voice from inside the box.</i>	
166	Andres	Where are you going?	<i>Andres is grabbing and shaking the flap.</i>	
167	MC	Where are you going?	<i>Sweet voice and encouraging</i>	
168	MC	Gentle, gentle, gentle.	<i>To Andres softly.</i>	
169	MC	Where are you going? Can you go to the store and get us some oranges?	<i>MC, Andres, and Castro are looking in.</i>	
170	MC	Okay, let's move to the side so he can drive. You're standing in front of his car.	<i>MC standing to one side and encouraging Andres and Castro to move.</i>	
171	MC	Gentle, Gentle, gentle, that's a big noise. That might be scary.	<i>Andres is slapping the flap. She is redirecting him.</i>	

MC stood close to the box and monitored the other children's interactions with Aldo in the box (see Table 5.21). Andres, Castro, and Alice were all at the door of the box waiting for a turn. She reminded Andres to use a soft voice by modeling a soft voice in line 167, and in line 168 she gently asked Andres to be gentle with the box. Then she used 'car driving language' with Aldo to make his experience in the box similar to the other children's. Moving Andres and Castro to the side of the box moved them away from the flaps because they were flapping the box shut when Aldo wanted the door flaps open. This redirecting of other children helped keep Aldo's risk-taking experience safe and at a level of risk he could manage.

Table 5.22

*Does Aldo Want Something New?*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
			<i>Steven pulls the console out of the box.</i>	
172	Andres	No, no, no.	<i>Andres picks up the console from Steven and stands in front of the door.</i>	
173	MC	Do you want the controls?	<i>To Aldo</i>	Inviting Risk
174	MC	No? Okay. There's a ball (pointing to a ball in the box) you can use for the steering wheel if you want.	<i>Aldo shakes his head no.</i>	
175	MC	No? Okay.		

In Table 5.22 MC is urging Aldo to add a pretend steering wheel to his car experience. She wants him to expand his risk-taking with support. MC monitored the flaps on the box and the amount of ambient noise. She also asked additional questions about using the controls (the console) or if he wanted a ball to use as a steering wheel. In this way, she gave him control of the risk he was taking in entering the box. He could take on more stimuli or just be in the box. He chose to just be in the box with the balls beside him.

Table 5.23

*Other Children Sound Risky*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
176	Andres	I want to go in there now.		Risk-taking
177	MC	Carrie's gonna have her turn.		
178	MC	Castro, I'm gonna ask you to let him have his turn. Come on over here, Castro.	<i>Aldo is sitting in the back of the box with two balls beside him and a big smile on his face.</i>	

In Table 5.23, MC responded to children wanting the next turn. Aldo may have felt threatened by Andres wanting his turn. MC maintained the turn taking and safety when she reminded Andres that she had promised Carrie the next turn. In lines 179 – 186 (not included in a Table in-text), MC was chatting with Aldo and giving guidance to children waiting their turn. At one moment, she lifted a box flap to talk with him directly and found him sitting and smiling. At no point did he feel abandoned or lonely.

Andres was pressuring MC for a turn as Castro ran off to find Carrie. MC managed children's impatience with two strategies. First, she reminded Andres of the process, and second, she gave Castro a task to make the time pass more quickly.

Table 5.24

*Does Aldo Want More Items?*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
187	MC	Do you want the controls? Do you think he wants the controls in the car?	<i>Aldo nods no.</i>	
189	Andres	No.		
190	MC	No, he doesn't wanna, he's just sitting in there.		
191	MC	Peek-a-boo.	<i>MC is peeking in the front door.</i>	
193	MC	Peek-a-boo.	<i>MC is peeking in the hole</i>	Risk-taking
195	MC	Peek-a-boo. Hello.	<i>Laughing/cheerful voice in the hole</i>	
196	Andres	Peek-a-boo, peek-a-boo...	<i>Leaning in the front door and calling to Aldo</i>	
197	MC	Alright that's the timer. Come on out.	<i>Aldo comes out with a smile.</i>	

These last few seconds of Aldo's turn, seen in Table 5.24, were spent asking if he wanted to extend the risk by pretending with a console. While he did not choose his own challenge, he smiled when MC said peek-a-boo at the front door and then the peep holes. This cheerful peek-a-boo that could be surprising extended Aldo's perception of risk by the teacher pretending with him. When Andres said peek-a-boo at the front door, the timer went off and Aldo's turn was over.

**Discussion of teacher discourse and risk-taking.** In Tables 5.2 – 5.24, the box was an easy environment for independent play for some children, but for Aldo, it was a source of curiosity and uncertainty. MC's teacher discourse -- her confident voice, assurance of safety, and proximity -- created a safe setting for Aldo to risk engaging in pretend play with the box. First, MC emptied the packing material piece-by-piece out of the box with frequent invitations for

Aldo to reach into the box, but he rejected her. With much prompting from MC, they ultimately moved the box together. She maintained a voice that conveyed confidence in Aldo's ability and assured him each task was safe. Together they moved the box, tipped it over, and emptied it of foam, tape, and other packaging items.

Statements such as "Do you want to help carry this?" and "Can you reach in?" were small challenges or risks for Aldo. In fact, she asked 35 questions in this vignette encouraging his engagement with the box. At times, these questions were in response to his curiosity about the box becoming a car, while at other times, the questions served to maintain his engagement. There were 15 statements of clarification that narrated what she or Aldo were doing. These included "We have a box over here" (125), "Let's take these out" (172), and "And there's another box" (195). In addition, there were 15 challenge statements that were more direct moves to stimulate his engagement such as "Come on over here and push" (137), "Come on and help me tip it over" (163), "Go back and get those things" (said in a humorous tone of voice), and "What are they doing in there?" (192). There was a balance in her challenges between pushing his risk-taking and maintaining an emotionally safe climate, such as when she injects, "It's ok. You're safe" in line 177. MC's actions, statements of clarification, and challenge statements influenced Aldo's risk-taking disposition. First, she provided strong encouragement to help move the box. And she created space for Aldo to watch MC and other children pull packing materials out of the box. Then she placed strips of paper within his reach for him to pull out. And finally, he bent his body into the box and pulled out a piece of foam in line 221.

***Making micro-risks helps Aldo manage risk.*** MC incrementally minimized risk-taking for Aldo using a strategy I call micro-risks. In 138 lines of transcript, Tables 5.2 – 5.19, MC made micro-risk statements – a series of *baby steps* that divided the risk into smaller segments. Micro-

risks precede and build up to the risk-taking task or event. The sequence of statements from MC represents micro-risks. The importance of these measured micro-risks was found in how they kept this child motivated and engaged. While he was simultaneously interested in this uncertain task with the box, he was hesitant to accept the actions MC posed to him. Each time he said no or refused to remove an item on his own, she made the task smaller. She made these challenges small enough to be acceptable to Aldo, cutting his sense of risk-taking into bite size pieces to make risk digestible for Aldo. Her moves identified his interest, challenged and maintained his risk-taking with micro-risks, and created novel micro-risks to hold his attention. MC also knew when he had enough and facilitated the invitation with Alice to drive away on the school bus tricycle. The next day, they revisited the box. Micro-risks continue from *Box as a car* (Tables 5.2 -5.19) to ‘Aldo in the Box’ (Table 5.20 -5.24) on the second day.

***Building upon previous risk-taking actions.*** In the entirety of *Box as a Car*, the box was an easy environment for independent play for some children, but for Aldo, it was a source of curiosity and uncertainty. The next day, they revisited the box. Micro-risks continue from *Box as a car* to *Aldo in the Box* on the second day. The next vignette, *Aldo in the Box*, began the next day, when many children took turns going in the box, pretending they were driving a car. MC was monitoring turns and encouraging Aldo to go in the box. Many children went in, and some chose loose materials or parts to use as steering wheels or seats. When Aldo finally went in the box, he went alone with no parts.

***MC conveyed confidence.*** Voice, safety, proximity, and micro-risks were used to support risk-taking. Throughout these two vignettes, MC’s voice was confident and assuring as she communicated with Aldo as he entered the box. “It’s Aldo’s turn and then Carrie’s” (line 155) and “Aldo can sit right there” (line 157) both communicated confidence to Aldo through the

absence of a questioning tone in MC's voice. Her tone was affirmative and steady, not questioning or reedy. She conveyed confidence in his ability to sit in the box and pretend it was a car. Then, she affirmed his pretending by asking a question she asked of all children 'driving' the box, "Where are you going? Can you go to the store and get us some oranges?" (line 169). The use of this assured, consistent, and affirming tone of voice influenced Aldo's risk-taking.

*Creating emotional safety for Aldo.* Discursive moves assuring safety are often moves that boost emotional safety in support of risk-taking, not necessarily a health and wellness concern. Each statement MC made about safety in this vignette also supported risk-taking. "That trunk will stay open because we have a staple through it" (line 162) communicated that she knew Aldo needed the box open to feel safe, yet the staple was the reason for it to remain open. MC did not say something like, "That trunk will stay open because Aldo is scared in the dark." Her statement about keeping the trunk open affirmed the presence of light in the box without verbalizing Aldo's possible fear of the dark or bringing attention to his concern about being in the box. Additionally, line 170, "Okay, let's move to the side so he can drive. You're standing in front of his car," announced to all the children that Aldo was in the box and *driving the car*. The line appeared to be a reminder of safety, but it was also a directive to clear the space around the box. Consequently, the box did not get bumped while Aldo was inside. Then she made a direct statement about emotional safety, when she reminded Andres to be gentle when he was slapping the flap and making a big noise that might be scary. "Gentle, Gentle, gentle that's a big noise. That might be scary." (line 171). With this move, she reminded Andres what to do, "be gentle", and signaled to Aldo that she knew the big noise might be scary, and that he was taking a risk with the unknown area inside the box. This acknowledgement of Aldo's concerns may have served to help him feel calmer. He could hear that MC was aware of the noise, and that she had it

under control. Five statements following this line continued to bolster Aldo in the box and lend him control of his experience, such as, line 173, “Do you want controls?”, line 174, “No? Okay. There’s a ball you can use for the steering wheel if you want.”?, a cheerful “Peek-a boo,” in lines 191,192,193. MC knew Aldo well and made overt and subtle moves and statements supportive of his emotional state (safety). Her discursive moves provided the necessary support for him to risk entering the box.

*MC supported micro-risks with proximity.* MC used proximity along with micro-risks. The first micro-risk occurred when MC respected Aldo’s concern with entering the box. She kept him proximate to the box, inviting him to try *driving the car* nine times before he entered. These invitational moves or micro-risks held his interest and continued to challenge him. She answered his questions about the box and reminded him of when his turn would be. He stood quietly and watched intently as other children went in and out of the box. Later, she guided Aldo into the box, engaged him in pretend play, and sustained his calm demeanor.

### **Approximating Risk**

This next vignette was set again on the playground climbing structure. MC was supporting Alice’s goal of hanging from the bar, letting go, and jumping to the sand (see Figure 7). Jesus was in the tunnel behind the platform where Alice was standing. She was scared and MC negotiated an approximation of the hanging and letting go risk, to standing on the four-foot-high platform and jumping.



Figure 7. Alice and MC at the Platform  
Table 5.25

*Planning to Jump*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
39	MC	Okay. You're going to jump down?!?	<i>To Alice who is hanging from the bars by her hands. MC holds her by the waist.</i>	
40	MC	Jump down	<i>ascending tone.</i>	
41	Alice	Okay.	<i>Alice hangs by her hands and then puts her feet back on the platform</i>	Risk-taking

MC guided Alice in a series of moves that moved her closer to her stated goal of jumping in Table 5.25. At the start, Alice reached out and hung from the monkey bar. MC addressed Alice in multiple ways in lines 39-41. First, she held Alice's waist as she hung from her hands. Using an affirming question, MC said, "Okay. You're going to jump down?!?" Next, in an ascending voice inferring a question asked, "Jump down?" However, Alice had placed her feet back on the platform.

Table 5.26

*Alice is Scared*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
42	MC	Okay. You want to jump?	<i>MC is still holding her.</i>	
43	MC	You're going to jump down?	<i>Alice hangs by her hands and then puts her feet back on the platform a second time.</i>	
44	Alice	I scareeed.	<i>Alice is standing on the platform with her hands at her side.</i>	

In Table 5.26, MC maintained Alice's stated intention of jumping with "Okay, you want to jump?" in an affirmative tone of voice. She then repeated Alice's goal with a question in line 43. Alice was not touching the bars, and in line 44, she said "I scareeed". MC did not affirm Alice's fear.

Table 5.27

*Approximating the Risk*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
45	MC	Okay. Now what you can do is you can get on here,	<i>pointing to the platform</i>	
46	MC	and you can jump to here	<i>pointing to the ground</i>	
47	MC	You want to jump from here?		

MC doubled her engagement with Alice in Table 5.27, presenting an approximation of the jump to be taken, and indicating that Alice could jump from the platform and not from the hanging position. She did not change the goal of jumping but offered an approximate solution instead. She said the word 'Okay' a fourth time in line 45, "Okay. Now what you can do is you

can get on here (pointing to the platform) and you can jump to here (pointing to the ground). You want to jump from here?” Importantly, MC did not directly address or repeat Alice’s statement that she was scared; instead MC said, “Okay” to acknowledge Alice’s emotion.

Table 5.28

*Pause to Reset Emotions*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
48	MC		<i>Alice points her foot out and at the spot where she might land if she jumped.</i>	
49	MC	Let me tie your shoe for you.	<i>Alice looks down at MC tying her shoe.</i>	

These two lines in Table 5.28 were a period of recalculation. Alice was standing on the platform, and she pointed to the place she intended to land on with her toe. At the same time, MC noticed her shoe needed tying. This attention to safety was also an act of a person-to-person connection. The act of shoe tying gave Alice five seconds to pause and perhaps gather herself.

Table 5.29

*Jesus Interjects another Choice*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
50	Jesus	Stand back.	<i>Jesus is talking to Alice from the tunnel. [Jesus is in the tunnel behind Alice with the ball he and another child were playing with.] She is ignoring Jesus.</i>	
51	MC	So, he's asking you to move back and then he'll roll it [the ball] to you. [She has the option to abandon jumping and play ball with Jesus, but she stays focused on the jump]		Risk-taking
52	Jesus to Alice in a monotone voice	Stand back. Stand all the way back.	<i>. MC is more focused on Alice's jump than Jesus' words.</i>	

In Table 5.29, Jesus distracted Alice when he asked her to stand back. MC interpreted his request for Alice, so Alice understood that he wanted to roll the ball through the tunnel to her on the platform. She had the choice of two risks here. She could respond to Jesus (a risk due to his unpredictability) and accept the ball, or continue with her intent to jump. In line 51, MC maintained focus on the jump and asked her again if she wanted to jump. The pause may have relieved Alice of some anxiety she felt about jumping, and MC maintained focus and continued to encourage her risk taking.

Table 5.30

*I Can't Jump*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
53	MC	Okay. You want to jump down? I'll hold your hands and you can jump.	<i>MC finishes tying Alice's shoes, looks up at Alice with a generous, warm smile, then holds out her hands to Alice, who takes both hands in her own. MC encourages the jump.</i>	
54	Alice	I can't		
55	MC	Practice jumping.	<i>Encouraging tone</i>	

In Table 5.30, MC used physical contact to offer encouragement saying in line 53, "I'll hold your hands and you can jump." This new approximation added physical contact and the encouraging facial expression of a smile. When Alice said, "I can't," MC did not argue with her or try to change her mind. Instead, she gave her a new option, stating, "Practice jumping" (line 55). This approximation of the task encouraged Alice and kept her focused on the risk-taking task, not her fear of jumping.

Table 5.31

*Alice Jumps*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
56	Alice	Watch!	<i>She makes an effortful noise, ugh. Alice jumps while holding MC's hands.</i>	
57	MC	Wow. Nice job. Very nice job.	<i>In an excited whisper.</i>	

Alice responded to MC’s encouragement with “Watch!” While holding MC’s hands, Alice jumped. MC responded with an intense and excited voice, “Nice job.”

**Discussion of approximating risk.** The teacher adapted her discourse to meet the risk-taking levels of each child and additionally, she shaped risk-taking to meet the risk-taking goals and abilities of each child. Shaping risk-taking describes teacher moves made with the child, planning, guiding the child, or setting up the environment to create risk-taking opportunities appropriate to each child. For example, in Tables 5.2 – 5.19 when Aldo and MC were moving the box, MC divided a task into small steps or micro-risks, creating manageable risk-taking opportunities. In a similar manner, in Tables 5.25 – 5.31, she approximated risk when she guided Alice to jump rather than hang and let go. This created a smaller, more doable risk and helped her consider a larger risk. She helped the child plan, anticipate risk, and execute a doable task. Micro-risks break down the tasks toward the child’s risk-taking goal.

Similar to micro-risks, approximation of risk involves subtly changing or approximating the risk-taking goal to accommodate the child’s risk-taking ability. Approximation of risk is different from micro-risks. With approximation of risk the teacher described variations of what the child was doing and made small approximations of the end goal, rather than how micro-risk

used language to expand or hold their interest – not changing or approximating the end goal, but adapting the path or process to attain the end goal.

