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Teaching Academic Concepts in a Play-Based Preschool Environment: A Case Study of Guided Play across Three Classrooms

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TEACHING ACADEMIC CONCEPTS IN A PLAY-BASED PRESCHOOL ENVIRONMENT: A CASE STUDY OF GUIDED PLAY ACROSS THREE CLASSROOMS

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Dissertation Abstract
Teaching Academic Concepts in a Play-Based Preschool Environment: A Case Study of Guided Play Across Three Classrooms

This qualitative study examined interactions between preschool children and teachers during guided-play activities. These interactions were studied through observations and interviews in a case-study format. Classrooms were observed for 1 hour per week over the course of 4 weeks. Teachers were interviewed following each observation. All three preschool classrooms were located in northern California and belonged to the same chain of schools. A total of six teachers and 75 students participated in the study.

Three main research questions drove the course of the study. The first research question examined the types of interactions between experienced preschool teachers and students during guided play. The second research question dealt with how preschool children respond to different types of interactions during guided play. Finally, the third research question involved recommendations for how school leaders can help teachers use their knowledge of each child's individual abilities to make guided play more effective in the classroom.

The study revealed that teacher interactions were extremely beneficial to student learning in a play-based environment. Teachers in each classroom organized a set of hands-on activities each day through which the children rotated. The activities had specific learning goals and objectives. Many activities were in the children's zone of proximal development (ZPD), which is defined as the area between "the most difficult task a child can do alone and the most difficult task a child can do with help" (Vygotsky,

1986, p.83). Working in the ZPD requires some teacher support and interaction, as these are the types of activities children cannot do independently. Proper scaffolding is necessary when children are working toward a goal that is slightly above what they can do without assistance. Preschool teachers should take this into consideration when planning lessons and guided play activities. School leaders can support teachers by providing more training on how to manage guided play with a large group of children, as individualized attention is necessary for successful implementation. Suggestions for training topics are detailed in the findings and discussion of this study.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

Lisa Hansen May 10, 2018
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Patricia Mitchell, Ph.D. May 10, 2018
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DEDICATION

This work is dedicated to my daughter Brielle. She was born halfway through this journey and is now a bright, inquisitive three year old, much like many of the children who participated in this study. She has so graciously shared her mother with not only a career, but also a dissertation. I hope she will be proud of me and one day understand what has been accomplished. In the end, this work is for her and all children her age eager to learn and explore the world around them. May you never lose your love for learning.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

STATEMENT OF THE PROBLEM

Early childhood is a highly critical time period for learning. Students who attend preschool programs typically come to kindergarten better prepared to start elementary school, socially and academically (Kirp, 2007). Preschool-age children are capable of reaching a plethora of academic goals. By the time they enter kindergarten, most children can identify colors, basic shapes, numbers, and letters. Many can also read, write, and solve simple mathematics problems (Singer, Golinkoff, & Hirsh-Pasek, 2006). The way early childhood educators present this information to young children is often an area of debate (Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009; Wood & Bennett, 1998). The State of California has recently expanded access to early childhood education by passing the Pre-K for All Act of 2018, as well as expanding eligibility requirements for transitional kindergarten. As preschool education becomes more accessible to a larger number of children, it is more important than ever to identify best practices in the field.

Many early childhood experts believe in the importance of play and hands-on experiences for young children (Engel, 2015; Hanline, Milton, & Phelps, 2010; Sumsison, Grieshaber, McArdle, & Shield, 2014). Children at this age have a natural desire to learn and explore their environment (Bruner, Jolly, & Sylva, 1976). Most high-quality preschool programs emphasize the importance of free play and child-directed learning, and early childhood educators heavily debate the introduction of academic concepts (Glinkoff & Hirsh-Pasek, 2016; Walsh & Gardner, 2006). Some teachers believe children should not be “pushed” to learn academics at such a young age. Other teachers feel the pressure and obligation to prepare children for kindergarten standards

and expectations (Kirp, 2007). As early childhood education ventures more into the realm of public education, calls are sure to increase for more standards and accountability in academic goals. Preschool-aged students and their educators can benefit from instructional methods that purposefully teach academic goals through a play-based approach, especially when empirical evidence supports this type of learning (Hirsh-Pasek et al., 2009; Miller & Almon, 2009).

Weisberg, Hirsh-Pasek, and Golinkoff (2013) outlined a method called the *guided play* approach to preschool classrooms. Guided play sits between free play and direct instruction. Through the use of guided play, children engage in hands-on learning opportunities, guided by adults.

> The adult's role in guided play is active, although not dictatorial; the adult in a guided play situation might initiate the play context but does not direct the play within that context. Rather, the adult follows the child's lead and allows the child to engage in discovery within the context of a prepared environment with subtle scaffolding. (Weisberg et al., 2013, p. 106)

Guided play differs from free play because it includes clear learning objectives, supported by teacher guidance and scaffolding. Teachers may model play for children, play side by side with them, or ask open-ended questions. Teachers are also responsible for setting up play experiences for students. To be effective, guided play requires thoughtful observation and planning by the teacher and can be a practical way to address curriculum standards in a context that is developmentally appropriate and meaningful to preschool-age children.