In the vignette represented in Tables 5.25-5.31, MC approximated risk to help move Alice toward a larger risk. She changed the risk-taking goal from jumping from hanging to jumping from the platform. MC added approximation of risk to the strategies of voice tone, safety, and proximity and adapted the risk to fit the child.

In this vignette of coaching Alice's jump, the teacher utilized the strategy of approximating risk and additionally she inserted a discursive move of assigning the risk-taking task. First, MC approximated Alice's intended risk. She presented risks that were not jumping from hanging but jumping from the platform, which was an approximation of the hang and jump risk. As she moved Alice toward her stated goal of jumping, she did not scaffold in the traditional educational sense of giving temporary supports that are incrementally removed. Instead, MC approximated the jumping task to build Alice up toward the task of hanging and jumping by modifying the initial goal.

Second, MC assigned the risk-taking task to Alice. She was not jumping "because you are brave," or "your brother will be so proud". Instead, she was jumping because it was a risk she had established, and MC reflected Alice's ownership of the risk using the pronoun 'you' four times. It was always Alice's risk. MC remained focused on Alice completing this risk-taking task and kept Alice focused on the task, not the distractions or the fear. MC influenced Alice's motivation for risk-taking by approximating the task when it appeared uncertain and maintained Alice's focus on the task. Additionally, MC gave Alice ownership of the risk which conveys the power of risk-taking to the child.

## **Planning for Risk-Taking**

Planning with a child to influence risk-taking is an additional strategy used in this study to influence the learning disposition of risk-taking. In the following description, the child named Irene, was guided toward the risk of sharing her work with the whole class. This was labeled as a risk because of the level of encouragement Irene needed to share with the group after she had shared easily with the teacher. MC supported Irene's sharing of a drawing through a series of verbal exchanges that planned Irene's sharing with the class at circle time.

Morning Circle was the time of day about 15 minutes after arrival when all the children and adults (teacher, assistant, speech therapist) in the room sat on the rug in a circle to start the day. They sang a few group songs, shared ideas, and discussed the plan for the school day. This vignette began at arrival time when parents were entering the classroom with their children. This vignette was too expansive for a Table, but the transcript can be found in Appendix F. The children put away their backpacks, washed their hands, and sat down with their parent to write in their paperback journal. This day, Irene drew a picture and wrote words with her mother in the form of a joke. MC was working with three other children when Irene brought her journal to MC, who held the journal, smiled, and pointed to the words. In line 97, Irene read, "I am you. Ha, ha, ha." MC said, "'I am you, ha, ha, ha'. You put words in your picture. This is beautiful. It looks a joke picture. Do you want to share this with the class? It's a nice joke. Let's mark this spot. If you go to my computer, you will see the star post-it notes, and you can mark the spot, so we know where it is." (lines 98-100).

In these three lines above, MC positioned Irene as a writer of a joke that would be of interest to the class. MC also gave Irene the authority to retrieve the post-it notes from the teacher's desk. Irene returned to MC, who said, "Yeah, that's it. You can take it off and mark

your book” (line 105). Irene placed the post-it in the journal page. MC greeted a few more children and then said, “So that will be your marker. ... Would you please put this [the post-its] back, so I know where it is?” (line 112). Irene put the post-it notes back on MC’s desk. As children continued to enter the room, Irene held her journal for the next eight minutes. She placed it on the chalkboard ledge for sharing during Morning Circle. The children sat down in a circle, sang songs, and after five minutes, MC said, “So Irene, you had something you wanted to share” (line 346). Irene looked up with hesitation on her face. MC “If I look up at the board and I see Irene’s journal...” Irene slowly stands, picks her way around a few children, and gets her journal with the marked page. She walks back to her place with a very neutral expression on her face looking down. She returns to her place and sits down. MC then cues her in lines 349 and 350, “Alright Irene. So, she’s got her journal, and she marked it, so she knows right where it is, what she wants to share. OK.” MC planned Irene’s risk-taking when she narrated Irene’s plan to share (marking the place in the journal), committed to share (placing the journal on the ledge), and cued Irene to share with the class. This was the first time Irene shared her writing and drawing at circle, and this was the first time she had written words with her picture, so she was venturing into an unknown and uncertain experience. MC continued to support Irene as she nodded to her and cued her to read. “I am you, Ha, Ha, Ha.” Irene read the words with her face down, appearing very shy, and snapped the journal shut. It seemed that she wanted to be done sharing. Then, MC pushed her risk-taking a bit more and said in lines 352 -355: “So, so, so .... show the picture.” Irene turned the journal toward the class. Then MC said, “Can you walk around so everyone can see the picture?” Irene slowly stood up and as she was slowing walking around the circle (see Figure 8), MC finished with “So, it’s a joke. Irene wrote a joke.” And MC

empowered Irene when she continuously acknowledged her ownership of the work and the risk-taking task.



*Figure 8.* Irene is showing the class her journal.

**Discussion of planning for risk-taking.** Together MC and Irene planned for risk-taking. MC gave her responsibility for preparation. MC asked Irene to ‘enter’ the private area of her desk and directed her to complete teacher tasks (marking the page, returning the post-its, and preparing for circle). This move of shared responsibility with the teacher empowered Irene. Although Irene felt uncertainty about sharing her work, MC facilitated Irene’s plan for sharing, reminded Irene of her risky plan to share, asked her to share, and asked her to walk the picture around the circle.

Irene’s emotional risk was observed in her hesitancy about taking action. She risked her creation being found silly. With MC’s encouragement and security through planned risk-taking, Irene took the risk of sharing even though the outcome was uncertain. In this way, planned risk-taking is another form of scaffolding risk (along with micro-risks and approximating risk). Planned risk-taking is a form of teacher attention similar to descriptive attention, except the attention giver describes the act or creation before the child does it. Planned risk-taking can give

value or empowerment to the child's expressed thought process and give the child space to correct or adjust the plan.

### **Teacher's Management of her own Sense of Risk-Taking**

A teacher's attitude toward risk can influence a child's attitude toward risk-taking. The teacher in this study made discursive moves with confidence that seemed to communicate an acceptance or plan for risk-taking. She also made choices for her classroom that had uncertain (or risky) outcomes, including hanging and jumping and entering a box. The following vignettes demonstrate an attitude toward risk-taking that is calm. The teacher never projects an uncertainty or concern about risk. MC manages her own sense of risk, so children try things they might not consider with another teacher.

**Risk-taking with Speech and Self-help.** The following two vignettes, represented by Tables 5.32 – 5.36 and a narrative of pouring water, in which children have the option to pour their own water, communicate the teacher's acceptance of risk-taking and comfort with creating space for children to take risks.

MC kept a gallon jug of water on the play yard on a table or bench, so children could pour water for themselves. One day, while on the playground, MC was sitting on the bench pouring water for children or helping them pour.

Table 5.32

*Andres Wants a Drink*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
38			<i>Andres comes into the scene holding a cup and sits down beside MC.</i>	
39	MC	Would you put the top back onto the water jug for us?	<i>She hands him the jug.</i>	Risk-taking

In Table 5.32, MC engaged Andres with the responsibility for putting the top back on the jug not yet realizing he wanted a drink. She could have easily put the top back on herself, but she chose to ask Andres to try holding the heavy jug and putting on the top. While this may not be a risk-taking task for an adult, it could be daunting for a young child.

Table 5.33

*MC Offers a Drink*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
40	MC	Or did you want more water?	<i>She holds the cap as he takes the <math>\frac{3}{4}</math> full gallon jug.</i>	
41	MC	Would you like to pour more water?		

MC hands Andres the heavy jug and gave Andres the risk-taking option to pour himself more water (see Table 5.33).

Table 5.34

*MC Offers Support*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
42	MC	I'll hold the cup for you.	<i>MC holds the cup and the mouth of the jug as Andres guides the pour.</i>	
43	MC	It's very full. It's very heavy.		
44	MC	Heavy pouring. Ok, stop.	<i>(said quickly)</i>	Risk-taking
45	MC	Oh, you got it.		

MC provides support in Table 5.34 by holding the cup with confidence that Andres' pour will be successful and not spill on her. She describes his actions in lines 43 and 44 and draws attention to the risk of the "full" and "heavy" jug, narrating his pouring with a confident voice. Line 45 draws attention to Andres' ability with the phrase "Oh, you got it," instead of a teacher-directed phrase such as "I'm so proud of you," or deficient praise such as "And you didn't spill a drop."

Table 5.35

*MC Engages in Conversation*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
46	MC	Do you practice at home?		
47			<i>Andres makes 2 attempts to speak starting with “I”. His effort to create the words is noticeable on his face. He turns to look into MC’s face.</i>	

After the risk of pouring was mastered, MC continued the conversation (see Table 5.34), building on Andres’ possible act of practicing at home. This child receives speech support, so engaging in conversation is a risk for him. Andres struggled to speak in line 47 and looked into MC’s face for support. Her steady gaze and gentle smile lent support.

Table 5.36

*Andres Engages in Conversation*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
49	Andres:	I pactice (sic) how, I ... um///	<i>Irene waves her cup at MC on the other side, smiles, and</i>	Risk-taking
50			<i>MC moves the jug back to the Irene side, but maintains her gaze at Andres as he composes his response.</i>	
52	Andres:	I pactice [sic], I put my cup on the frig.		
53	MC	Oh, you so you get the water from the frig [sic]?		

MC’s continuous attention to and support of Andres’ communication encouraged talking in Table 5.36. In line 49, she ignored Irene waving her cup to be filled and gently waited for Andres to compose and speak his words. When a child struggles to be understood, talking can be a risk. MC supportively rephrased his comment in line 53, drawing attention to Andres’ ability to get water from the refrigerator on his own.

In the vignette above, MC did not communicate concern about getting wet while sharing the bench with Andres, spilling water, or taking this risk with children. She set aside any concern she might have about spilled water and handed Andres the jug to let him pour. Ignoring other children, she gave Andres her full attention. Using a voice of confidence, she made conversation supportive of his ability.

Another day in the playground, MC had planned to pour water into paper cups for Andres, but she asked Ms. Andie to help him instead. When Ms. Andie looked at the table, Andres had already started to pour. As he poured, MC said, “Oh, I think he could get it. Can you

pour me a glass, too?” Ms. Andie said, “Hey Andres, how's it going? Look for the opening, yup. Here ya [sic] go.” This gave him the opportunity to say, “I want to pour it myself.” He poured one for himself and one for MC, and Ms. Andie said, “This is MC's? Oh, that's very nice of you. And this one is yours? Nice job”. The teacher dialogue communicated confidence about Andres pouring independently, and their language acknowledged his ability with positive and informative comments. Both MC and Ms. Andie were aware of the possibility of unknown outcome such as spilled water but did not express concern. MC encouraged this potentially messy action by making it accessible to all children. She supported the action with her positive language and actions.

### **Risk-Taking throughout the Day**

Opportunities for risk-taking occurred in the indoor classroom as well in the outdoor classroom (as shown above). Morning Circle often included opportunities for children to name a novel motion or movement to go with a song. When children pretended to fly like dragons with large arm motions, MC guided and reminded them to keep their hands safely away from a friend as they flew around the circle area. The permission of big arm motions supported risk-taking because children were trusted to keep each other safe. Furthermore, when they were ‘jumping their sillies out’ in one song, she paused the song to remind children to stay on the edge of the rug and a safe distance between one another. During the study, MC never refused a move because it was *too dangerous*. One time, three children were tugging on a stuffed animal toy (a snake named Snakey) in the middle of the circle. In this case, the risk of a negative outcome was too high, so MC calmly focused on “keeping Snakey safe” and moved the children out of the circle to resolve the struggle by conveying calm as she talked privately with the children. MC exercised classroom management balancing risk-taking and creativity with group safety. She

gave instruction before the action and trusted children to maintain safety or managed the action before it resulted in a negative consequence, allowing children to try a movement with an uncertain outcome that could be perceived as dangerous.

During the school day, after snack and before the final group, there was a period of 30 – 40 minutes called ‘Investigations’. During this block of time, the class of 4 and 5-year-old children had opportunities to make activity choices on their own. Options included working at the Legos table, playing in the dramatic play area, block building, painting, using manipulatives, reading, or investigating the science area. While not an uncommon practice in early education, MC’s period of ‘investigations’ was unique because of her ability to risk an unknown outcome among the children. She had established external controls such as be kind, walk, and use resources wisely. Within these parameters, she risked children creating an unknown outcome such as constructing a very tall block building, painting at the easel with both hands, or creating a fiesta in dramatic play. On various days, she even had two live rabbits hop around loose in the classroom. She trusted the children to be kind to the rabbits. She created risk-taking opportunities in the classroom and created rules and norms with the children, trusting the children to honor the established controls. MC demonstrated comfort with ambiguity, a diminished need for absolute control, and trust in the children to make productive or creative choices. MC demonstrated a comfort with risk as a learning disposition.

## **Discussion**

**Discursive moves for risk-taking.** This research suggests discursive moves teachers can make to increase risk-taking as a learning disposition in early childhood education. Risk-taking appears most frequently in the early education literature in work supporting outdoor play (Cooper, 2015; Harper, 2017; Maynard, Waters, & Clement, 2013; Rivkin, 1995), rough and

tumble play (Smith, 2017; Storli & Sandseter, 2015) and policy (Harper 2017; Little, 2006), but only one article (Nolan, Taket, & Stagnitti, 2014) described teacher affect. Nolan, Taket, & Stagnitti (2014), focused on the role of the teacher in supporting children's resilience whose families are experiencing the presence of at least two challenges such as poverty, unemployment, insecure employment, insecure housing, divorce, separation, bereavement, family violence, and chronic health problems within the family. They described resilience as a human capacity that can be developed and strengthened in all people. The studies mentioned above highlight the importance of risk-taking, and Nolan, Take & Stagnitti (2014) describe the role of the teacher. However, I did not find a study that linked the role of the teacher to the support of risk-taking.

I argue that deeper attention to teacher discourse can further develop risk-taking in young children. I specifically name three discursive teaching moves that influence risk-taking: the manner in which attention is given, the manner in which safety and confidence is established and maintained, and the scaffolding of risk-taking. These additions to the literature will clarify ways in which a teacher can support risk-taking to help build resilience, problem-solving, and independence; it will also add to understanding how risk-taking can be incorporated in a preschool classroom (Little, 2006; Nolan, Taket, & Stagnitti, 2014; Smith, 2017; Storli & Sandseter, 2015).

**Attention.** This study adds to the research on risk-taking by arguing that the attention given a child through detailed words and actions of a teacher are critical. Previous studies of the effect of the teacher in the development of resilience related to risk-taking focused on environment, relationships, and practices. These studies highlighted aspects such as building relationships (Carver, Timperio, & Crawford, 2008; Mackett et al., 2007a), developing self-regulation, promoting social-emotional learning (Nolan, Taket & Stagnitti, 2014), and providing

positive reinforcement and consistency (Rissotto & Tonucci, 2002). However, they did not consider the complex space and discourse in teacher and child interactions. These prior studies describe what to do but not how to do it. In contrast, my study describes the quality and type of attention MC provides as found in the verbal context of descriptive attention, verbal attention, and non-proximity.

***Descriptive attention.*** Descriptive attention can be observed when a teacher describes the child's actions and words and implies the child's ownership of the action. When MC said, "Good job" in line 8 of Table 5.1, she was describing Tasneem's act. Her utterance would have been more descriptive if she had said, "Good job jumping, Tasneem." MC did not deliver a form of praise attention, which is attention given to a child containing verbal superlatives dependent upon the attention giver, such as if MC said, "I really like how you jump." Instead, descriptive attention describes the action, empowers the child, and positively influences risk-taking by giving positive feedback specifically about the child's idea or action. In Table 5.1, MC described to Tasneem what she had accomplished and was pleased by her actions but did not use reflexive words such as "I am so proud of you." This method of describing the action helps the act belong to the child, and their ability to try an uncertain act is their accomplishment.

***Non-verbal attention.*** Non-verbal attention is found in facial expressions such as an accepting smile, an open body position with both arms relaxed at the teacher's side, and gentle touch. It is a form of communication that begins early in life. A baby first learns non-verbal communication when they recognize the pleased faces of caregivers. This learning precedes language learning and remains an important communicative tool throughout early childhood (Brazelton & Sparrow, 2003). The teacher in this study used non-verbal communication specifically with early language learners and second language learners and also with all children.

Throughout the study, MC was nodding her head in agreement, smiling at children as she listened, and being relaxed whenever a child was processing uncertainty, for example, when Alice was attempting to jump. Positive, affirming non-verbal attention was used to encourage risk-taking dispositions.

***Physical proximity.*** The third effective mode of giving attention to risk-taking is through physical proximity. When a teacher stands near a child taking a risk, the proximity can create a form of physical attention and convey a sense of safety or security (Neill, 1991). Examples of this behavior include MC being near Alice, touching Tasneem when they jumped, and remaining close to the box as Aldo was placing himself in a very uncertain space. MC determined the appropriate proximity to a risk-taking child according to the level of risk or uncertainty she felt the child was expressing.

***Safety and confidence.*** In these excerpts, MC created physical safety and emotional safety through conveying confidence to the children. Her voice tone was positive when she told Andres to “look for the opening”, instead of a phrase such as, “look out!” or “be careful not to spill it all over the table.” She kept a neutral (not anxious) tone and was never loud or abrupt. Voice tone is important for emotional safety because a child could associate a loud or abrupt tone with a problem or mistake the child had created. As with Aldo and the box, her tone was neither overly concerned, dismissive, or anxious. She never used a negative or uncertain tone of voice that could undermine a child’s confidence. Her tone of voice was one of the factors that enabled children to work with uncertainty. Through her voice, she conveyed her belief in their ability to achieve their learning goal.

Maintaining a constant field of safety was also important in influencing risk-taking. Children who trust the environment are more willing to test uncertainty (Jirout & Klahr, 2012).

She kept Aldo feeling safe by controlling the sound level in the box and assuring some box flaps would be open for him to have light. When Tasneem was jumping, she kept the area below her cleared of children to avoid collisions, as well as guided Tasneem's foot position, so she would land safely. The general maintenance of a sense of safety gives children less fear of uncertainty (Briggs-Gowan, Pollak, Grasso, Voss, Mian, & Zobel, 2015). Thus, MC's assurance of safety supported and influenced children's willingness to take up a known risk.

**Scaffolding.** The idea of micro-risks, approximation of risk, and planning for risk adds nuance to literature about scaffolded learning. Described as an instructional technique, scaffolded learning moves children from one level of understanding toward a stronger understanding in which the teacher, named by Vygotsky as the trusted other, provides appropriate levels of temporary support; this helps students reach higher levels of understanding that they would not be able to achieve without assistance (Vygotsky, 1978; Moll, 2013). In the context of this study, scaffolding is not only an academic learning concept. Scaffolding can also be used to develop learning dispositions. Therefore, I argue to expand the concept of scaffolded learning to include scaffolding a risk-taking goal.

Scaffolding risk-taking involves invitational moves in which the teacher adapts the tasks toward a goal, approximates the goal, or plans for the goal and thereby establishing, shaping, and supporting the risk-taking task and scaffolding a child toward a risk-taking goal. In this way, risk-taking can be a scaffolded learning disposition. The trusted other can approximate the risk through descriptive analysis of the goal, make statements of clarification narrating what the child is doing, or make challenge statements to stimulate engagement. In this study, risk was scaffolded through three strategies: micro-risks, approximation of risk, and planned risk-taking. These three strategies are all forms of shaping scaffolding, similar but different.

**Micro-risks.** Micro-risks involve dividing the process of meeting the risk-taking goal into smaller, more manageable pieces, but not changing the goal. This was seen in Tables 5.2 – 5.19 where MC worked with Aldo by understanding his comfort zone (which parallels Vygotsky's (1978) zone of proximal development) and calculated the next risk-taking move with the support of the trusted other. In her interactions with Aldo, MC calculated each move from removing items from the box, to watching other children go in the box, and scaffolded Aldo toward the goal of sitting in the box. MC placed him in a position of greater comfort, thus removing the level of uncertainty he was experiencing, without changing the end goal of going in the box. He was interested in transforming the box into a car. First, he held the box and helped move it in small steps. Then, when he was unwilling to reach in the box, and MC kept pulling items out of the box, moving pieces close to him, until finally he pulled a piece of packing twine out of the box. The next day he watched others go in the box as a car and went in himself when his turn arrived.

Micro-risks can be seen in a classroom setting. For example, when a child appears uncertain to finger paint, the teacher can give the child a peg to move the paint, and then let them shift to using their fingers to move the paint once they are comfortable using the peg. The teacher has changed the process of the risk-taking task, but the end goal of finger-painting on the paper using fingers (not a brush or a peg) has been maintained. The teacher added the micro-risk of using a peg thus adding a step to the process of the ultimate goal of painting with fingers.

**Approximation of risk.** Approximation of risk is adjusting the risk-taking goal, so it is doable. This concept is similar to micro-risks but different because approximation of risk involves changing the risk-taking goal, not simply adapting the process of achieving the goal. This was best observed when MC noticed that Alice was too uncertain to hang from the bar and

drop to the ground. Instead of encouraging her to try an overwhelming risk or telling her to try later, she changed the risk to jumping from the platform. MC approximated the risk-taking goal. This placed Alice in a position of greater comfort, thus removing the level of uncertainty she was experiencing.

***Planned risk-taking.*** Planned risk-taking is a type of scaffolding that involves moving from a known risk in planned stages to a greater challenge with the help of a trusted other. As seen with Irene planning to share her journal, MC moved Irene from marking the place in her journal, to placing the journal near the reading circle, to showing it to the class, and ultimately walking the journal around the circle to show her classmates. Each act was planned and built (or scaffolded) upon the other. These children learned to take risks through the scaffolding of the trusted other. The planning through the use of demonstrative statements act to scaffold the risk.

These findings demonstrate how risk-taking can be identified as an act with an uncertain outcome that could be perceived as dangerous or embodying some level of fear. In other words, when a child learns to face uncertainty by taking on risk, they learn to work with uncertainty. This learning enables them to take on related learning dispositions and other types of risk. For example, curiosity relies on the ability to consider the unknown – an unknown physical entity or an unknown idea. Without comfort with risk, children would be less willing to explore the unknown, and the unknown includes problem-solving. Learning includes engaging with problems that involve a set of circumstances without a solution. Therefore, learning can be facilitated when a child is willing to risk entering an uncertain experience. When children learn to risk, they learn to explore the unknown. For this reason, risk-taking is an important learning disposition to be added to ECE literature.

Resilience and persistence are included in chapter 2 among lists of learning dispositions. They are commonly understood and the terms are more palatable than risk-taking, and I agree that they are important. However, I argue that risk-taking is misunderstood. Risk-taking can be viewed as a negative behavior of trying something dangerous or ill-advised, but when risk-taking is viewed as the ability to respond to uncertainty, it has a positive image. Persistence is the ability to return to or persist with a problem despite setbacks, and resilience is seen when someone persists or continues working with a task past the expected time of completion or in spite of opposition (Claxton & Carr, 2004; Katz, 1998). Resilience is similar yet different than persistence because resilience is an ability to recover from or adjust easily to misfortune or change (Claxton & Carr, 2002, p 14). Both resilience and persistence describe how a person approaches a problem or challenge, whereas risk-taking is the action taken to meet a problem or challenge. I argue that a child must first take action toward a problem before they can be resilient with the setbacks or persist toward a solution. Risk-taking is an essential learning disposition because it enables or prepares a child for many other learning dispositions. In addition, risk-taking involves moving from a place of less knowledge or skill, a position of uncertainty, to a place of knowing. Managing uncertainty is an important aspect of learning, so risk-taking must be added as a learning disposition.

## Chapter 6: Voice

### Introduction

Voice is more than the sounds uttered or sung by a person. In this study, voice was named as a learning disposition because it enables the enactment of knowledge and skill. Voice includes the right to be heard, contribute, and have influence. When a child has voice, their thinking and ideas are taken into consideration by others, including peers, teachers, parents, and also less influential people, such as school volunteers or store clerks. Voice motivates a child toward the learning goal of being understood. In this way, I argue for voice to be viewed as a learning disposition because motivation toward a learning goal is supported when a child is heard or has influence (Katz, 1988, 1993b). It is about a child figuring out how to be heard, as well as how to negotiate for a place in a conversation or social/play engagement.

The literature on learning dispositions includes communication (Carr, 2006) as a learning disposition, expressing ideas and feelings. Voice is expression and enables the enactment of knowledge and skills to be understood by others. In this way, voice can serve as an “affective and cultural filter for learning trajectories” (Carr et al., 2010, p. 15) because expressions of opinion, will, choice, desire, or right are grounded in a child’s lived experience (Esteban-Guitart & Moll, 2014). Just as voice can be supported by interactive experiences in an environment with important adults, such as parents and educators, and peers, it can also be weakened by these same influences (Bertram & Pascal, 2002). This literature on communication relates to the importance of voice.

Voice can reside with commonly named learning dispositions such as curiosity, persistence, independence, and resilience (Bertram & Pascal, 2002; Katz, 1988) as well as confidence, courage and curiosity, trust and playfulness, perseverance, and responsibility (Carr, 1998) because voice too enables the enactment of knowledge and skills. The Arizona Early

Learning Standards (2018) list curiosity, creativity, attentiveness and persistence, and reasoning and problem-solving as approaches to learning (pp.41- 65), a parallel term for learning dispositions. Katz (1988, 1993b) connects approaches to learning to the definition of learning dispositions as tendencies or habits of thinking that influence behaving or speaking in a manner that satisfies or moves a person toward a learning goal. Voice as a learning disposition follows this definition because it is an environmentally sensitive behavior and be supported or weakened through engagements with significant adults or peers (Bertram & Pascal, 2002). Voice, defined as the expression of knowledge, ideas, and sense-making, is essential in moving a person toward a learning goal. Voice can be a single expression or an exchange or dialogue with another or group of people. Although voice is not commonly named as a learning disposition, this study argues for its inclusion.

In this chapter, I examine the ways MC influenced the development of voice through the use of voice with the children in her classroom. I coded voice as expression that enables the enactment of knowledge and skills to be understood by others. It is seen when children's ideas are taken into consideration by others including peers, teachers, and parents. Included in this chapter are examples of children communicating their right to be heard and engage, their *sense-making*, and their right to be understood. Communication that develops voice is a dialogic engagement, a mediation, not a one-way engagement. This teacher demonstrated and valued children's emergent linguistic ability when she supported children as they made bids for participation instead of being silenced. The focal point of this chapter demonstrates the ways a teacher can influence voice as a learning disposition by making space for emergent linguistic ability, articulation, acceptance of alternative identities, and the expression of opinion, will, choice, desire, or rights.

Throughout this classroom research, children were heard expressing opinions, making choices, and expressing needs. Filming occurred at the end of the school year, and the dialogic practices were apparent as children expressed their opinions with the expectation of being heard and communicating with MC. There were six languages represented in the class: Spanish, Nepalese, Yoruba, Chinese, English, and Farsi. MC spoke English, rudimentary Spanish, and gave much effort to understanding all children's spoken and signed language, used elements of other languages, and gave time to understand those with enunciation delays. The following vignettes demonstrate how MC supported the voices of children.

### **Voice Expressed in Emergent Abilities**

In the next two vignettes, Tables 6.1 – 6.8, MC influenced voice through her engagement with children whose spoken language was emerging. In *Voice in Speech Delays*, MC listened and responded to Castro, a four-year-old child with speech delays (Table 6.1 – 6.4). She also listened and responded to Sarah whose primary language was Spanish in Tables 6.4 - 6.8 in *Voice in a Second Language*. Sarah combined Spanish, English and a form of sign language she used with her father.

**Voice in speech delays.** During a spin art session, six children were waiting for a turn. Castro was standing near MC, waiting his turn and looking at the colors as Alice squeezed paint from a bottle onto the plate to be spun. Alice put cyan (blue) and yellow in the spinner, and MC was struggling to make the spinner lid work (see Table 6.1).

Table 6.1

*Castro Sees the Colors Blend*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
307	Castro	I wanna see...It gonna do it like 'bue' [sic]!	<i>Castro's hand is on MC's shoulder as she is trying to make the spinner work for Alice.</i>	Voice

Castro was looking on at Alice spinning yellow and blue together. Castro made an energetic comment that he wanted to see it, "It gonna do it like bue [sic]!" He had an idea and is expressing his idea, but MC was working with Alice and did not ask Castro to be quiet. It can be assumed she heard him, but she did not respond.

Table 6.2

*Castro Connects Colors to "the Mommy."*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
308	Castro	It's gonna do,	<i>Looking into the spinner intently (10s lapse)</i>	
309	Castro	.. it's like the mommy. Mommy! Mommy!	<i>MC looks at Castro for 8 seconds.</i>	Voice

In Table 6.2, the 10 second pause between these two lines signifies MC looking at Castro and thinking about his expression. She seemed to be wondering about what he is saying and its meaning.

Table 6.3

*Castro Connects to “Mommy Blue and Daddy Blue”*

<b>Line number</b>	<b>Agent</b>	<b>Utterance</b>	<b>Non-verbal</b>	<b>Learning dispositions</b>
310	MC	Oh, like um, Little Blue, and Mommy Blue and Daddy Blue	<i>...Talking with Castro while holding the spinner for Alice</i>	Voice
311	Castro	Mommy!	<i>A contented tone to his voice.</i>	

In Table 6.3, MC responded to Castro’s comment by making reference to the book, *Little Blue and Little Yellow* (Lionni, 1959). Castro’s voice tone changed from excited expression, to contented understanding.

Table 6.4

*MC Shares Castro’s Idea with the Children*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
312	MC	Oh, like in the story. Little Blue. Do you guys remember the story, Little Blue? What happened when little blue and little yellow hugged? What happened?	<i>Castro looks up at MC with a large smile on his face and nods yes</i>	
313	Castro	They turned geen [sic]!		Voice
314	MC	They turned ... [End of power in camera.]		

At this moment, in line 312 (see Table 6.4), MC provided space for Castro’s voice by listening carefully to him and then pausing for eight seconds to make sense of his utterance. Castro was watching the blue and yellow blend in the spinner and connecting this visual image with *Little Blue and Little Yellow* (Lionni, 2011), a book they had read as a class. In this book, the little blue blob and his friend little yellow blob hugged and made green. Mommy and Daddy

blue blob were worried about little blue when he came home with little green. Castro was connecting the ideas of color blending from the book to what he was seeing, but he struggled to make himself understood because he was learning to enunciate certain consonants (l, f, d, k, n, r). MC reported that it took time to repeat in her head what he said and understand it. In this vignette, she amplified and clarified Castro's voice. This event is notable because she attended to a side comment while working with six children. MC could have ignored him; instead, she took the time to honor his effort at communicating and having a voice in this activity. MC had created a learning environment where voice was valued. This is evident in Castro's facial expression. He had an idea and his language was difficult to understand, but that did not stop him from expressing himself. He knew his voice was valued when MC paused in her engagement with Alice to fully understand him. MC influenced the learning disposition of voice with intentional listening and listening for children's meaning.

**Voice in a second language.** The next vignette occurred during spin art on another day. MC used this frequently requested small group activity as an opportunity for conversations with children, as seen previously in chapter four with Steven and the spinner. During this small group time, MC could repeat difficult sounds like 's' with children or talk about the bird sounds as children were working. She gave space for children to share stories that they might not share in a large group time. This small group engagement offered a more intimate setting for relationship building through conversation. In this vignette, Sarah, a quieter child who communicates in sign language and Spanish at home, shared a connection she makes with 'spinning'.

Table 6.5

*Sarah Comments on Spinning*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
164			<i>Castro is spinning while MC holds the salad spinner.</i>	
165	MC	Spinning		
166	MC	What are you doing?		
167	Castro:	Spinning		
168	Sarah:	It's like a witches' spinna [sic].	<i>Sarah says something that is not well understood by MC</i>	Voice

In Table 6.5, Sarah is listening to the conversation among the children and MC. When MC said the word spinning (repeated by Castro), Sarah made a connection to another form of spinning, and most importantly, she expressed her idea below in line 168. The expression was audible, but MC did not understand its meaning. It is unclear why Sarah is expressive at this moment, but it is obvious that MC has created a learning environment where verbal expression is encouraged and honored. Understanding followed Sarah's utterance.

Table 6.6

*MC Repeats Sarah's Phrase for Understanding*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
168	MC	It's like a what?	<i>Looking at Sarah quizzically and smiling to understand</i>	
169	MC	A wiget spinno [sic]?	<i>Repeating Sarah's utterance slowly to understand.</i>	
170	Sarah:	Ya, like this, a witches' spinna [sic]		Voice
171	Sarah:		<i>Sarah holds one hand up as to hold something and with her other hand makes the motion of spinning a widget.</i>	

These four lines (168-171 of Table 6.6) begin to add clarity to Sarah's expression. First MC directly asks for clarity, "It's like a what?" responsively and kindly with a soft voice and gentle smile. Then, she repeats what she heard Sarah say in line 169. Sarah responds with spoken language and uses her hands to illustrate her meaning by showing how one holds what they called a *widget* spinner (commonly known as a fidget spinner) in one hand and spins it with the other. She used oral and visual expression to communicate her meaning.

Table 6.7

*MC Understands Sarah*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
172	MC	Oh....like a widget spinner,	<i>Big smile on MC's face and emphatic nod</i>	
173	MC	A widget that Alfred brought in and shared with the class that you put on your finger.	<i>Sarah nods yes, and smiles.</i>	

In line 172, MC pauses to think after saying 'Oh' and then expresses her understanding of Sarah's statement, and in line 173 adds additional information to expand the understanding with Sarah about the widget spinner (see Table 6.7). MC not only affirmed Sarah's utterance, she valued it by adding detail. MC had focused on and valued Sarah's connection of the paint spinner to the widget spinner. This acknowledgement of voice and shared understanding caused Sarah to further expand her expression as seen in Table 6.8.