The guided-play approach involves teacher-directed play, incorporating curricular objectives and goals through less formal play-based interactions (Weisberg et al., 2013). Many topics often covered through direct instruction could be introduced though a guided-play approach. This approach builds on a child's natural curiosity and desire to play. However, unlike pure free play, students are presented with particular challenges, tasks, or objectives. Teachers then guide them through these challenges (Hassinger-Das, Hirsh-Pasek, & Golinkoff, 2017).

Despite the push for more academic concepts and standards in preschool, many private programs remain solely play-based. However, these programs also come with unique challenges and may benefit from more intentional teacher interactions through guided play. Keeping preschool students engaged and challenged is sometimes difficult in traditional play-based programs (Levine & Ducharme, 2012). Young children can move quickly from one activity to the next when they are not challenged or engaged. This often results in schools and teachers purchasing increasing numbers of items and materials in hopes of better capturing their attention (Kirp, 2007). With teacher scaffolding, teachers using guided play can introduce more options to engage with the same set of manipulatives and extend the time spent with the students. This format not only maximizes student learning, but provides financial benefits to the school and program.

Preschool children thrive on stimulating, hands-on activities (Edwards, Gandini, & Forman, 2012). Young children who are not in an intellectually stimulating environment often seek stimulation and attention elsewhere (Ritz, Noltemeyer, Davis, & Green, 2014). Children may misbehave, push boundaries, or even engage in risky

behavior (Tobin, Wu, & Davidson, 1989). Helping teachers understand how to effectively implement guided play and scaffolding in a preschool classroom will increase learning time, thereby limiting some avoidable behavioral challenges (Tobin et al., 1989).

Preparing a classroom for play-based learning requires intentional planning and preparation by the teacher. The Early Childhood Environment Rating Scale (ECERS), a widely used assessment tool to measure the quality of preschool classrooms, requires well-defined classroom centers that encourage play and hands-on learning (Harms, Clifford, & Cryer, 2005; LaParo, Thomason, Lower, Kintner-Duffy, Cassidy, 2012). Classrooms should include areas for music, dramatic play, art, block play, reading, and science exploration (National Association for the Education of Young Children, 2017; Wolfgang, Stannard, Jones, 2003).

However, setting up a classroom and providing play opportunities for children is only one piece. Preschool teachers need to be intentional in both their planning and implementation of activities as well as their interactions with the children while they engage in these planned activities.

> Some teachers may be intentional in planning, but do not use planned activities and apply purposeful strategies. Others may be intentional when interacting with children, but do not intentionally plan specific activities that support children's learning and development. (Jung & Conderman, 2013, p. 174)

Advocates for guided play argue that teacher interactions are just as important as the materials provided for the children (National Association for the Education of Young Children, 2017).

Weisberg et al. (2013) argued that guided play could offer preschool students a more balanced approach to learning than direct instruction or free play alone.

> We argue that guided play offers an appropriate middle-ground pedagogical approach for preschool education. It allows for teaching rich content in a way that incorporates elements of free play, discovery learning, and traditional pedagogy. … In guided play, adults initiate the learning process, constrain the learning goals, and are responsible for maintaining focus on these goals even as the child guides his or her own discovery. This latter point is critical. (p. 105)

Despite current research, educators widely use direct instruction to introduce academics to preschool children. Educators often reserve play to teach nonacademic concepts, such as social skills (Hirsh-Pasek, Golinkoff, & Eyer, 2004). Although a great deal of research supports play-based learning, many educators are still unclear about how to effectively carry out play-based instructional methods, especially when introducing academic concepts (Hassinger-Das et al., 2017). Preschool teachers and administrators could benefit from concrete examples, illustrating how children can reach academic goals through guided play and teacher scaffolding.

Background and Need

Educators and researchers have recently advocated for more play in the preschool classroom (Hirsh-Pasek et al., 2009). Many researchers highlighted the benefits of play for young children (Miller & Almon, 2009). Similarly, national common core standards and other requirements call for children to come to kindergarten more prepared than ever before. Many educators call kindergarten “the new first grade.” Kindergarten curriculum in today’s schools is often highly focused on reading, writing, and mathematics (Hyson,

2003). Students are expected to start school kindergarten already knowing the basics of shapes, colors, numbers, and letters. They are also expected to have a foundation in literacy such as letter recognition, phonics, concepts of print, and basic writing skills (Kirp, 2007). If these concepts are not incorporated into the early childhood classroom, students may be underprepared for elementary school (Singer et al., 2006).