Table 6.8

*Sarah Connects Widgets with Spinning Tops*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
174	Sarah:	Like	<i>She makes a motion with her hand showing how to spin a top on the ground (deft use of physical example)</i>	
175	MC	The tops are like spinners	<i>Smiling and nodding</i>	
176	Sarah:	I have <i>tompo</i> [sic, a Spanish word for a spinning top] at my grandma's house.		
177	MC	Do you?	<i>Smiling and nodding</i>	
178	MC	Really good remembering		
179	MC	Oh, kiss your brain.	<i>Motion two fingers from her lips to her brain.</i>	
180	MC	Oh, that was a good one.	<i>MC smiling and nodding affirmatively.</i>	

In line 174 in Table 6.8, Sarah says simply, “like” but makes the motion of spinning tops on the ground. MC listened carefully to Sarah in an effort to understand her voice. Creating opportunities for Sarah to verbally communicate in English is an established educational goal (set by MC) because her home languages are Spanish and a form of sign language which I had observed her using with her father. In Tables 6.5 – 6.8, MC used Sarah’s interest and curiosity as an effective medium of communication. Sarah made the statement in line 167, “It’s like a witches’ spinna.” (see Table 6.5). MC did not know what she was saying, but she did not laugh it off, ignore, or dismiss Sarah’s comment; she repeated to Sarah what she had heard with a wondering look on her face. Her body language of leaning forward, smiling, and tilting her head

communicated a message of, *I care what you are saying and want to understand you*. Sarah used her hands to demonstrate the widget spinner and MC understood immediately. Sarah had made a mental connection between the spinning of the salad spinner and a spinning toy from her home experience. With MC's response of delight, Sarah further connected spinners with spinning tops (a Mexican spinning top or *trompo*) she had used with her grandmother at her home. The act of watching Sarah's motions and listening to her words enabled MC to understand her meaning, and then Sarah followed up with the widget spinner, another connection to her grandmother's spinning tops. The intentional effort on the teacher's part to understand the child demonstrates to the child that their ideas as expressed in their utterances are important, and the teacher's interest in voice expanded the dialogue. The effect of this responsive listening is a strategy for influencing the development of voice.

**Listening Deeply to Emergent Voice.** As MC's class of children transitioned from outdoor learning on the playground to indoors, they routinely sat on the school patio and sang and talked while waiting for their turn to go inside for snack. This day they were talking about spiders because Sarah had just finger-painted a spider. In Tables 6.9 – 6.15, MC discussed with the group the content of her conversation with Sarah about spiders, their legs, eyes, abdomen, and the size of their heads. Castro raised his hand frequently to contribute. MC and Ms. Laura, the speech therapist (who worked with children in the context of the classroom) were both familiar with his difficult-to-understand speech patterns. When Castro wanted to add a comment, they first ignored him, but his tenacious attitude insisted on being heard. They then took a moment to listen deeply and understand his statement.

Table 6.9

*MC is Talking about Spiders*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
16	MC	She did her spider like this.	<i>Showing the group how Sarah positioned her hands in a voice of interest and wonder</i>	
17	MC	And her spider had how many legs?		
18	Castro	Eight	<i>Quickly raising his hand and eagerly blurting out a response</i>	Voice

In Table 6.9, MC and the speech therapist were facing this group of ten children and MC was asking questions and making statements about how Sarah made a spider using her full handprint. She was reviewing children’s knowledge of spider facts and Castro was eager to participate.

Table 6.10

*Castro Interjects a Comment*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
19	MC	Did it have eight legs?	<i>Confirming with the group</i>	
20	MC	It had eight legs	<i>Nodding her head in confirmation</i>	
21	MC	And a big ...	<i>Holding her hands outside her head to motion a large head</i>	
21a	MC	(2s) head	<i>MC self-answers</i>	
22	Castro	(---)And ang[sic]	<i>Castro's interruption is unintelligible to everyone and ignored</i>	

In Table 6.10, MC was guiding the conversation toward Sarah's comment about head size and its relationship to smartness. Castro had a spider fact (Spiders have 'angs') that he was trying to share but was ignored.

Table 6.11

*Castro Keeps Trying to be Understood*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
23	MC	And big legs, eight legs.		
24	MC	Sarah said, "If you have a big head, you are smart."	<i>Looking at Sarah</i>	Voice
25	Castro	it got ang[sic]	<i>He interrupts again</i>	

MC was talking about spider facts and head size, and Castro wanted his comment about 'angs' to be understood (see Table 6.11). MC was actively ignoring him.

Table 6.12

*Castro Strives for Attention*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
26	MC	But I have a small head, and I'm smart?	<i>Castro wants to tell MC something. He moves from 4 feet away, to 6 inches in front of her, and holds both her hands.</i>	
27	MC	So, you can have a big head and be smart or have a little head and be smart.		
28	MC	Can you go back and raise your hand?	<i>MC directs Castro with gentle hands to go back with the group.</i>	

In Table 6.12, Castro moved back away from MC and sat with the group of children. While seeming frustrated that he couldn't be understood, he still looked determined to be heard.

Table 6.13

*Castro Keeps Trying to be Understood*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
29	MC	Tasneem go on in, Aldo, Irene	<i>Dismissing children to go indoors for snack</i>	
30	Castro	(--) They got ang[sic]	<i>Castro with his hand raised straight up and his body is tense.</i>	

In line 30 (see Table 6.13), Castro blurted out again with the statement, "They got ang[sic]." At this moment, MC stopped talking and MC more closely. She appeared to be thinking about what Castro was saying.

Table 6.14

*MC Seeks Clarification*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
31	MC	Things? Things? Things? Things?	<i>Directing her speech toward Castro, and unable to understand his meaning.</i>	
32	MC	What song has things? Can you sing a song with things? How does it go?	<i>MC is guessing that Castro is suggesting a song title.</i>	

MC repeated what Castro might have been saying (see Table 6.14). She was looking right at him and was engaged with just him. Her head was cocked to one side in a questioning or wondering mode. This nonverbal action conveyed her interest in understanding his comment that he had repeated three times. Because children had been calling out names of songs to sing, she tried to place Castro's utterance of "angs" in the context of a song. She did not yet realize he was adding to the subject of spiders.

Table 6.15

*What is Castro Saying?*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
32a			<i>Pause(9s) Castro is silent, MC looks at Ms. Laura. They look at Castro's wondering face that seems to say, "why don't they understand me?". There is a long 12 second silence.</i>	Voice is being valued in the time and attention finally being given to understanding Castro
33	Diana	Fangs	<i>I inject my guess about what he's trying to say.</i>	
34	MC	Ohhhhhh. Spiders have fangs!	<i>Castro nods yes with big smile nodding yes. His body stance moved from an anxious upright position to a relaxed satisfied position.</i>	
35	MC	Fangs		
36	MC	Spiders have fangs for teeth.	<i>Castro continues to nod.</i>	

Table 6.15 was a climax moment for Castro's expression – for his use of voice. Castro was emphatically working to be understood, repeating the word 'angs' three times. At that moment, his physical voice was present, but before line 33, the most important component of Castro's voice, his ideas, had not been heard. As a result, Castro's voice was not yet contributing to the conversation, which was clearly frustrating for him and for MC, who was being interrupted. Young children whose speech is not yet clear are at considerable risk of being left out of meaning-making and conversations, which provides them with fewer opportunities to try out their ideas on others and establish a meaningful position in the class. Thus, one truly important way that EC teachers can support young children is by helping them find and effectively use their voice to express their meaning, opinions, and rights.

The satisfaction of successful communication influences the development of voice. When I suggested ‘fangs’ and MC understood, it was a moment of relief for everyone (see Table 6.15). In Tables 6.9 and 6.15 when Castro was understood, his face conveyed a look of satisfaction, or he smiled. In this way, he was further encouraged to make his voice heard. This teacher intentionally worked to understand all children. This was observed when she amplified and clarified Castro’s meaning, giving voice to his ideas through intentional interpretation of his meaning.

**Discussion of influencing voice in emergent language.** These three vignettes (Little Blue, Widget Spinners, and Spiders have Fangs) demonstrate a child expressing an idea, being heard, and the satisfaction of a child whose speech is understood. MC mediated her conversations with children to support their meaning-making. In each example, she is observed pausing her own line of thinking and participating with the child in their expression. When Castro talked about Little Blue, she paused while working with five children and listened to his approximation of language, truly hearing his meaning and understanding his connection of the art event with a familiar story. The child’s voice was empowered, as seen in the look of confidence on Castro’s face. She demonstrated that Castro’s linguistic ability mattered here, and he took up space and participated instead of being silenced.

In the second vignette, quiet Sarah, whose first language is Spanish, had an idea related to spinning that she expressed with the support of both a form of Sign Language and English. MC watched, listened, and paused to grasp her meaning. In fact, the first connection to widgets lead to a second connection to *trompos*. These small moments of mutual participation when the teacher paused, listened, repeated what she heard, and continued to participate until an

understanding was reached communicated to children that their thinking, expression, and meaning have value.

The last vignette, in which Castro strove to communicate that spiders have fangs, demonstrated a strategy of deep listening. Castro was persistent in his communication as he tried four times to be recognized and understood, but MC was not understanding the word “angs.” Finally, MC paused the group conversation and repeated his utterance to herself and the speech therapist. She wondered if he was suggesting a song to sing. There was 10 seconds of anticipatory silence. When I spontaneously interjected “fangs”, MC’s understanding of Castro’s meaning became clear. Castro’s voice was empowered when MC paused and gave full attention to understanding his meaning. Without that pause, I could not have been helpful. Pausing to listen deeply to gain understanding of a child’s meaning is an effective strategy for developing voice.

### **Voice Developed in Imaginary/pretend Play**

The following vignettes demonstrate ways MC supported children’s bids for participation when they were pretending another identity. Children express the identities of butterflies, superheroes, a crab, and a daddy astronaut in this section.

**Imaginary play as identity shift.** In the context of developing voice, a child sometimes stated they were something other than the person known as Irene, Casey, or Castro. When the teacher accepted their pretend status instead of being silenced, these bids for participation as another identity were honored. Access to alternative identities was easily accomplished through the use of capes and costumes. In a simple manner, when Irene attached the Velcro strips on the butterfly cape around her neck and slipped her fingers into the wings, she became the butterfly. When MC said, “Does butterfly want some water,” Irene replied, “oh, just a sip.” Casey and

Alfred were asked, “Who do you want to be today?”, referring to a cape choice of Hulk, Superman, Spiderman, or Batman. They chose the Hulk and Batman and were transformed to other beings. Pretend play is an important activity for young children, and when the teacher enters that pretend play, she is valuing the voice of young children by honoring their pretend identity.

Castro as crab was enacted over multiple days in a variety of contexts. When Castro was a crab, he was fully a crab in every way. His arms were curved like claws, his hands became pinchers, he walked sideways in a squat position, imitating not only the appearance of a crab, but also the movement of a crab. MC engaged with Crab and mediated Crab’s relationships with children. In the following vignette, Castro pretended to be a crab and MC was moving Crab out from under the climbing bars.

Table 6.16

*Castro Pretends to be a Crab*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
17	MC	Hi Crab. Crab, we're going to have a flying boat here.	<i>To Castro (pretending to be a crab) who is suddenly under the ladder</i>	
17a	MC	So, come on over here, Crab. Okay, thank you. You want to see the flying boat?	<i>She takes his hand and they gently move away from the ladder</i>	
18	MC	So, the crab's here in the water, we're watching the flying boat.	<i>MC stands with her hands out, softly blocking the 'scurrying crab' from scooting in the way of the 'flying boat.'</i>	

In Table 6.16, MC highlighted Castro's bid for participation. This child who struggled to make himself understood verbally was being heard through the voice of pretend. In this example, voice was expressed physically, without speaking. He was engaging with MC through the identity of Crab. MC was helping Castro express his voice by engaging with his physical actions. His voice was *heard* as he enacted Crab, and she allowed his actions as a crab to influence the activity of the moment, enabling him to be part of the shared negotiated meaning. Crab was recognized by the teacher by name, and she expanded his identity in line 18 when she said, "Crab's here in the water, we're watching the flying boat." She entered his pretend world in this phrase using the pronoun "we" when she stated, "We're watching the flying boat." These two statements conveyed the understanding that MC was watching with Crab. Other days, she asked him to hold a plate "in his pinchers," or directed "Crab" to move over to make room for a friend at circle time. This strategy of recognizing pretend worlds influences voice by making space for

alternative identities to make decisions and appropriate power. MC allows children the space and initiative to *speak* through pretend play.

**More complex imaginary play.** This next vignette occurred during ‘investigations’, the class time when children have free choice among the play and creative centers in the room (blocks, dramatic play, costume area, puppets, Legos, manipulatives, books, a science area, easel painting, a creative or construction activity at a table, or writing). MC and Ms. Andie, the teaching assistant, were working with small groups of children and other children were working independently in the dramatic play area or using blocks or Legos.

The excerpt began when the children were concerned about the two-foot-wide pile of 30-40 twigs on the floor in the dramatic play area. Beside MC’s foot was the handle of what appeared to be the remains of a handmade hand broom that had all the twigs broken off (see Figure 9). In line 43 (see Appendix F), when MC asked, “What happened here?”, the four children looking on were completely quiet waiting for MC’s response. In line 44, MC said, “What happened here? Was there a bird? Did a bird come in here and try to build a nest?” She then invited “astronaut Casey” to help and invited Castro. Next, she walked away to find a container to hold the twigs, returned with the container, and left the children to pick up the twigs. MC then gathered the children to take the twigs outside for the birds to use for a nest. Castro carried the container, Kyle and Irene accompanied him, and Casey also joined the group as an astronaut pushing a baby doll in a stroller (Figure 10).



Figure 9. What is this Pile of Twigs?



Figure 10. Astronaut Casey with his Baby Doll.

Table 6.17

*An Invitation to Astronaut Casey*

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<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
46	MC	Would you like to help me, astronaut Casey?	<i>Casey comes over and slides up the face shield on his helmet to look at the pile of twigs.</i>	Voice addressing Casey's pretend identity

MC addressed Casey as “astronaut Casey.” in Table 6.17, immediately identifying him as the alternative identity he had chosen. This alternative was given space in the classroom to exist and participate.

Table 6.18

*Gathering the Twigs for Birds' Nests*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
47	MC	Let's gather this together.	<i>MC bends over and starts pulling the twigs together with her hands into a pile on the floor. Irene comes over and is watching with great interest.</i>	
48	MC	Castro! Do you want to come over and start gathering these up and we'll give them to the birds?		
New video segment			<i>Three minutes when children are picking up twigs with MC.</i>	
35	MC	Ok, let's take it outside		
36	MC	Castro, Astronaut Casey		Voice to Casey's pretend identity.

In Table 6.18, children were being called by their identifying name or a pretend identity. MC addressed Casey by the pretend identity to whom he was giving voice.

Table 6.19

*Waiting for Astronaut Casey*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
37	MC	We're waiting for Casey.	<i>Kyle, Castro and Irene are waiting at the door with MC.</i>	
38	MC	Are you taking your baby doll, Astronaut?	<i>Casey is moving toward the door in the astronaut coat and helmet, and he is pushing a stroller with a baby doll in it.</i>	

In Table 6.19, MC noticed that Casey had included a baby in a stroller in his pretend play. Casey's voice was the expression of an astronaut who is caring for a baby. MC included Casey's voice as he expressed himself as an astronaut daddy in the dialogue with the whole group of children.

Table 6.20

*Taking the Nesting Material Outdoors*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
39			<i>MC, Casey, Castro and Kyle all go outdoors. Castro is holding a container with the nest materials.</i>	
40	MC	Where should we put them? Where do you think the birds would like them?	<i>She asks this question as they are looking into the courtyard that is the size of half a soccer field, has a pine, ash, and fig tree, numerous shrubs, a tortoise enclosure, a raised bed garden, and a large open grassy area. There is a cement stage area at one end with eight steps down to the grass.</i>	
41- 45		[Discussion with 4 children of where to place the sticks.]		
47	MC	You want to push your stroller down the ramp, so your baby doesn't bump out of the carriage? Here's your ramp over here. Casey let's go over by the tree.		

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48	MC	Casey got it? Okay.	<i>Casey carries the stroller down the steps. Irene looks back. Castro walks down the steps.</i>
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MC magnified her connection with Casey’s pretend identity when she gave support to Casey’s as he maneuvered the stroller down the stairs to the lawn pretending to be an astronaut with a baby in a stroller (see Table 6.20). In line 47, she asked, “You want to push your stroller down the ramp, so your baby doesn't bump out of the carriage? Here's your ramp over here. Casey, let’s go over by the tree.” Casey chose to go down the stairs to the lawn instead of the ramp, so she said, “Casey got it? Okay.” In Table 6.21 there was discussion of where to put the twigs for the birds to find. A large tree was selected by Kyle, and the twigs were dumped out.