Currently, two main approaches drive learning in many preschool classrooms: direct instruction and free play (Hirsh-Pasek et al., 2004). Direct instruction involves highly structured learning time when children receive information from the teacher. Free play lies at the other end of the spectrum. Children are allowed to play freely with toys and materials with little or no teacher influence. Both approaches can lead to learning in a preschool classroom (Tegano & Burdette, 1991; Thomas, Warren, & deVries, 2011). Direct instruction often results in children learning letters, numbers, or vocabulary. Free play helps children develop important social skills, independence, and self-confidence (Coolahan, Fantuzzo, Mendez, & McDermott, 2000; Denham, Basset, Zinsser, & Wyatt, 2014; Hirsh-Pasek et al., 2009; Sualy, Yount, Kelly-Vance, & Ryalls, 2011). Free play can also help children develop important language skills while working and communicating with their peers (Conner, Kelly-Vance, Ryalls, & Friehe, 2014).

Although some preschools purposefully self-identify their programs as "structured" or "play-based," many full-day programs offer a combination of approaches, with designated times for direct instruction and free play. Although these types of programs provide a well-balanced approach, some researchers believe preschool students could benefit from an additional layer of learning (Fromberg & Bergen, 2015). Weisberg et al. (2013) used current research to formulate their philosophy on guided play.

> The evidence suggests that preschool children benefit from a curriculum that is structured and rich in cognitive stimulation. … We humbly submit that guided play, with its focus on children's own efficacy and exploration, provides the model for precisely this kind of pedagogy, making it uniquely well suited to conferring academic benefits to preschool children. (p. 109)

The guided-play approach combines instruction with play. "Guided play refers to learning experiences that combine the child-directed nature of free play with a focus on learning outcomes and adult mentorship" (Weisberg et al., 2013, p. 177). The teacher and children are active participants in learning (Weisberg, Hirsh-Pasek, Golinkoff, Kittredge, & Klahr, 2016).

Educators often use activities that include encouragement for playful learning with the guided-play approach. Although teachers can introduce activities with specific proposes, materials may also be open-ended. For example, a teacher could bring out a collection of various fabrics for the dramatic play center. The teacher can then guide the children to use the fabric in different ways. The fabric could be used as a skirt, hat, or blanket. During play, the teacher can ask a range of academic questions related to the fabric, such as *What color is the fabric? Does it match anything in the room? How does it feel? What could you make with it?* "Guided play allows teachers to piggyback on children's joy and engagement to reinforce important skills" (p. 48). The goal of the guided-play approach is to build on the play in which children naturally engage, and then engage the children in the activity on a more complex level (Hassinger-Das et al., 2017).

Children will likely not learn academic concepts through free play alone, even if educators carefully select the materials; some interaction with the teacher is necessary.

One example used by Weisberg et al. (2016) was that "children cannot learn letter-pairing or addition by running around a playground, even if that playground is covered in letters and numbers" (p. 177). Thus, the teacher plays a vital role in the guided-play approach. Determining the proper amount of interaction by the teacher is key to a successful guided-play approach. Educators need more observations and research related to the guided-play approach and teacher interactions as they learn to perfect this practice in typical classroom settings.

Theoretical Framework

The theoretical framework used to guide this study was based on the works of Dewey, Montessori, and Vygotsky. Guided play is a relatively new term, but the concept of teaching young children through intentional teacher interactions and hands-on materials is not a new concept. The educational theories developed by these three influential figures include many components of the guided-play approach. Their observations and philosophies regarding how children learn best provide much support for the guided-play approach. Their theories and writings also provide historical background and insight.

Dewey's Balanced Approach

Dewey was a highly influential U.S. figure whose theories shaped the current educational system (Mooney, 2000). Over the course of Dewey's work, the scholar focused on bridging the gaps between new ways of learning and old. Dewey believed children learn best under the guidance of teachers and their peers. Dewey (1938) criticized "progressive education," which gave children too much freedom. This type of approach gave teachers an excuse for not intervening in the learning of their pupils. On

the other end of the spectrum, Dewey criticized the "drill and practice" approach to education (Dewey, 1910). This method resulted in students achieving one goal: the student could merely repeat information but could not be creative or engage in further exploration. Dewey had strong opinions about this type of approach.

> Sheer imitation, dictation of steps to be taken, mechanical drill, may give results more quickly and yet strengthen traits likely to be fatal to reflective power. The pupil is enjoined to do this and that specific thing, with no knowledge of any reason except that by so doing he gets his result most speedily; his mistakes are pointed out and corrected for him; he is kept at pure repetition of certain acts till they become automatic. Later, teachers wonder why the pupil reads with so little expression, and figures with so little intelligent consideration of the terms of his problem. (Dewey, 1910, p. 46)

To be an effective teacher, Dewey emphasized the importance of building on past experiences, being organized, and planning a thoughtful curriculum (Dewey, 1902). In turn, these three components continue to be important elements of the guided-play approach. When teachers reflect on their students' prior experiences, they are better able to scaffold those experiences into new learning. Teachers need to be organized and come prepared with a plan regarding what they want students to learn and how they will achieve these goals.