Table 6.21

*A Gift for the Birds*

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<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
56	MC	We can dump them out. Castro, I mean Casey, you may want to come 'round the other way.	<i>MC helps Casey navigate the picnic Tables and the stroller. Castro hands the container to Irene who dumps them out.</i>	Voice
57- 60		[The children are standing under a tree and commenting about the pile of sticks.]		
61	MC	I hear them, I hear them. They're saying, "Thank you!" Can you hear them? They're saying, "Thank you!"	<i>Some sparrows can be heard chirping. The children look up into the tree.</i>	

MC engaged Casey's complex identity of an astronaut daddy when she gave support to the struggle of navigating a baby in a stroller down the stairs in Table 6.20, line 48, and when she helped him through the picnic tables in Table 6.21. She not only verbally acknowledged his pretend identity, she entered it as a helper. This act of engaging children's pretend worlds is evident in line 61 (see Table 6.21) as she talked with the children about the birds talking to them and thanking them for the nesting material. This vignette demonstrates MC engaging verbally and nonverbally with Casey's pretend identity and acknowledging the pretend world of conversing with the birds. Through her engagements, she influenced the voice of complex imaginary play.

**Discussion of engaging with complex imaginary identities.** This vignette also demonstrates a subtle form of voice development by acknowledging choice to have an alternative identity. In this way, voice can be influenced when a child expresses a make-believe identity. Casey was a complex identity of an astronaut with a baby: an elaborate combination of space explorer and caregiver. MC spoke to both these pretend identities, while mediating the pile of twigs. He was making a choice about who he wanted to be. This choice was not just acceptable; it became part of the dialogue. She addressed him as "Astronaut Casey" and inquired about the safety of his baby in line 47 (see Table 6.21). In this way, his pretend expression was heard. His expressed pretend play role was given space and was taken up by the teacher supporting his voice.

## **When Voice Disagrees**

A child's use of voice is truly honored when it expresses a difference of opinion. In the two vignettes that follow, Tables 6.22 – 6. 26 and 6.27 – 6.37) MC listened to children who actively disagreed with her.

**Voice in divergent opinions.** The day Sarah finger painted a spider with MC (as referenced in Tables 6.9 - 6.15) they were both sitting on the ground with a sheet of finger paint paper between them and some paint. MC intentionally positioned herself on the ground to be able to talk with Sarah face-to-face. After making a handprint that transformed into a spider, they counted eight fingerprints for legs and put the thumbs together for a head. The collaborative nature of this event was established when Sarah made one handprint and said it looked like a spider. She placed another handprint beside it. Imitating her technique, MC printed with one hand and then printed with the other so both thumbs were pointed in the same direction. MC self-narrated, "You put your hand one way and then the other way. Spider legs! So how many legs does the spider have?" Then Sarah imitated MC's use of the fingers on each hand and counted the legs. The following dialogue ensued in Tables 6.22- 6.26.

Table 6.22

*Sarah's Spider has a Big Head*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
31	Sarah	Tennnn[sic]	<i>Counting the fingers in her handprint that has become a spider, and then looking up with a big smile.</i>	
32	MC	It's a ten?	<i>Softly questioning voice</i>	
32a	MC	Ok, now let's count it. One, two...	<i>Sarah interrupts MC</i>	
33	Sarah	I know what means to big head. That's means like have like a big ... head. [sic]	<i>Sarah is motioning a big head with her hands stretched out on either side of her head.</i>	Voice

MC and Sarah were engaged in a conversation about legs on the spider Sarah had finger painted. In line 32a in Table 6.22, Sarah interrupted MC's counting to make an observation about the spider's big head. Sarah's interruption indicated a relationship that is fluid and makes space for children's original ideas and comments.

Table 6.23

*Sarah's Spider has a Big Head, Part 2*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
34	MC	You have a big head? Sometimes spiders can have a big head, couldn't they?	<i>Quietly talking with Sarah and encouraging her response.</i>	

In line 34, MC listened carefully to Sarah and interpreted her motions and words to ask if her comment was about spiders or about her head. MC encouraged voice as she maintained an

open conversation wondering about heads with a question that encouraged further dialogue about Sarah's interest in heads and head size.

Table 6.24

*Sarah's Cousin has a Big Head Because She is Smart*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
35	Sarah	My cousin says she has a big head because she's smart.	<i>Conversing and looking into the distance.</i>	voice
36	MC	She says she has a big head because she's smart?	<i>MC and Sarah are looking at each other and nodding affirmatively.</i>	
37	Sarah	Because she is too smart.		
38	MC	So big heads mean that you're smart and...		

The text in Table 6.24 accurately represents Sarah's language. MC was listening to Sarah's ideas for meaning and understanding about having a big head and being smart. This listening strategy influenced the development of voice. MC taught the children that their ideas were worthy of expression regardless of sentence structure or grammar. If she were to focus children's comments being grammatically correct, children might reduce their conversation to avoid grammatical corrections. In MC's classroom, ideas took precedence over grammar, and children developed voice.

In lines 39-40 MC and Sarah were interrupted by a child wanting water. MC started to get up but sat back down again to finish her conversation with Sarah, as documented in Table 6.25. MC initially gave the other child's need for water priority, but she returned to the subject of head size with Sarah. MC remained seated on the ground, in position that signaled equity to Sarah while they talked. MC did not stand up, which could have been a power move. Instead, she

remained on the ground and leaned forward toward Sarah, a move signifying importance or deep interest, as if to say, *this is an important topic for us to discuss*.

Table 6.25

*Are Big Heads Smart?*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
40a	MC	I don't know, do you think that's true that big heads are smart?	<i>MC does not get up to get water but is leaning in with both hands on the paper; Sarah is looking at MC.</i>	
40b	MC	Do you think so?	<i>Sarah nods yes</i>	
40c	MC	How come?	<i>MC maintains a fixed gaze on Sarah. Sarah prints again.</i>	
	Sarah	Mmmmm (5s)	<i>Sarah looks down at her hands.</i>	
41	MC	I have a small head and I think I'm smart.	<i>MC smiles at Sarah and points to her head.</i>	
42	Sarah	Small head, means you dumb.	<i>Sarah is looking right into MC's face.</i>	Voice

Sarah continued to state that a big head means you are smart and ended with the comment “small head means you dumb.” MC made space in the conversation for Sarah’s opinion. Sarah frequently looked down, but she did not waver in her opinion that a big head means you are smart. Importantly, the children had learned that their ideas were worthy of expression even when MC did not agree with their ideas. If MC had insisted that all children’s comments be an opinion she agreed with, children might not have shared as freely. In MC’s classroom, ideas took precedence over correctness or agreement, and children developed voice. Throughout dialogue and discussion, the learning disposition of voice was supported.

Table 6.26

*Small Head Means You Dumb*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
43	MC	Really? I think I'm pretty smart. What do you think?	<i>MC is smiling with her head cocked to one side.</i>	
43a	Sarah	Small head....	<i>Sarah starts this sentence with a handprint.</i>	
44	Sarah	Small head means you dumb.	<i>Sarah looks straight into MC's eyes.</i>	Voice
45	MC	I don't know about that, I think small head means you're smart, too. I feel smart, and I think I do smart things.	<i>MC turns her lips down to signal she disagrees, but her voice tone is friendly. Sarah is smiling and looking into the distance.</i>	
46	MC	Uhhh. I'm gonna go wash my hands.	<i>MC pushes herself to standing and uses a neutral tone of voice.</i>	
46a	MC	You want another piece of paper?		
47	Sarah	Yes.		

This vignette ended with MC having the last word. Perhaps she wanted to leave a lasting impression that head size does not determine a person's intelligence. Sarah was sure that big heads indicate a smart person, and conversely, "small head means you dumb." This subject was not resolved, but Sarah clearly was given space to disagree with the teacher. It is remarkable that she expressed her opinion strongly enough to say to MC that if MC had a small head, then she was dumb. This expression of voice was not suppressed. MC did not agree, but she respected Sarah's right to her opinion four times. MC clearly influenced children's right to express themselves by giving space for dialogue and respecting opinions different than her own.

This verbal exchange demonstrated influencing the development of voice through the safe expression of opinions. Sarah told her teacher that if she had a small head, she was dumb. That type of statement would not occur without Sarah trusting that her voice would be heard, and her expression would be honored. The dialogue demonstrated a disagreement about the relationship between small or large heads and intelligence, but that disagreement is grounded in voice. Sarah expressed an idea, and MC expressed support of her voice. MC rephrased Sarah's statement and offered a dialogue with Sarah. They had six exchanges about head size. In this way, Sarah was explicitly heard and valued within her linguistic ability.

**Defiance as an alternative opinion.** This next vignette is divided into two tables. Each table focuses on a different child. In this vignette, the children were transitioning from outdoor play and going inside for their snack. Some children waited on the patio in the school's interior courtyard with MC, while Ms. Andie helped other children wash their hands for snack indoors in groups of four. The observed group with MC sat against the school wall and sang songs as they waited for their turn to wash their hands and the last few children came in from the playground. Table 6.27 is the first line from this vignette, followed by an analysis. Table 6.28 continues the vignette and focuses on Carrie. Carrie had been watering the garden with a friend and creating water puddles in the sand. This sand puddle became the 'shoeshine shop' because their shoes became shiny when they were wet. In the vignette that follows Table 6.27, her shoes were soaked.

Table 6.27

*Jesus Takes a Lap*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
1	MC	Jesus, it's time to listen. Miss Caroline's asking you to sit down now, please.	<i>MC is sitting, children are seated facing her waiting to go inside to wash their hands. Jesus slowly leaves the group and walks toward the grassy area of the courtyard. He is within sight and sound of MC but is at least 20-75 feet away at any moment for two minutes. He returns toward the end of the next vignette in Table 6.35.</i>	

As children were coming to the group gathering on the patio for singing, a few children had alternative needs. A few had wet shoes, and Jesus did not want to sit down. As researcher, I was curious about Jesus, who left the group and went into the grassy courtyard to run.

His choice and permission to run was a non-verbal expression of voice. It was a subtle event that signaled Jesus' right to have his needs met. Jesus' need to move was honored. In line 1, Jesus left the group and started running in the grassy area of the courtyard. He was expressing his right to move. By line 7, MC responded to the concerned look on my face and said, "It's alright, he kinda does a lap, and then he comes back." In two minutes, he walked to the patio and took a seat among his classmates. Later, MC told me that he sometimes needs to move, and "We have an agreement that he can run a lap and then sit down with the group." The need to move is a physical expression of will, choice, and right. This is a non-verbal expression of choice. At the time, Jesus was being evaluated for learning delays; he had limited abilities to verbally

communicate, but he did communicate with his body. He and his teacher had a plan for him to express his needs, and he was empowered with choice. When he felt the need to move, he could act on that need and productively run a lap. After running, he walked onto the patio and gently sat down with the other children. He was giving voice to his choice to move and through this participation in communication, his voice could be *heard*, or more accurately, *seen*. His teacher was influencing his ability to recognize his needs and voice them physically.

Table 6.28

*Carrie Comes in from the Playground*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
2	MC	Carrie, c'mon and sit down.	<i>Motions to Carrie to join the children sitting against the wall waiting to go inside.</i>	
2a	MC	Ah, yeah...	<i>Her tone is exasperated.</i>	

This transition from outside play to handwashing and snack was procedural. Children were expected to clean-up where they were playing, sit and wait, and then wait in small groups to wash their hands. MC kept the waiting interesting by singing songs with the children, and small group hand washing meant they did not have to wait very long in line to wash. In Table 6.28, when wet shoes were inserted in the routine, it made it all more complicated. MC's voice initially sounded frustrated when Carrie came to the group with defiance about her wet shoes.



Figure 11. Carrie in Lines 3 – 6.

Table 6.29

*Carrie Disagrees*

Line	Agent	Utterance	Nonverbal	Learning Disposition
3	Carrie	I can't sit down while I'm standing up. My shoes are wet.	<i>Said forcefully with a defiant tone.</i>	Voice

In Table 6.29, Carrie arrived at the patio last and was unhappy about her wet shoes. With her hands on her hips and her back arched forward she said with a strong voice tone, “I can’t sit down while I’m standing up. My shoes are wet.” Carrie sounded angry about her shoes.

Table 6.30

*Carrie Will Have to Sit Down*

Line	Agent	Utterance	Nonverbal	Learning Disposition
4	MC	Well, you'll have to sit down, and we will take them off while you are sitting down.	<i>Stated with an encouraging yet firm and tired voice, that becomes more commanding as she continues. Carrie does not respond or react.</i>	
5	MC	So, if your...	<i>Stronger voice</i>	

MC responded in a kind but firm voice in line 4 (see Table 6.30): “Well, you'll have to sit down, and we will take them off while you are sitting down.” Carrie’s body position did not

change, and MC responded with a stronger voice “So if your...” I wondered if they were moving toward a confrontation.

Table 6.31

*MC Changes her Voice*

6		<i>Full and abrupt stop in her speech that switches to calmer more conciliatory voice in next line.</i>
7	MC	It's a great point, if your shoes are wet you might want to take them off so that we can put them in the sun to dry them. So, Carrie, you're going to need to sit down.

As MC increased her commanding teacher voice in line 5 (see Table 6.30), she stopped talking mid-sentence, and abruptly changed her tone of voice to conciliatory. This shift in voice tone acknowledged Carrie’s opinion and extended power to Carrie. In line 6 (see Table 6.31), MC released her position of power and said, “It's a great point, if your shoes are wet, you might want to take them off so that we can put them in the sun to dry them. So, Carrie, you're going to need to sit down.” Line 6 acknowledged Carrie’s voice with “That’s a great point,” and shifted the power to Carrie. Figuratively, MC was saying, *you are right, you can’t sit down now, and here is an idea to fix the problem you have expressed*. This interaction did not change the fact that Carrie was being asked to sit down and take off her shoes; however, her opinion about her shoes was honored. She was given responsibility for taking them off and putting them in the sun to dry.

Table 6.32

*MC Agrees and Guides*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
8	Carrie	No, no, no, you can't take off my shoes now.	<i>Strong voice directing to MC</i>	Voice
9	MC	No, I can't but you can. Farida, you can take your shoes off and we...	<i>Nodding her head yes.</i>	

Carrie continued with a strong voice in Table 6.32, telling MC that she couldn't take off her shoes. MC respected that opinion and agreed with her in line 9. MC then included other children who needed to take off their wet shoes.

Table 6.33

*Children Take off their Shoes*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
10	MC	You sit down and you take off your shoes. Jane you can take off your shoes and we can put them out in the sun to dry.	<i>Explicitly directing children to take off their wet shoes.</i>	
11	Carrie	my socks are dirty.	<i>Neutral response from MC</i>	

MC now supported the children with wet shoes (see Table 6.33), gave them a specific task and the responsibility to take care of their problem. She returned her attention to the group and sang with the children for 40 seconds as Carrie continued to stand and seemed to be considering this dialogue.

Table 6.34

*Carrie is asked again to Sit Down*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
13	MC	Carrie, I'm going to ask you again. Please sit down over there next to Jane and take your shoes off, thank you.		

Respectfully and in an even tone, MC reminded Carrie of the task of removing her shoes and putting them in the sun to dry (see Table 6.34).

Table 6.35

*A Moment of Calm*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
	MC		<i>[singing as a group] (photo 4) Carrie takes off her shoes. Jesus returns to the group [see Table 6.27]</i>	Voice

In Table 6.35, the clear understanding between MC and Jesus was demonstrated when he returned and sat, quietly joining the group. Carrie was working on taking her shoes and socks off. Jesus could have remained running but at this time he chose to return and sit quietly. Carrie chose to sit and take off her own shoes. It could be that being heard engages a child in dialogue that is calming, as if the child is thinking “They don’t have to agree with me. I just have to be heard and then I can consider their request.”

Table 6.36

*Carrie Sets her Shoes out to Dry*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
21	Carrie	I'm gonna put them in the sun.	<i>Carrie walks her shoes to a sunny spot.</i>	Voice

In Table 6.36, Carrie walked across the patio and put her shoes in a sunny spot to dry as the group sang, *I think you're Wonderful*, and other children took off their shoes. Two minutes later MC asked Carrie to teach Farida where to put her wet shoes.

Table 6.37

*Carrie Demonstrates her Care of Shoes*

<b>Line</b>	<b>Agent</b>	<b>Utterance</b>	<b>Nonverbal</b>	<b>Learning Disposition</b>
23	MC	So, Carrie show them where you put your shoes in the sun so they can put their shoes next to yours in the sun. Okay?		Voice

Carrie narrated her knowledge and power to care for her own shoes in Table 6.36. Her complaints about wet shoes were heard, and then MC asked Carrie to be the expert on wet shoes as she showed the other children where to place their shoes (see Table 6.37). This represents voice through assigning Carrie a leadership voice.

In this vignette, MC not only heard Carrie's voice when she complained about her wet shoes, but she also adapted her voice to mediate Carrie's needs when she went from frustrated to understanding the problem and presenting a solution in line 6 (see Table 6.31). At this moment, she acknowledged Carrie's opinion with "That's a great point," and shifted the power to Carrie.

This discursive shift empowered Carrie with ownership of both the problem and the solution. Carrie took ownership and responsibility for care of her shoes, and, Carrie's opinion about her shoes was honored. Carrie's persona was not marginalized; instead, she was given the right to speak her opinion about her wet shoes and dirty socks. She was not placed in a deficit position because her shoes were wet. On the contrary, her problem was recognized, and a solution was named. The teacher's narrative of speaking and listening, then letting go of a power struggle, gave Carrie agency. She was given time to take her shoes and socks off and then was positioned as the expert on shoes drying in the sun. Later, when Carrie was questioned by another student about her bare feet, MC helped Carrie save face, by saying, "They got wet in their shoeshine shop and now they are drying in the sun." The teacher not only heard Carrie's voice, but she also adapted her voice to mediate Carrie's needs. The child's right to be heard was respected, and she was not silenced.