> Nothing is more absurd than to suppose that there is no middle term between leaving a child to his own unguided fancies and likes or controlling his activities by a formal succession of dictated directions. As just indicated, it is the teacher's business to know what powers are striving for utterance at a given period in the

> child's development, and what sorts of activity will bring these to helpful expression, in order then to supply the requisite stimuli and needed materials. (Dewey, 1902, p. 130)

Taking the time to plan well considered and meaningful curriculum that will engage students in active learning goals is the educational method that Dewey deemed most effective. In this regard, Dewey's theories about instruction are quite similar to the theories that drive the guided-play approach.

Learning Through Materials: The Montessori Method

Montessori, an Italian scientist and educational philosopher, incorporated many aspects of guided play in an approach to early childhood education (Mooney, 2000). In 1907, Montessori opened the first "Casa dei Bambini," or "Children's House," in the slums of Rome. Its original purpose was simply to occupy the children of working parents, but the school quickly became a model for educational theory and methods. By 1913, almost 100 schools in the United States followed the Montessori Method (Standing, 1957).

Through the Montessori Method (Montessori, 1912), educators present preschool children with academic materials in the classroom. These materials are carefully constructed and designed to produce a specific learning outcome for the child. Although the goal is for children to engage with the materials independently, the teacher does first show the children how to use the materials properly (Lillard, 2013).

Montessori wrote extensively about observations of young children and was especially interested in interactions between children and adults (Montessori, 1967a,

1967b). Montessori lived when child-centered learning was a foreign concept to most adults.

> Adults have little time to spend on children since they are busy with their own pressing duties … they are confined to their room or entrusted to the care of strangers. They may not pass into that part of the house reserved for their parents. There is no place where they feel that they are understood and where they can carry out their own proper activities. They must be kept quiet and touch nothing, since nothing is their own. Everything is inviolable, the exclusive property of adults and, consequently, forbidden to children. (Montessori, 1966, pp. 1–2)

Montessori believed children deserved and needed to be acknowledged as legitimate members of society. They needed a place of their own to learn and grow with child-sized furniture and unrestrained access to learning materials, tools, and activities (Montessori, 1912).

With the Montessori Method, each activity in which the child engages is attached to a specific learning objective. For example, sorting beads into numbered trays works on counting goals, number identification, and fine motor skills. Activities are meant to engage the child in a task and help them reach a learning goal through hands-on exploration. This method is quite child centered and nothing like a traditional "drill and practice" approach.

In the beginning, Montessori used tangible rewards with students but quickly abandoned the practice. The learning goals attached to the activities in the Montessori Method were their own intrinsic system of rewards. Children did not need tangible rewards such as pins, stickers, or toys to engage in learning activities. They were

motivated solely with the purpose of learning (Standing, 1957). Observers can see this same motivation in the guided-play approach.

Although the Montessori Method is very much like the guided-play approach, they differ in several significant ways. One interesting aspect of Montessori's theory of childhood was that it was unhealthy for children to engage in "adult fantasies." Such fantasies include fictional characters, such as Santa Claus, as well as fairy tales. In addition to these "fantasies," the Montessori Method also does not support pretend play. For example, instead of cutting playdough and pretending to serve other children in the class, students in a Montessori classroom would be cutting real fruit and vegetables in preparation for an actual meal. Montessori believed children only engaged in pretend play due to an intrinsic need to partake in the real activity. Thus, providing the child with the real materials would eliminate the desire for pretend play (Lillard, 2013). Dollhouses, dress-up clothes, play food, and even open-ended building blocks have no place in a traditional Montessori classroom (Standing, 1957). Although these items do not focus on academic concepts, social and emotional development and creative expression are extremely important aspects of many play-based preschool programs, including those that incorporate guided play (Lillard et al., 2013).

Another significant difference between the Montessori approach and guided play lies with the materials. The Montessori Method uses a very specific set of materials for each classroom level and subject. Teachers must show children how to use the materials before they are allowed to use them independently, discouraging using the items for other than their designated purpose (Lillard, 2013). Although teachers often show children how to use play materials for specific purposes during guided play, that method has greater

student flexibility. A teacher using the guided-play approach can select from an unlimited number of options in teaching materials and loose parts. In contrast, the Montessori Method uses only designated materials.

Perhaps the most significant difference between the Montessori Method and guided play lies with teacher interactions. Montessori emphasized the importance of children working independently (Montessori, 1912), whereas guided play involves the teacher as a more active participant in the child's learning. In a Montessori program, despite initial teacher interaction, the goal is to have the children working independently, without teacher guidance. In a classroom using the guided-play approach effectively, teachers continuously interact with children, scaffolding instruction at different levels. Once students master a skill or concept and can work independently, a new and more challenging notion is introduced.

Vygotsky: Scaffolding Toward a Higher Understanding

Vygotsky, a Russian educational theorist, believed educators should guide children from one level of learning to the next (Mooney, 2000; Vygotsky, 1978). Vygotsky studied the works of Montessori, but instead of stopping with a goal of children working independently, believed learning should broaden and children should be appropriately challenged to continue moving toward greater complexity. Vygotsky (1986) developed the theory of the zone of proximal development (ZPD) and discussed the importance of scaffolding student learning. Many researchers describe Vygotsky's ZPD, especially as it relates to the guided-play approach.

Vygotsky's theories provide a very important framework for guided play. During guided play, the teacher scaffolds learning based on what the child already knows and

what they are ready to achieve next. Working in the ZPD—the space between "the most difficult task a child can do alone and the most difficult task a child can do with help" (Vygotsky, 1986, p. 83)—involves very careful observation as well as teacher guidance and support. If teachers are aware of each child's ZPD, they can better tailor educational goals and expectations for each student. Teachers who do not acknowledge the ZPD risk providing tasks that are too easy for the children, which could cause them to quickly lose interest. In contrast, teachers may also choose tasks that are too challenging, which could cause children to lose interest, or even worse, become frustrated or discouraged. It is critical that teachers take time to observe students and plan activities that are in each child's ZPD for those particular activities.

The theories of Dewey, Montessori, and Vygotsky form the basis of the guided-play approach. Dewey argued for a more hands-on approach to learning, rather than "drill and practice" or direct instruction methods. Montessori argued for a child-centered approach using hands-on materials designed for a specific educational purpose. Finally, Vygotsky introduced the ZPD, crucial in planning for and implementing guided-play activities. Awareness of each child's ZPD, for each task or learning goal, can make interactions between the teacher and students much more effective (Bodrova & Leong, 2007).

All three researchers emphasized the importance of observation in supporting educational theory. Much of the work by Dewey, Montessori, and Vygotsky included detailed observations of children. Countless scholars and educators have studied and applied the theories sparked by these written observations. Given the highly variable nature of the early childhood field, this type of educational research cannot exist without

detailed observations (Mooney, 2000). The present study examines the effectiveness of guided play through qualitative observations and real-life classroom scenarios.

Purpose of the Study

The purpose of this study was to examine student and teacher interactions during the use of guided play in a preschool classroom. Through observations, video recordings, and teacher interviews, the study results provide greater understanding of how guided play can be effectively implemented with preschool-aged students. Particular attention was given to teacher interactions involving intentional scaffolding. How students responded to these types of interactions can help drive recommendations for teachers and administrators in the field of early childhood education.

Research Questions

Three main research questions were explored in this study. The questions relate to guided play and interactions between teachers and students.

- What kinds of interactions do experienced preschool teachers use during guided play?
- How do preschool children respond to different types of teacher interactions during guided play?
- How can preschool leaders help teachers use their knowledge of each child's ZPD for a particular activity to make guided play more effective in the classroom setting?

Limitations of the Study

Several limitations impact this study. One limitation is the lack of previous data. Limited studies have documented interactions between children and teachers during

guided play in a typical preschool classroom, specifically with an intentional focus on scaffolding. Given the limited data and previous research, the present study was kept quite broad. As more data accrues and similar studies are conducted, researchers studying the concept of guided play will have the freedom to become more specific in their research.

Another limitation is sample size. This study used a convenience sample of teachers and children at three schools; thus, the schools represent a small portion of the overall population of preschool teachers and students. All the schools were located in the Sacramento area, so the study does not necessarily measure effects on preschool students outside of this area.

In addition, the time spent on observations is fairly short. Each classroom was only observed for a total of four hours. The study only took place over the course of four weeks. A study covering a longer span of time with more observations would provide significantly more data.

Finally, the researcher is also the owner of the three schools used in this study. This was a benefit to the study because the children and teachers were already comfortable with the researcher's presence in the classroom. However, it could also be seen as a limitation due to researcher bias and that the teachers were employed by the researcher.

Significance of the Study

Early childhood education is a field in need of more research and data, specifically on instructional methods (Hirsh-Pasek et al., 2004). With a goal of making preschool available to increasing numbers of children, it is currently a critical time in the

field. Educators, researchers, and administrators must work together to advocate for developmentally appropriate practices that can also meet learning objectives and standards. Evidence supporting these practices is needed to help find a common direction. Despite current research, many misunderstandings persist around the best educational strategies to use with young children. Play-based programs are often favored because of a common philosophical belief that young children learn best through play; however, many schools with play-based programs rely heavily on free play, with limited teacher interactions. Teachers taking early childhood courses are often not thoroughly or effectively taught how to guide children's learning through play-based adult interactions (Kirp, 2007). At the same time, many public transitional kindergarten programs often desperately lack play-based learning (Hirsh-Pasek et al., 2009).

As early childhood education gains more funding and becomes accessible to a larger population of students, it is extremely important to identify effective and age-appropriate educational methods. Guided play is a method that may help preschool children reach curricular goals while fulfilling their natural desire to play (Hirsh-Pasek et al., 2009). More research suggesting positive outcomes associated with guided play and scaffolding may encourage universities and community colleges to provide more training on this topic to prospective preschool teachers (Trawick-Smith, 1999; Townsend, 2014). Study results could also help guide curriculum implementation in private and public preschool programs.