## **Discussion**

In this chapter, voice is defined as communications that belong to a child as the expression of opinions, rights, and desires. In this preschool classroom, when these expressions of voice were engaged, heard, and given space, children began to learn that their communications or forms of *sense-making* were understood. The more the children's communication are understood, the more they expect to be understood. As they grow in this expectation, their sense of agency, and ultimately their voice, is developed.

**Voice and emergent language.** This teacher demonstrated support of children's linguistic ability empowering children to take up space and make bids for participation instead of being silenced. This was clear when MC fully understood Sarah as she made a connection between the paint spinner and the Widget Spinner, and went further to connect to her

grandmother's *trompos*, her spinning tops. When a teacher pauses in a busy moment and listens carefully to a child's expression, the child learns their ideas are valued in this act of mutual participation. The teacher paused, listened, repeated what she heard, and continued to participate until an understanding was reached. MC communicated to children that their thinking, expression, and meaning has value. Acts of mutual participation influenced voice, especially when MC honored all linguistic abilities in the communication process. The literature, as described in the following section, focuses on identifying children's voices, but it overlooks a more foundational aspect of voice development – the understanding of emergent language as found with children who are learning to speak, learning to speak a second language, or who are working to be understood due to a speech delay.

**Young children's non-verbal voice in pretend play.** In the early years of verbal development, children express their voice in pretend and alternative roles. Non-verbal physical expressions can be viewed as voice in pretend play when children's pretend roles are recognized. Voice in young children has been researched from various angles. Children's voice in home environments and with families (Noppari, Uusitalo, & Kupiainen, 2017), examined power relations as they become visible in the context where they occur. These Finnish researchers entered home environments, yet their presence created shifted the trust dynamic and created a dilemma for qualitative research. Schnoor (2012) examined voice in the crèche or care facility for young children in France, comparing voice in "the sense of participation [and] agency" (p. 462) with "linguistic utterances" recognized as children's voices. He found voice to "emerge and change in the relations, interactions and performances among and between children and adults" (p.469). Schnoor's study examined utterances, not the non-verbal communication in pretend play. The absence of voice, or silence as examined by Spyrou, 2011, argues that children's

silences have meaning in “interactional, institutional and discursive contexts” (p. 7). And Moss, Clark and Kjørholt (2005) refer to children’s voices and perspectives as “multifaceted, changing and conceptualized” (p. 178) and “spoken from within an intricate web of relationships with others” (p. 178). However, these research studies fail to recognize non-verbal physical expressions as influencing the development of voice. While non-verbal expression may be without vocalization, it is not silent. In this dissertation, the teacher was in dialogue with children’s pretend or make-believe expressions, which represented a child’s choice and opinion of how their specific pretend character or creature should act and what sounds it should make. The teacher’s dialogue supported the children’s expression, such as Castro’s crab, Casey’s astronaut, and Irene’s butterfly. They were engaged in dialogue with their teacher based on an expression of choice of pretend character. Their bids for participation, even imaginary participation, were given space in the classroom. When children are believed for who they pretend to be, the voice of who they are also emerges. A teacher can support children’s development of voice through a discourse that recognizes all forms of expression including pretend play.

**Valuing children’s expressions.** The literature cited in the previous section examines the dialogic development of voice in a home setting (Noppari, Uusitalo, & Kupiainen, 2017), and research in schools looks at voice and children’s expression (Adair, 2014; Moss, Clark, & Kjørholt, 2005). However, what the teacher is doing to encourage the development of voice is missing. The dialogic relationship between children and their teacher is an area needing further investigation. How the teacher engages with and develops children’s expressions could be better understood. This teacher paused to listen, struggled to understand meaning, and at times, set aside her agenda to honor a child’s expression of opinion, rights, or desires. She exercised an

ability to carefully listen to her students. She encouraged their ‘sense-making’, their right to be heard and engage, and their right to be understood. Sometimes, children’s ‘sense-making’ involved mediations that were often about opinions regarding where to be or what to do. The most powerful example of mediation was MC’s encouragement of Carrie’s opinion about her shoes. Carrie spoke up, so MC changed her tone of voice mid-sentence to give voice to Carrie’s opinion. Both Carrie’s right to an opinion and her opinion were honored. She was making sense of the world, and it included her opinion.

The learning disposition of voice in ECE can be a group learning disposition in which everyone learns to value the voice of others. The small group times, such as spin art and taking the twigs to the birds, were moments when children responded to each other. MC occasionally asked, “Did you hear what (*child’s name*) said?” In this way, voice was influenced as children listened to one another in a dialogic participation. Voice is influenced not only when the teacher listens deeply to a child’s meaning but is also developed as children learn to listen deeply to each other.

Voice was developed in this study when the dialogic engagement between a teacher and young children occurs as a mediation, a conversation, or deep listening. A child’s mutual participation with another in their world is essential. Voice is developed in the social engagement of the classroom (Vygotsky, 1978). In this way, voice can be understood as socially grounded, performed through exchange, and subject to power struggles as well as social roles (Noppari, Uusitalo, & Kupiainen, 2017). This idea of learning through mutual participation and didactic communication is foundational in the preschool classroom.

There is a deeper effect of voice. When a person is heard, the action of really listening validates their existence. Honoring the emergent voice of all children supports their cultural

resources, heritage, linguistic ability, racial expression, and can be gender neutral. “The soul is kind of contained in the human voice” (Dave Isay, May 25, 2020). When all children are really heard, then all children will feel empowered to have voice.

## **Chapter 7: Discussion**

This study asks the question: What does a teacher of young children do or say to influence learning dispositions? It investigates what one early childhood teacher did to support young children's development of specific learning dispositions. This chapter begins with a section describing how this discussion of learning dispositions is critical specifically to early childhood education, followed by a defense of the contribution of two previously unconsidered learning dispositions. The next section names teacher strategies for supporting learning dispositions. The chapter concludes with ideas for further research and implications for teacher education.

### **Learning Dispositions are Critical Elements of Early Childhood Education**

Learning dispositions, as defined in chapter one, are the tendencies or habits of thinking that influence behaving or speaking in a manner that satisfies or moves a person toward a learning goal (Katz, 1988, 1993b) throughout life. These observed behaviors begin early and continue to develop (or not) throughout formal education. Learning dispositions such as curiosity and the ability to communicate needs, wants, and thoughts are said to be essential for Kindergarten readiness, whereas academic skills and abilities, such as knowing the letters of the alphabet or how to count to 20, have been considered of secondary importance (Lewit & Baker, 1995). These academic skills are a component of Kindergarten Readiness and because they dominate Readiness policy, the need to highlight learning dispositions is more acute (Hustedt, Buell, Hallam, & Pinder; 2018). The 2011 Arizona Kindergarten Readiness Study (Marx, 2011) also confirmed the importance of learning dispositions (or the term, approaches to learning). Skill and knowledge development are important life-long academic processes; however, learning dispositions are essential foundations to life-long learning.

## Two New Learning Dispositions: Risk-taking and Voice

This current study identifies two new learning dispositions, risk-taking and voice. There are many sources identifying a wide variety of learning dispositions, however, risk-taking and voice do not appear as learning dispositions in the literature. Arizona Early Learning Standards include curiosity, creativity, attentiveness and persistence, and reasoning and problem-solving as Approaches to Learning. Other studies name persistence, emotion regulation, attentiveness, flexibility, and organization (Fantuzzo, Bulotsky-Sherarer, McDermott, McWayne, Frye, & Pearlman, 2007; Fantuzzo, et al., 2004). Independence, creativity, and engagement are three dispositions put forth by Bertram and Pascal (2002), while engagement, resilience, and imagination are dispositions in New Zealand's national ECE curriculum, *Te Whāriki: He whāriki mātauranga mō ngā mokopuna o Aotearoa Early childhood curriculum* (Carr, 2002). Some of these dispositions overlap across sources, while others are unique to the source. Learning dispositions are critical to learning, and the addition of risk-taking and voice adds dimension to our understanding of learning dispositions because risk-taking predicates problem-solving when a child takes a risk to ponder an unknown or uncertain phenomenon. Voice adds the dimension of expression of knowledge, identity, rights, and the expression of uncertainty or wondering.

**Risk-taking.** Risk-taking is an act whose outcome, from the child's perspective, is uncertain and could be perceived as dangerous or embodying some level of fear. It moves a child toward a learning goal because it indicates a tendency to take on uncertainty. Risk-taking empowers a child to move toward a learning goal. In this study, MC was observed encouraging risk-taking as she supported children managing uncertainty. MC used a variety of strategies or techniques to do this. For example, MC's voice tone, presence, and approximation of risk encouraged a girl who was hanging from the bars to jump. At another point, MC used micro-

risks to motivate Aldo when he was uncertain about entering a box. These important teacher moves enabled children to learn to accept uncertainty. And managing uncertainty is an essential element of the process of learning – moving from a place of unknowing to a place of knowledge.

While previous literature did not include risk-taking as a learning disposition for classroom settings, other studies have focused on the closely related learning dispositions of resilience and persistence. This study extends these two dispositions by adding risk-taking as a precursor to the valued learning dispositions of resilience and persistence. Claxton and Carr (2002) argued that resilience is a factor in taking on a learning challenge whose “outcome is uncertain” (p. 14). They wrote that resilience is “indicated when a child sticks with a difficult learning task; has a relatively high tolerance for frustration without getting upset; and is able to recover from setback or disappointment relatively quickly” (p. 14). Resilience differs from risk-taking. In risk-taking the process and the outcome are uncertain and embody some level of fear, and persistence the child demonstrates determination or stamina to achieve the learning goal. Fantuzzo, McWayne, Perry, and Childs (2004) argued that persistence involves attending to relevant stimuli and persevering with difficult tasks. Persistence, or sticking with a problem, is important, but it does not yet show how a child initiates an uncertain process and the fear associated with the process. Both resilience and persistence are learning dispositions that come into play after a child has taken on a risk. By adding risk-taking to the corpus of learning dispositions, we can better see how a child gathers the courage to initiate various learning processes.

Risk taking has been studied somewhat in early childhood education. Stephenson (2003) names risk-taking in its physical attributes of a child experiencing height, speed, and bordering on fear. Venturing into nature is the key feature of Rifkin’s (1995) study of outdoor play. Harper

(2017) discussed nature and risk-taking with young children in an argument for Forest and Nature Schools. These studies discuss the value of risk-taking to human development. This study adds to these ideas and shows the ways a teacher influences risk-taking in school. In this study, the teacher went beyond the risk-taking literature of outdoor and nature play and incorporated risk-taking in her engagements with children and in play. Researchers argue that undertaking ‘risky’ activities is important toward extending children’s physical prowess and independence (Duberry, 2001; Harper, 2017), but simply undertaking risk does not focus on specific teacher strategies in school settings that influence risk-taking. While work on the benefits of risk-taking related to outdoor play is important, what a teacher does to influence risk-taking in school is equally important. This study shows multiple strategies MC used to support the learning disposition of risk taking. In a variety of situations, she selected forms of attention, establishing safety or confidence, or scaffolding of risk-taking. By adding specific strategies to what we know about risk-taking in the classroom, we can better see how to support risk-taking in the classroom.

*Forms of attention.* Chapter 5 Risk-taking, described the quality and type of attention MC provided to influence risk-taking in the context of non-verbal attention, proximity, and descriptive attention. Non-verbal attention as found in facial expressions such as an accepting smile, an open body position with both arms relaxed at the teacher’s side, and gentle touch are known supportive teaching strategies. Proximity conveys a sense of safety or security (Neill, 1991) and is significant toward influencing risk-taking, but is not a new concept to human engagement. But descriptive attention that supports risk-taking warrants inclusion in this final discussion because of how it supports the development of agency through risk-taking.

*Descriptive attention and risk-taking.* Teachers can use descriptive attention to influence risk-taking and support a child’s developing sense of agency. Oswell describes children’s agency

as the capacity to make a difference and be involved in “emergent innovative, experimental and substantive forms of solidarity and coexistence.” (Oswell, 2013, p 6). Previous studies examined teachers’ effect on the development of resilience (related to risk-taking) focused on environment, relationships, and practices, highlighting aspects such as building relationships, developing self-regulation, promoting social-emotional learning, and providing positive reinforcement and consistency. While these studies suggest what needs to be done to develop resilience, they do not say how to do it. For example, Nolan, Taket, and Stagnitti (2014) used terms focused on persistence building to support social-emotional development, providing feedback on emotions and positive solutions to participation with peers. They recognized the important role a teacher can play in fostering the development of resilience but did not describe teaching strategies. Malone and Rudner (2011) noticed the negative impact of parental anxiety of risk on children’s autonomy. Morrongiello and Hogg (2004) noticed differentiated responses to risk-taking according to gender differences, implying that adult affect impacts children’s risk-taking behavior. Their work specifically noticed parents’ expectation that they could influence girls risk-taking behavior yet have no influence over boys’ behavior. While this work is important, it does not address what a classroom teacher can do to influence risk-taking as a learning disposition. This study of MC’s behavior shows how descriptive attention is an important teacher strategy for risk-taking.

Descriptive attention is a term I use to describe how a teacher narrates a child’s actions and words. In the study, MC described Alice’s and Tasneem’s actions to them. She described to Irene the steps she was taking to show her journal to her classmates. Descriptive attention is observed as the narration of the act to the child and implies the child’s ownership of the action. Through verbal description, it adds to the child’s capacity and cognitive involvement in the

action. It is not a form of praise attention (attention given to a child containing verbal superlatives dependent upon the judgement of the attention giver) or providing feedback on emotions (Nolan, Taket & Stagnitti, 2014). Instead, descriptive attention empowers the child and positively influences risk-taking by giving the child specific positive feedback (in descriptive form) about the child's ideas or actions. Not only is their process of taking on risk described, as well as the risky act, their ability to try an uncertain act is also described. Because positive feedback encourages action, this method of describing the child's experimental or risk-taking action increases the child's capacity to be experimental or innovative. This increased ability to try something experimental, innovative or different aligns with Oswell's definition of agency. Therefore, descriptive attention supports a child's risk-taking, and consequently supports a child's emerging sense of agency.

*Confident voice tone, safety and risk-taking.* Other studies have established the value of teacher confidence in the act of teaching (Graven, 2004; Nolan & Molla, 2017). This study builds on this by showing how a teacher's confidence, when conveyed through voice tone, can have a positive effect on children's risk-taking disposition. Neil (1991) discussed the importance of confidence communicated in voice tone in classroom management. He finds that positive voice tone increases students' level of confidence and creates a climate of security. Gobl and Chasaide (2003) argued that voice quality signaled emotions and added affective overtones to a message. Noddings (1996) pointed to the connection between teacher affect and student affect. I build on her thinking to suggest that a risk-embracing teacher could influence children to be less risk averse. While this work on teacher confidence and teacher affect is important, it does not yet describe how a teacher's confident voice conveys confidence to her students and influences risk-taking.

This study, focused on MC, reveals how voice tone is important for influencing risk taking. She kept a neutral (not anxious) tone, was never loud or abrupt (which could be associated with a problem) and was positive. She also refrained from using a negative, concerned, or uncertain tone of voice that could undermine a child's confidence. Her voice was one of the factors that enabled children to work with uncertainty through conveying confidence. Studies demonstrate the positive affect of teachers' use of a confident voice. This study demonstrated confident voice tone as a support for risk-taking.

***Scaffolding risk-taking.*** Other studies have established scaffolded instruction as interactive dialogues that focus on both content and strategy learning. Moll and Diaz (1987) described scaffolding as a dialogue between the teacher and learners that provided language models and tools guiding a child's inner talk about learning. The use of the metaphor of a scaffold implies an adjustable, temporary support that can be removed when no longer necessary. This study builds on scaffolded instruction by showing that risk-taking can be scaffolded as well. This study suggests adding the nuances of micro-risks, approximation of risk, and planned risk-taking to literature about scaffolded learning.

***Micro-risks.*** MC demonstrated both building upon the lower level supports or leaving supports in place supported Aldo's risk-taking. These supports were micro-risks, or large more formidable risks divided into smaller more manageable risks. Risk-taking through micro-risks involved a multi-step process of invitational moves. First, MC noticed a child considering taking a risk. Next, she intentionally adapted the risk into incremental steps according to the child's will and ability. In these steps, or micro-risks, she approximated the risk, or divided the larger, 'scary' risk into smaller, manageable chunks, which became the 'lattice' of the scaffold for the risk-taking event. This was observed when she guided Aldo through working with the box, which

ultimately led to him entering the box. This scaffolding of support can be seen in Tables 5.2-5.19 when MC scaffolded Aldo's comfort with the box until he could finally enter the box by noticing moments of discomfort with a task and changing the task into a task he was willing to try. Then she left the supports of her voice and Aldo's visual connection with the world outside the box in place in support of his risk-taking act of entering the box.

***Approximation of risk.*** When MC noticed her students' goals and presented a lesser and attainable goal as a scaffold to meet the desired objective, the children attained their goals. As seen when MC modified Alice's risk-taking goal of jumping from the climber while hanging and letting go, to standing on the platform and jumping. MC approximated the initial risk-taking goal of hanging and letting go, into standing while holding the bar and jumping down. This was a scaffolding of risk-taking that supported Alice to attain her goal of jumping from the climber.

***Planned risk-taking.*** Planned risk-taking is a type of scaffolding most aligned with social-cultural literature. It involves moving from a known risk in planned stages to a greater challenge with the help of a trusted other. As seen with Irene planning to share her journal, MC supported Irene as she completed various steps toward the learning goal of showing her work to the entire class. Demonstrative statements acted to scaffold the risk. Each act was planned and built (or scaffolded) upon the other. This small example demonstrates children learning to take risks through the scaffolded support of the trusted other. Planned risk-taking parallels Vygotsky's Zone of Proximal development when a trusted other supports a child's ability to move from a point of knowledge to a new understanding. Planned risk-taking successfully moves a child from an area of certainty to a place of uncertainty. By adding the scaffolding of risk taking to what we know about socio-cultural learning, we can better identify strategies that support young children.

**Voice.** Voice is an added learning disposition in which a child's thoughts, ideas, and opinions are heard, have influence, and contribute to the group discourse. When a child has voice, their thinking and ideas are taken up for consideration by others (peers, teachers, adults, parents, etc.). Voice in education literature is a topic associated with autonomy, children's rights, and reconceptualizing early childhood education (Cannella, 2002; Dahlberg & Moss, 2004; McNaughton, 2003; Soto & Swadener, 2005). These studies argue for children's voices to be heard and name strategies for documenting and hearing voice, but this study names voice as a learning disposition essential for learning. Similar to agency as defined by Adair (2014), "in the context of schooling as being able to influence and make decisions about what and how something is learned in order to expand capabilities", voice is the learning disposition related to expression that precedes having agency. The learning disposition of voice supports a child's development of agency.

In this study, voice as a learning disposition belongs to the child and is not essentially dependent on response of the listener. The listener may not agree, as when MC did not agree with Sarah's opinion that big heads mean you are smart and conversely, small heads mean you are dumb (Table 6.26, line 42). Especially in early education, when children are learning to speak, the discursive moves, including non-verbal actions, of a teacher's careful listening to emergent language and developmental language signals to a child that their ideas and opinions are valued, which encourages them to develop voice.

This study found multiple strategies for influencing voice including: dialogic engagement, interpretive listening, non-verbal communication in pretend play

***Dialogic engagement.*** Voice is developed in dialogic engagement, which is found in the back and forth dialogue of 'sense-making.' An example of this was observed when MC focused

on understanding Castro as he worked to have his idea of ‘fangs’ understood, or when she spoke back and forth with Sarah to gain deeper understanding of the ‘widgets’ similarity to the paint spinner and her grandmothers *trompas*. Dialogic engagement also appeared as mediation when Sarah and MC talked about the relationship between the size of heads and being ‘smart’. MC worked to develop voice through understanding children’s thoughts, opinions, and ideas. The learning disposition of voice assures expression for all children through the context of dialogue. Voice is particularly important as our schools become increasingly inclusive of world cultures because voice enables agency. With the learning disposition of voice, children can be empowered to be expressive. Voice is related to cultural inclusivity because when children have voice, they express their thoughts, opinions and ideas, and expect to be heard, including when their perspective differs from their teacher’s.

**Interpretative listening.** Other studies have established strategies for developing voice. Methodologies for listening to children and hearing their voice are used with young children. Observation (Elfer & Selleck, 1999; Owoikie & Goodman, 2002) as seen in ECE as focused observation of children with field notes, or participant observation (Clark & Moss, 2001) a type of in situ dialogic observation inclusive of the child. Interviews as a methodology with young children is more research directed because the researcher formulates the questions often prior to observing the child (Brooker, 2001; Gollop, 2000; Langsted, 1994). Methodologies utilizing structured activities such as puppets (Carr, 2000; Measelle, Ablow, Cowan, & Cowan, 1998) and persona dolls (Hall, Hughes, & Jarrett, 2002; Vandenbroek & Van Keulen, 2002) engage the child through play or role-playing, but this too is typically guided by the researcher. These methodologies are either disengaged from the child as in observation or are engaged with the child in a manner guided by the researcher’s agenda.

Multi-sensory approaches include photos of children and ask their interpretation (Clark & Moss, 2005; Gadd & Cable, 2000). This method asks a child to remember the moment the photo was taken and remember what they were thinking and feeling. Voice recording (Cousins, 1999; Evans & Fuller, 1996) capture the moment but understanding of the moment without the child is subject to researcher interpretation. Child-guided walks or tours (Clark & Moss, 2001) brings in the child's voice and opinion about what is seen but can also be skewed due to the researcher's agenda. Role play as a dramatic tool (Cousins, 1999; Finch, 1998; Miller, 1997) also relies on a situation set-up by the researcher to investigate the children's interpretation of the dramatic situation. These methodologies are of importance, but they do not include the quality of listening for understanding or interpretation in the moment, which is what MC employed to encourage the children's development of voice. A methodology for listening that moves beyond technique and focuses on listening as a relationship, which Rinaldi (2006) described as "competent listening [which] creates a deep opening and predisposition toward change" (p. 130). I propose adding interpretive listening in the moment as an additional methodology for influencing voice.

The strategy of listening for understanding or interpretation builds upon the studies involving non-verbal communication cited in the previous paragraphs and adds, especially with emergent English Language Learners (ELL) as well as children with speech delays, strategies for developing voice. This study shows how pausing, careful listening, repeating what is heard, and continuing to participate with the child are all strategies for developing voice. By adding interpretive listening to what we know about voice, we can better see how a teacher can support ELLs and children with speech delays to develop voice. The dialogues of *sense-making* with children whose spoken language may be challenging to understand involved mediation, care, and attention. This attention to the details of communication with all children helps to

assure that no child feels marginalized due to an inability to make themselves understood. The teacher in this study, MC, responds to the process of children's expression or work rather than the results. In this way, she communicates that the children's thinking is valued. She does not judge their ideas or statements. They know their ideas will not be dismissed, and their teacher will work with them until they are understood. Attention to children's voice teaches children that their thinking, expression, and meaning has value.

*Voice and the non-verbal communication of pretend play.* In this study, we also see how the non-verbal communication of pretend play is important for the development of voice. In contrast to previous studies, this study shows that non-verbal pretend play is an important dialogic context for the expression of voice. Previous studies argued that many non-verbal strategies for 'hearing' voice exist. The Reggio Emilia approach calls for listening to the "100 voices of children," meaning children have multiple modes of expression (as cited in Edwards, Gandini, & Foreman, 1998), but this type of voice produces permanent evidence in contrast to pretend play, where voice is ephemeral, existing for the moment yet effecting the child's learning disposition. Tay-Lim and Lim (2013) and Dockett and Perry (2005) suggested using drawings as a context for listening to children's voices. The visual images and verbal exchanges around the child's art can give expression to a child's voice. Their work is important. Additionally, this study adds the non-verbal communication of pretend play as an additional context for dialogical engagement. This study of MC shows how a teacher in dialogue with children's pretend or make-believe expressions engages with the child's non-verbal expression of voice. These expressions represent a child's choice and opinion of how their specific pretend character or creature should act and the sounds it should make. Whether it is an expression of a crab, an astronaut with a baby in a stroller, or a child 'floating' around the playground as a butterfly,

these expressions are emergent forms of voice. Focused on an expression of choice of what to pretend and how to pretend, the teacher and children were engaged in dialogue regarding that choice. Children's bids for participation, even imaginary participation, were given space in this classroom. When children are heard in their pretending context, the voice of who they are has space to emerge. In this way, voice is represented in pretend play as an expression of the child's thinking, and for non-verbal or emergent speakers, non-verbal communication is an essential teaching strategy for supporting learning dispositions.

### **Teacher Strategies for Supporting Learning Dispositions**

This study asks and answers the following question: What does a teacher of young children do or say to influence learning dispositions? The section below identifies multiple strategies MC used to influence learning dispositions: intellectual inquiry, non-verbal attention, the Zone of Proximal Interest, and differentiated engagement.

**Intellectual inquiry.** Connecting with or engaging a child's intellect to influence curiosity, has been established in the following studies, but how a teacher actively engages with students is named in this study as an addition to the literature. Engle and Hackman (2002) called teacher engagement "active interest cognition or focusing condition" (p. 634), where the teacher is extremely attentive and encourages student behavior with smiles, eye contact, and occasional interjections. CLASS (La Paro, Pianta, & Hamre, 2008) named teacher-child relationship as critical to engaging with students through a positive classroom climate. While this work is important, it does not yet address how to connect with a child's intellect. If we are to help children "sense that their intellectual question is of deep interest and importance to us" (Katz, 1998, p. 38), then we need tools for deeper engagement. As observed with Steven and the spinner, MC identified uncertainty, followed it with intentionally placed questions, and

wondered aloud with him to prompt curiosity. With Alice jumping and Aldo and the box, MC focused on their condition of risk-taking with interest, intentional questions, and statements spoken with focus on the child. This study builds upon the adult cues named by active interest cognition Engle and Hackman (2002) and meaningful relationships of CLASS (La Paro, Pianta, & Hamre, 2008). Beyond adult non-verbal cues and meaningful relationships, sincere and intentional questions model and inspire intellectual inquiry. Intellectual inquiry in the context of a positive classroom climate (Engle & Hackman, 2002; La Paro, Pianta, & Hamre, 2008) supports the development of curiosity and other learning dispositions in young children.

**Non-verbal attention.** Non-verbal attention is another strategy used to connect with a child's intellect in support of learning dispositions. It is found in facial expressions such as an accepting smile, a focused gaze, an open body position with both arms relaxed at the teacher's side, and a gentle touch. Non-verbal communication precedes language learning and remains an important communicative tool throughout early childhood. The teacher in this study used non-verbal communication with early language learners and second language learners by nodding her head *yes*, smiling at children as she listened, and being relaxed as children were processing their uncertainty. MC connected with Castro with direct gaze, touching his hand as he made connections about spiders. She smiled and warmly hugged him when he formulated ideas about paint blending and connected those ideas with a book they had read. Her work with Steven and the spinner truly invited his exploration with the mechanism without him saying a word by gazing at his actions and smiling. In this way, she connected with the intellect of a child who may not yet have the ability to communicate verbally. Using non-verbal supports, she connected with children's intellect and influenced the learning disposition of voice.

**Zone of proximal interest.** Another strategy for developing learning dispositions is noticing children's interests through a type of response to their interests which I call the Zone of Proximal Interest (ZPI). First stated on page 118, this term describes the zone of a child's interest, what they are interested in, and more importantly, where the teacher could support the children with that interest or could expand that interest. This idea was observed in action when MC expressed interest in Irene's writing, and expanded her interest in writing by marking the spot and then asking her to share with the class. ZPI calls upon the teacher to notice a child's interest or curiosity, be the trusted other, and add to that interest. Similar to Vygotsky's Zone of Proximal Development, in which a trusted other responded neither beyond the child's interest nor in too simplified a manner, the teacher's response is significant. The teacher noticed, added either a focal or challenging question that expanded their interest, and pushed their zone of interest without moving the child beyond the ZPI.

**Differentiated engagement.** Throughout this study, MC observed and responded differently to different children and different circumstances. Similar to differentiated instruction, which offers a framework for addressing learning variance as a critical component of instructional planning (Tomlinson & McTighe, 2006), differentiated engagement offers strategies for interacting with children according to the development of their learning dispositions. For example, while developing curiosity about the box with Aldo, MC considered the aforementioned 'zone of interest' as she placed her questions and comments within a context the child could easily comprehend. Her comments about the possibility of pulling items out of the box were not beyond the child's interest or too simplified. These comments were also essential to the goal of using the box to make a car. In this example, the comments were varied by this trusted other in response to the child's interest level. Differentiated engagement offers a

framework for engaging with children based on teacher observations of their interests or learning dispositions.

This study introduces differentiated engagement in contrast to previous studies on differentiated learning. Differentiated learning as argued by many (Hall, 2002; Subban, 2006; Tomlinson & McTighe, 2006) stated that students have multiple options for “taking in information and making sense of ideas” and requires teachers to be “flexible in their approach to teaching and adjusting curriculum and presentation of material” (Hall, 2002, p 1). However, differentiated engagement involves the teacher and student in a reciprocating process of learning. A metaphor for this idea follows. Differentiated learning views the teacher as a chef in the kitchen adjusting the flavoring of a dish for her guests according to their taste and diet, whereas differentiated engagement calls for the teacher to enter the children’s kitchen, where teacher and child flavor and adapt the dish together. By adding the framework of differentiated engagement, the role of the teacher is extended to observer, co-creator, and expander. With this framework, we can increase our understanding of didactic engagement and better see how to develop learning dispositions. By adding differentiated engagement to what we know about differentiated instruction, we can more clearly understand how children learn when we engage in and customize learning engagement to meet their learning interests.

### **Conclusion: Ideas for Further Research**

**Small scale interventions.** This study demonstrates the need for small scale interventions targeting learning dispositions. A study by Li-Grining, Votruba-Drzal, Maldonado-Carreño, and Haas (2010) identified a strong link between approaches to learning or learning dispositions and achievement and named the Chicago School Readiness Project, Tools of the Mind and Head Start REDI (Research-based, Developmentally Informed) as interventions targeting specific

dimensions of approaches to learning. This important work identified large scale interventions to develop aspects of learning dispositions, but it did not name small-scale interventions. Cities and counties are working on increasing quality in early education, and they have created bold policies and creative systems, but at times, classroom teachers feel abandoned. Though the large scale is important, small scale interventions are easier for the classroom teacher to study and enact. Li-Grining et al. (2010) also implied that further developing approaches to learning could provide equity across both “economic disparities and gender gaps, fostering science, technology, engineering and math for girls, and reading for pleasure among boys” (p. 1074). The self-regulatory aspects of improved approaches to learning may help ethnic minority children cope with stereotype threat and test anxiety, which undermine achievement performance (McKown & Weinstein, 2002; Schutz & Davis, 2000). These studies, combined with the work of Pianta, La Paro and Hamre (2008), stressed the importance of teacher-student relationships but fail to describe how teacher-student relationships influence learning dispositions. This study of MC shows a possible link between learning dispositions and the teacher-child relationship. Within each classroom, learning dispositions can be influenced within the teacher-child relationship, and this study shows how that trusted other (Vygotsky, 1978) influences learning dispositions. This study also reveals important interventions or strategies for developing learning dispositions. By adding to our knowledge regarding the complex space of the teacher-student relationship and the words and actions within that space, we can better see how learning dispositions can be developed with preschool children. These relationships are found in small scale, classroom interventions and strategies. Local, small scale interventions that support development of trusting teacher-student relationships that can move the field of ECE to realize the important goal of influencing learning dispositions.

**Studies of learning dispositions.** Currently assessments for learning dispositions with young children do not exist. A number of questionnaires for adolescents and college students were identified by Ridley (2007). She cites “the Study Process Questionnaire (SPQ; Biggs, 1987b) and the Learning Process Questionnaire for secondary (high) school children (LPQ; Biggs, 1987a). The Approaches to Study Inventory (ASI) and Revised Approaches to Study inventories (RASI) were developed by Entwistle and his colleagues (Entwistle & Ramsden, 1983; Tait & Entwistle, 1995)”. Tait, Entwistle and McCune (1998) went on to develop the Approaches and Study Skills Inventory for Students (ASSIST). Fantuzzo, Perry, & McDermott (2004) assessed the validity of the Preschool Learning Behavior Scale (PLBS; McDermott, Green, Francis, & Stott, 2000) for low income, urban preschool children. Their study revealed a three-factor congruence between the PLBS and Competence Motivation, Attention/Persistence, and Attitude Toward Learning. This study connects with learning dispositions tangentially, however, this is not a direct assessment of children’s learning dispositions or assessment of the teacher’s influence on the development of learning dispositions. Despite the consensus that learning dispositions are vital to children’s learning, effective assessment tools are not apparent.

This study calls for an assessment tool for learning dispositions (or approaches to learning). Over 133 educational and developmental assessments for children under age six exist in the domains of language, literacy, numeracy, and social-emotional development (Dockrell, Laurado, Hurry, Cowan, Flouri, & Dawson, 2017). One developed by Carr and Claxton (2002) that assesses learning dispositions in young children is somewhat misleading and conveys a romanticized view of children’s learning (Katz, 2002). Carr and Claxton (2002) discussed the use of learning stories, student portfolios, and a learning disposition grid to inclusively track the development of playfulness, resilience, and reciprocity, and while these tools yield insightful

data about learning dispositions, I agree with Katz (1993), who stated, “Educational goals should include dispositions that strike an optimal balance between generality and specificity” (p. 20).

We need a tool that is of practical utility and guides teachers toward intentionally including opportunities for influencing learning dispositions. This assessment tool for learning dispositions is important, but for early educators to influence learning dispositions, they need to know more about them and how to notice or identify them and observe their development.