Definition of Terms

Several terms related to early childhood education are used frequently in this study. Some of these terms may be familiar to readers; however, past researchers may

have had varied definitions of each term. Clearly defining how each of these terms are used in the context of this study will lead to a better understanding of the content.

Direct instruction: Direct instruction, sometimes referenced as didactic instruction or "drill and practice," is an approach to education that is teacher directed with little student interaction or feedback. This type of instruction is most seen in elementary, middle, and high schools but can still be observed in preschool programs. In a typical preschool setting, direct instruction often occurs during circle time with flash cards or books. Teachers may ask the students questions but they are often closed-ended and sometimes scripted questions, depending on the type of curriculum used (Krip, 2007).

Free play: Free play is a type of play that is predominately student guided, with little teacher interaction or direction. Children often play independently or engage with their peers. Free play can occur inside or outside. When children are outside they may play on a climbing structure or slide, dig in a sandbox, explore nature, or ride bicycles. Teachers typically have designated areas for different types of play in the classrooms as well. Common areas include a block center, dramatic play/home-living area, art center, classroom library, puzzle and table-toy area, and possibly an area for gross motor activities, depending on the age of the children. Some preschool programs focus only on free play and do not offer any teacher-led activities; others offer free play at designated times during the day (Weisberg et al., 2013)

Guided play: Guided play is an approach to education that is play-based, yet structured carefully by the teacher. This type of play can be either teacher directed or child-led, depending on the circumstance. Guided play involves hands-on, play-based interactions with an underlying purpose of reaching an academic goal. The teacher bases

this type of instruction on classroom observations and a knowledge of each child's ZPD for a particular learning objective. During guided play, the teacher chooses materials carefully and actively engages with the children in play-based activities, guiding them to understand curricular goals through interactions, conversations, and open-ended questions (Hirsh-Pasek et al., 2016).

Interactions: In this study, interactions include conversations between preschool teachers and children as well as nonverbal signals, cues, and actions. Guided play relies heavily on teacher interactions with students, so this was a focus of the study.

Play-based learning: Play-based learning, sometimes referenced as playful learning, is an approach to education that involves hands-on experiences and a variety of learning materials. Play-based learning is the approach used most often in preschool programs; however some elementary programs use this approach as well. Learning is typically child-led and teachers usually are followers in this type of approach. Teachers can take an active or passive approach to this type of learning; however they typically set up the environment for the children and help facilitate some of the play activities (Acer, Gozen, Firat, Kefeli, & Aslan, 2016; Cutter-Mackenzie & Edwards, 2013). Most preschool classrooms are formatted to encourage playful learning. Dramatic-play areas, block areas, classroom libraries, and manipulatives help foster a play-based learning environment (Harms et al., 2005).

Preschool: Preschool is early education in a group setting for children aged 2 to 5 years old. It can be center-based, home-based, or cooperative programs where parents can participate. Many types of preschool programs are available. Montessori and play-based preschools are especially popular options; however some academics-focused programs

are currently gaining momentum. Half-day and full-day programs are available at most schools. Half-day preschool programs usually take place in the morning and students go home before or shortly after lunch. Working parents typically use full-day preschool programs and may include early morning and late-afternoon care. Most preschools are privately owned; however public options are becoming more available to students. Typically public options are available for children 4 years old or older who narrowly miss a cutoff for kindergarten. Most school districts do not offer public preschool programs for children under 4 years old (Singer et al., 2006).

Scaffolding: Scaffolding is the process of working in a student's ZPD to provide customized instruction. When teachers scaffold instruction they provide support, as needed, and slowly remove that support as the student masters a skill or concept (Vygotsky, 1986).

Zone of proximal development (ZPD): The ZPD, theorized by Vygotsky (1986), defines the space between "the most difficult task a child can do alone and the most difficult task a child can do with help" (Vygotsky, 1986, p. 83). When working in a child's ZPD, the task or skill should not be too easy or too hard and the child should be able to master the skill with support from an adult or peer.

CHAPTER II

REVIEW OF THE LITERATURE

Many studies and books have been published on the topic of play in the preschool classroom. Based on this research, early childhood educators often favor play-based learning (Hirsh-Pasek et al., 2009). For preschool children, the line between play and education can be quite indistinct. Preschool classrooms abound with toys, manipulatives, and hands-on materials. Children use these materials to explore and learn about the world around them. Much of the learning in a preschool classroom involves hands-on experiences.

Through teacher-guided play and scaffolding, children can learn additional ways to navigate their environment and the materials accessible to them. Hirsh-Pasek et al. (2009) argued for these points, “The best preschool programs are those that permit some free play but are not limited to free play. The best programs also meld free play with adult-guided instruction in playful ways” (p. 53). Many books and studies have been published on the topic of play in the preschool classroom.

Most developed countries offer preschool programs with a somewhat universal mix of approaches. Given that children in preschool programs have typically not been exposed to other approaches to learning or educational philosophies, most research has a high rate of external validity (Jung & Conderman, 2013). In theory, an approach that works effectively for preschool students of one country is likely to also work with similar aged students in another. Thus, one should examine U.S.-based and international literature to gain a broader understanding of best practices among preschool-age children (Singer et al., 2006).

Play-Based Learning

Hirsh-Pasek et al. (2009) discussed the importance of play and play-based learning during the early childhood years.

> The weight of the evidence, from random assignment to correlational or interventional studies, suggests that both free play and playful learning create optimal environments for achievement. In addition, children in developmentally appropriate classrooms often show less anxiety and stronger social skills. (Hirsh-Pasek et al., 2009, p. 4)

Despite overwhelming evidence supporting play-based learning, many preschool teachers still feel pressure to use more structured approaches, specifically as the importance of learning becomes greater in elementary school. Hirsh-Pasek et al. (2009) argued that educators should resist this pressure: “children need both free play and guided, playful learning to best prepare for the entrance into formal schooling” (p. 15).

Several meaningful examples that highlight the effectiveness of play-based learning come from studies performed overseas. For example, Walsh et al. (2006) published a study involving appropriate curriculum for 4–5 year old children in Ireland. The study included 70 different classrooms, 38 using the Northern Ireland National Curriculum and 32 the Enriched Curriculum. The Northern Ireland National Curriculum has a structured and traditional approach whereas the Enriched Curriculum uses a more hands-on, child-centered, approach. The Enriched Curriculum was created in response to educators in Ireland recognizing the importance of less formal, play-based approaches for young children. Using the Quality Learning Instrument, researchers assessed the two curriculums.

Classes using the Enriched Curriculum significantly outperformed traditional classes on all nine themes of the Quality Learning Instrument: Motivation, Concentration, Confidence, Independence, Higher Order Thinking Skills, Multiple Skill Acquisition, Well-being, Social Interaction, and Respect. The Enriched Curriculum did not rely solely on play-based activities but also focused on appropriate interactions between children and adults. Curriculum topics were more practical and child-led than the traditional National Curriculum. In conclusion, Welsh et al. (2006) supported the notion that a less structured and more hands-on curriculum better meets the needs of young learners.

Another comparison was performed in a study in Hong Kong. Chinese preschools historically followed an academic approach to early childhood education (Tobin et al., 1989). In a recent study, Pui-Wah, Reunamo, Cooper, Liu, and Vong (2015) examined the differences between children in academic versus play-based programs in Hong Kong. The researchers compared children's agency perceptions in two preschools, one academic-based (Preschool A) and the other play-based (Preschool B). One particular point of interest in agency perceptions was how children addressed conflict.

Pui-Wah et al. (2015) studied 60 children between the ages of 4 and 5: 32 were boys. The researchers used qualitative and quantitative methods in this study. An interview-analysis tool presented the children with pictures and questions regarding 16 conflict situations to collect data on children's agency perceptions. Situations involved conflicts that might arise as the children interacted with peers and teachers. The researchers asked children to describe their feelings and responses. In addition to the data collected from the interviews, the researchers conducted classroom observations.

Pui-Wah et al. (2015) found that 16.7% of the responses from children attending Preschool A, the academic-based school, expressed uncertainty during the interviews. When asked how they would handle a conflict situation, the children provided responses such as “I don’t know,” “I can’t think of it,” shook their heads, or simply did not answer. This was a notable difference from students in Preschool B, the play-based preschool, where only 3.8% of the responses were uncertain. This difference was even more notable when comparing the responses of only boys. In Preschool A, 23% of the boys’ responses were uncertain whereas in Preschool B only 4% were uncertain.

> This study suggests that boys in Preschool A were at risk of not developing the tools to interact and articulate their views to address common social difficulties that they will encounter. This is likely to undermine their capacities for building positive social relationships with their peers and teachers. (Pui-Wah et al., 2015, p. 1840)

Children, specifically boys in the play-based preschool, appeared to be better equipped to address conflict situations.

The Pui-Wah et al. (2015) study suggested that a play-based environment better prepares preschool age children, especially boys, with important social tools needed to react to conflict. Social-emotional development often provides the foundation for academic learning and success in elementary school. The ability to react to conflict and adjust accordingly is an important part of this development. However, the authors argued for continuing academic learning, but in a play-based context. “One misconception about play-based curriculum is that it does not include academic learning. Actually, in an effective play-based curriculum, academic elements are embedded in the play and

integrated with children's experiences in the context of social interaction" (Pui-Wah et al., 2015, p. 1841).

Free Play in the Preschool Classroom

Aras (2016) conducted a study aimed at examining teachers' perceptions and interactions during free play in preschool classrooms. Through interviews with four preschool teachers in Turkey, the researcher concluded that the teachers often used free play time to complete administrative tasks and prepare for the day, rather than engaging with the children. Although allowing for this type of uninterrupted free play has several perceived benefits, teachers can enhance free play with more meaningful teacher interactions (Aras, 2016).