Although there are some assessments that relate to some learning dispositions, curiosity most frequently, none of those are classroom based. The learning disposition of curiosity has been assessed in adult curiosity scales (Mussel, Spengler, Littman, & Schuler, 2012) and the Curiosity and Exploration Inventory for adults (Kashman, Rose, & Fincham, 2004). A longitudinal study correlated infant attachment to toddler resiliency and curiosity (Arend, Gove, & Sroufe, 1979), and two types of evaluations measuring curiosity (Banta, 1970; Henderson & Moore, 1979) were used with young children. A 2018 study comparing parental reporting of curiosity to Kindergarten Math and Reading achievement using the Early Childhood Longitudinal Study, Birth Cohort (ESLS-B) stated theirs was the first study to associate curiosity with kindergarten achievement. Interestingly, this study had to extract measures of curiosity from the parent questionnaire at nine months because the ESLS-B did not contain a measure of curiosity (Shah, Weeks, Richards, & Kaciroti, 2018). These studies demonstrate that there is research exploring curiosity but not an assessment available in the classroom.

A closer examination of learning dispositions will enable teachers to know more about them and enhance them in teacher-student relationships. This study does not add to the knowledge about assessing learning dispositions, but it does point to the need for an assessment tool for learning dispositions, including a more robust definition of learning dispositions and how

to develop them. With an assessment tool for learning dispositions, we can support learning dispositions in all students to reduce achievement gaps related to school readiness.

### **Limitations**

This study is an examination of teacher discourse through direct observation, video, interviews, and thematic analysis (Glesne, 2011). It seeks to understand how a teacher's interactions as well as direct and indirect communications are connected to children's learning dispositions. Videos were transcribed, the transcripts were coded for learning dispositions, and teacher discourse was analyzed against the established learning disposition definitions. The limitations of this study include small sample size, novice videography, and external events outside of my control.

**Small sample size.** The most obvious limitation of this study is its very small scale. It is a study of one teacher over seven days. This small sample size is similar to another single subject study by Busso and Narayanan (2007) who researched the minute details of facial gestures. These initial studies of details of discourse, including non-verbal communication, reveal potential for future studies with more subjects, which will be useful to validate and expand the strategies presented here. My initial use of one highly rated teacher validates my hypothesis that a teacher can influence learning dispositions and implies learning dispositions as a domain for further research.

**Novice filming.** An additional limitation was my novice filming of MC. The study would have been better with full day filming without battery changes, microphone problems, and a novice videographer. With improved filming, I could have had more footage during the investigations time indoors and better filming of circle time. Outside, I could have placed myself closer to MC and captured more teacher-student engagements up-close.

**External events and filming schedule.** My initial plan was to conduct initial observations of the teacher's interactions with her class for two days without the camera to establish a relationship with the teacher and children and dampen the observer effect (Ary, Jacobs, & Sorensen, 2010). I had also planned to film for more days. However, the days were diminished because a teacher strike eliminated five possible days of recording. This schedule pushed up against the end of the school year, limiting the amount of data I could gather by videotaping.

### **Implications for Teacher Education**

The study of learning dispositions offers opportunities for change in teacher education. Institutions preparing teachers should consider including the study of learning dispositions and how to influence learning dispositions in teacher preparation programs. Observing and responding to learning dispositions can be included in learning about student observation, teacher-student relationships, and emergent curriculum. Programs can teach risk-taking and voice as necessary for development rather than dispositions to fear in young children. Because learning dispositions are foundational to learning, they need to be taught especially in preparation for teaching young children.

**Immerse learning dispositions in emergent curriculum.** Further study in early childhood education is needed to add learning dispositions to curriculum. Specifically, in Emergent Curriculum, where a teacher observes for children's interests, and uses these observations to inform curriculum, the integration of learning dispositions or how children approach learning would be most beneficial. In the course of child observations, the teacher would also observe for emergent learning dispositions. She could then infuse opportunities for the development of learning dispositions in the lesson plans for the curriculum.

Emergent Curriculum is a concept parallel to the Reggio Emilia Approach, which calls for careful observation and expansion of interests, providing materials for children to express themselves through art and other expressive materials and art forms. Notable with the Reggio Emilia approach is the teacher's documentation of children's expression with photos, portfolios, and narrative. Immersing learning dispositions in emergent curriculum suggests astute observation of children accompanied by a refining of the teacher's actions and conversation in response to the children. The teacher would then respond to children's interests and emerging learning dispositions with documentation of the child's expression and their movement toward their learning goal. The Reggio Emilia Approach is profoundly sensitive in its observations, engagements, and documentation of children's work. Adding intentional and illustrative documentation of children's thinking to emergent curriculum would document the child's learning disposition (s) and the thinking that moved them toward that learning goal(s).

**Teacher preparation programs.** My seven-year emic experience working with one early education teacher preparation program and this research has caused me to call for better preparation in engagements with children for pre-service teachers. Pre-service teachers are philosophically and methodologically well-prepared, but they need to be better prepared in observing children and engaging in those observations. They need to learn more about how a teacher expands the children's ideas, wonders aloud, and gives cues to influence the development of learning dispositions. They need to learn how to consider what the children are doing and observe for children's interests. These observations can inform learning opportunities. Pre-service teachers need to learn how a teacher notices learning dispositions.

**Viewing risk-taking as an opportunity.** Risk-taking is often misinterpreted or misunderstood as a danger instead of being seen as a learning opportunity. Stine (1997)

acknowledges the importance of challenge in developing competence but describes the balance that needs to be maintained between providing challenge/risk and repetition/security in playgrounds. This can be interpreted as risk-taking with prescribed limits. Scott *et al.* (2001) suggests concerns about risk sit within an even wider framework of risk anxiety which she views as a pervasive feature of contemporary society. Sansetter (2016) found increasing focus on safety in Norwegian society and a move away from a previous permissive attitude toward children's outdoor play. In Arizona's pre-school licensing policy, (Arizona Department of Health Services Office of Child Care Licensing, 2020) there are 63 pages of requirements regarding the facility, safety and recordkeeping of which only 3 pages are related to teacher qualifications. This heavy focus on safety could be interpreted as a greater concern for eliminating risk than for learning and quality of teaching in the early years.

As stated earlier, risk-taking is moving from a place of less knowledge or skill, a position of uncertainty, to a place of knowing. In this way, children would benefit from developing risk-taking as a learning disposition. Creating opportunities for children to learn to manage risk is an opportunity early education should consider as an important element in every classroom. Managing uncertainty is an important motivation toward learning, so risk-taking must be added as a learning disposition. The idea of risk-taking and actual risk-taking can give children opportunities to determine the difference between risk-taking and dangerous actions.

This study also recommends exploring the connection between risk-taking and acting upon curiosity. As stated in chapter 4, curiosity conveys interest, eagerness, inquisitiveness, questioning, investigation, and marveling. Curiosity seeks to increase knowledge and is frequently associated with uncertainty (Berlyner, 1979; French & Woodring, 2013; Meta, 2016). Hence, curiosity can be associated with risk-taking or learning to move from uncertainty to a

place of knowing. This means that a child who is curious and questioning or seeking to investigate a problem or uncertainty could call on the learning disposition of risk-taking to enact their curiosity and move toward resolving the problem or investigation. Additionally, a child developing voice still needs a measure of comfort with risk-taking to express their ideas and opinions in an uncertain environment. Risk-taking is often misinterpreted or misunderstood as children enacting dangerous behavior, but I propose moving risk-taking to a position of importance in the collective of learning dispositions.

### **Conclusion: Learning Dispositions Matter in Early Childhood Education**

It is my intent for this dissertation to provide teaching strategies to influence learning dispositions for teachers of young children. I also present a justification for including learning dispositions as part of the general concept of high-quality learning. Lilian Katz (1993) said, “dispositions are seldom included [as Educational Goals], although they are often implied by the inclusion of attitudes (e.g., attitudes toward learning) as goals (p. 2). She defined “a disposition as a pattern of behavior exhibited frequently ... in the absence of coercion ... constituting a habit of mind under some conscious and voluntary control ... intentional and oriented to broad goals” (Katz, 1993b, p. 16). Bertram and Pascal (2002) identified three core elements of effective learners: “dispositions to learn, social competence and self-concept, and social and emotional well-being” (p. 246). The researchers argue that a primary focus “on subject knowledge, particularly language and mathematics competency” (p. 241) is insufficient, and they urge teachers to focus on wider outcomes to sustain the development of young minds. Head Start links learning dispositions to children’s effective learning, and classroom practices/environments that support them (Head Start, 2019). This research supports the inclusion of learning dispositions as a component of school readiness can best prepare children to be life-long learners.

The importance of including learning dispositions in ECE pedagogy may most profoundly impact children raised in poverty. Low income can affect access to basic resources such as food, clothing, housing, familial stability, and medical and health support, as well as enriching resources such as cultural experiences, literacy events, community events, and access to high quality early education (Madill, Builin, Friese, Paschall, 2018). Haberman's (2010) pedagogy of poverty describes "youngsters [who] achieve neither minimum levels of life skills nor what they are capable of learning (p. 53). These life skills that could break the cycle of poverty can be understood as learning dispositions such as curiosity, risk-taking, voice, perseverance, resilience, and creativity. Twenty years ago, the National Education Goals Panel 2000 named approaches to learning (or learning dispositions) as "the inclinations, dispositions, or styles ... that reflect the myriad ways that children become involved in learning and develop their inclinations to pursue it" (NEGP, 2000, p. 18). This panel further stated that approaches to learning (learning dispositions) vary between cultures, and children can be successful in school in many ways, provided teachers and families engage children in learning in a manner appropriate to each child. In this way, with the intent of developing learning dispositions, we can shift from the pedagogy of poverty to a pedagogy of good teaching that includes learning dispositions.

Education begins in the early years, and I argue for an intentional inclusion of learning dispositions in ECE pedagogy. Learning dispositions can be "triggered, obstructed, enhanced, and retarded by conditions external to the person" (Riveros, Norris, Hayward, & Phillips, 2012, p. 37). Children can be more engaged learners when learning dispositions are activated early in life. Higher quality early childhood education is associated with a wide variety of better cognitive and socioemotional outcomes for children from diverse backgrounds, including

differences in gender, ethnic background, and level of maternal education (Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, & Kagan, 2001). The positive effects of higher quality care have been shown to be even stronger and longer lasting for children at greater risk (ibid). It is clear that higher quality childcare is associated with better outcomes for all groups of children (Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, 2001). If learning dispositions support the idea of “working smart rather than working hard” (Kirby & Lawson, 2012, p 1) then we can improve learning outcomes for all children with active development of learning dispositions in early childhood education.

## APPENDIX A: PRE-INTERVIEW

Diana Hill

April 29, 2018

IRB, Learning Dispositions: How Teachers Position Young Children for Learning in the Early Education Classroom

The semi-structured interviews with the teacher conducted before the first video and at the conclusion of the research will gather background information and elicit views and opinions (Creswell, 2014). It will occur in the familiar space of the teacher's classroom to establish a conversational atmosphere. This interview will establish familiarity and provide direct and indirect information (Fontana & Prokos, 2007). The questions include:

I. Initial Interview protocol:

- o Name, educational background, teaching experience
- o Why did you choose to teach young children?
- o Describe this year's class.
- o What are their strengths and challenges?
- o What do you think are the most important things you teach children in this classroom?
- o How do you teach these things? (pick something (XXX) mentioned in her previous response that is closely aligned with learning dispositions, for example, focus, curiosity, independence)
- o The AZ early learning standards name initiative and curiosity, attentiveness and persistence, confidence, creativity, and reasoning and problem-solving as important approaches to learning.
- o How do you foster initiative and curiosity, attentiveness and persistence, confidence, creativity, and reasoning and problem-solving with your students.

## **APPENDIX B: POST-INTERVIEW**

### II. Closing interview protocol:

You mentioned that you'd like to learn more about teaching content. Would you talk more about that idea.

o I'd like to hear your thoughts about what you say and do with children in relation to specific learning dispositions.

What you say and do with children foster curiosity?

What you say and do with children foster persistence?

What you say and do with children foster creativity?

What you say and do with children develop problem-solving abilities with your students?

Let's look at this clip. Look, then look at it again and talk about it.

My next steps: How much would you like to participate in reviewing my analysis?  
Are you interested in checking back in with me?

Do you have further ideas about the difference between a provocation and an investigation?

I am interested in children's curiosity.

Can you think of moments when your students were particularly curious?

How did you respond to that as a teacher?

Talk about a moment when you encouraged a child's curiosity?

## APPENDIX C: CONSENT LETTER TO PARENTS



Consent Version: **04/30/2018**

Page 1 of 2

### University of Arizona Parent Consent to Participate in Research

**Study Title: Learning Dispositions: How Teachers Position Young Children in the Early Education Classroom**

**Principal Investigator: Diana Hill**

**A research study is planned for your child's preschool class at Wright Elementary School.**

This document contains important information about this study and what to expect if you consent to your child's participation. Please consider the information carefully. Feel free to ask questions before making your decision whether to consent to your child's participation. This project has been reviewed by the Tucson Unified School District and has been approved.

This study examines interactions between your child and his or her teacher. I will video and audio record the teacher's interactions with children during the school day for up to 12 days. Specific interactions between your child and the teacher and between the teacher and the whole group will be recorded or noted as they are the focus of this study. This form includes a consent for me to include incidental conversations with you as recorded in my field notes or in recording. The classroom conversations and interactions will be transcribed and analyzed to better understand how a teacher's words and actions support the learning dispositions of curiosity, perseverance, independence, and creativity. I will assign your child a pseudonym so that your child's name will not appear in the transcript or my notes.

The videos may be used for research presentations or for future research papers without additional consent. Because of the nature of the data, it may be possible to deduce your child's identity; however, there will be no attempt to do so and the data will be reported in a way that will keep the identity of your child as confidential as possible.

Nothing outside of regular participation in the school day is required of families or children. There is no cost to you. There is no risk to your child, however they may benefit from having an additional adult in the classroom. They may also benefit as the teacher becomes more aware of how to support children's curiosity, perseverance, independence, and creativity.

If you do not consent to your child's participation in this study, they will not be recorded. Also, I will not include any interactions they have with the teacher in my data, dissertation, or any presentations. You may withdraw your consent from this study at any time.

Education records used by this research project are education records as defined and protected by Family Educational Rights and Privacy Act (FERPA). FERPA is a federal law that protects the privacy of student education records. Your consent gives the researcher permission to access the records identified below for research purposes.

HSPP Use Only:

Consent Script non-federal

**Protocol 1804506518 Approved by Univ. of Arizona IRB**

**(Expires 1-May-2023) Jan 2018**



**Consent Version: 04/30/2018**

**Page 2 of 2**

- The records requested include: race, languages spoken, gender, and number of children who buy full price lunch (approximating those who receive free/reduced fee lunch) for the purpose of describing the demographics population of the study in my dissertation.
- These records will be shared with me, Diana Hill, the PI.

The information that you provide in the study will be handled confidentially. However, there may be circumstances where this information must be released or shared as required by law. The University of Arizona Institutional Review Board may review the research records for monitoring purposes.

For questions, concerns, or complaints about the study you may contact: Diana Hill, 520-9090390, ordhill27@email.arizona.edu.

For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Human Subjects Protection Program at 520-626-6721 or online at <http://rgw.arizona.edu/compliance/human-subjects-protection-program>.

#### Signing the consent form

I have read (or someone has read to me) this form, and I am aware that I am being asked to approve my child's and my participation in a research study. I have had the opportunity to ask questions and have had them answered to my satisfaction. I voluntarily agree to participate in this study and give consent for my child to be videotaped.

I am not giving up any legal rights by signing this form. I will be given a copy of this form.

\_\_\_\_\_  
**Printed name of legal parent or guardian  
parent or guardian**

\_\_\_\_\_  
**Signature of legal and consenting  
Date**

\_\_\_\_\_  
**Printed name of child/study participant**

An Institutional Review Board responsible for human subjects research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research.

**HSPP Use Only:**

Consent Script non-federal

**Protocol 1804506518 Approved by Univ. of Arizona IRB (Expires 1-May-2023) Jan 2018**

## APPENDIX D: CODE DEFINITIONS

Learning Disposition Curiosity	Definition a view of self as interested, with expectation that people, places, and things can be interesting, which demonstrates motivation to understand (Claxton & Carr, 2004; Katz, 1998).	Observed when: A child or children seek to increase their knowledge about a novel or uncertain object (French & Woodring, 2013; Meta, 2016; Berlyner,1979).
Risk-taking	Engaging in act with an uncertain outcome that could be perceived as dangerous or embodying some level of fear for the child (Stephenson (2003).	A child or children uses language and/or nonverbal communication expressing fear or concern about the unknown or in response to uncertainty
Voice	Voice is the child's expression of an idea, question, or opinion. It is a term a child can exhibit.	A child or children express or enact knowledge and/or skill. It includes the expression of the right to be heard, contribute, and have influence. When a child has voice, their thinking and ideas are taken into consideration by others including peers, teachers, parents, and also less significant people such as school volunteers or store clerks.

## **APPENDIX E: SUPPLEMENTAL DOCUMENTS NOTICE**

All original coding tables and the complete transcript for *Alice Reads* can be found on ETD

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