Through careful observations of their students, teachers can scaffold activities during free play to extend the engagement of preschool children. One teacher in the Aras (2016) study encouraged students to take their play further by suggesting the children try making their block creations three-dimensional. This simple suggestion provided the children with an incentive to engage with the materials much longer than they would have without any teacher intervention.

Aras (2016) argued that teachers could benefit from more training as to when and how to engage with children during play. "To increase developmental outcomes of play, the role of the teacher should be more than observing. Teachers, through their observations, need to effectively enhance children's play through scaffolding and modeling" (Aras, 2016, p. 1181). Teachers should be more than merely passive observers if they want to extend their students' learning and reap the full benefits of play.

Different types of play and levels of teacher interaction serve different purposes in a preschool program (Aras, 2016). The teachers interviewed reported positive effects when allowing children to engage in free play for at least an hour at the start of the school day. This time allowed teachers to note ideas that may later have affected the students' school day. For example, a student coming to school after experiencing a problem at home often acted out that issue during dramatic play. The mood of the children during free play time was also a good indicator of their mood for the rest of the school day (Aras, 2016).

Teacher Interactions

Tsai (2015) examined the importance of proper teacher interactions during student playtime. A classroom in Taiwan was set up with several different "learning areas" including dolls and dramatic play, manipulatives, art, and language areas. Students spent 30 minutes playing in these areas each morning. The researcher observed the teacher, Ms. Li, during this playtime two times per week for a total of 30 observations. Data accrued through video recordings and interviews with Ms. Li (Tsai, 2015).

Over the course of the observations, Ms. Li interacted with the children in different ways during their playtime. She was careful to scaffold interactions based on previous interactions with the children (Tsai, 2015). She often provided assistance and guidance, based on the children's requests. For example, she helped one child count a group of colored straws by giving step-by-step directions. Ms. Li occasionally engaged in make-believe play with the children but was careful to allow the children to create their own narratives. For example, 1 day, children in the doll area had set up a store and wanted Ms. Li to be the customer. She was careful to ask the children open-ended

questions such as, “What kind of store do you have?” or “What kind of food can I order?” This helped ensure the children’s play was child-led rather than teacher-led (Tsai, 2015).

In one situation, Ms. Li approached a child in the language area and conducted a “spot test” or type of quiz (Tsai, 2015). The child had been playing independently with a device that helps children identify phonetic sounds. Ms. Li asked the child a series of questions that were a bit too challenging and the child quickly became frustrated and lost interest. This example highlights the importance of knowing each child’s capabilities through careful observations. Interrupting this child’s play for a “quiz” that was clearly outside of their ZPD did not serve an educational purpose because it only resulted in frustration. Proper scaffolding and meeting the child at their current level would have better supported learning in this situation (Tsai, 2015).

One very positive aspect of Ms. Li’s classroom was that she always took time to show the children how to properly use new items and materials (Tsai, 2015). This is an extremely important aspect of guided play. Ms. Li would first introduce the items to the entire class and show them how they work. Then, after she placed the new items in the learning areas, she would make herself available in those areas until the children were comfortable with the new items. This type of scaffolding helps support student learning and ensures children make the most of the available items (Tsai, 2015).

Tsai (2015) concluded that teacher interactions were an important component of learning during student playtime. The importance of scaffolding these interactions was apparent through the observations.

Thus, prior to participating, the teacher needs to first observe the situation, while keeping in mind the children’s character and ability; for only after doing so will

> the teacher be able to participate in such a way as to enhance the children's ability. (Tsai, 2015, p. 1030)

Teachers need to be aware of each child's capabilities and current ZPD to make the most of their interactions.

Bonawitz et al. (2011) examined the effects of teacher instruction versus discovery in two different experiments involving preschool-age children. The researchers were interested to see if instruction could hinder a child's engagement with a particular toy and if allowing the child to discover the toy freely would lead to a higher level of engagement. This study provides useful information related to guided play, even though the interactions do not meet many of the expectations of the guided-play approach. The researchers failed to use scaffolding and open-ended questions in their pedagogical condition. They also did not conduct prior observations of the students to determine their ZPD. These shortcomings are later discussed by the researchers and a framework for more relevant future studies is outlined.

Bonawitz et al. (2011) conducted two experiments for this study. Both experiments were conducted in an urban science museum using the same toy (a board with PVC pipes, lights, and mirrors that made various noises). In the first experiment, 85 preschool children between the ages of 48 and 72 months participated in the study. Children were assigned to one of four conditions. One was the *pedagogical* condition whereas the other three were non-pedagogical: *interrupted, naïve, and baseline.*

In the *pedagogical* condition, the experimenter showed the child one function of the toy (pulling a tube to produce a squeaking sound) and told the child "This is how my toy works" (Bonawitz et al., 2011, p. 324). In the *interrupted* condition, the experimenter

demonstrated the squeaking function of the toy in the exact same way, but afterwards interrupted themselves, making up an excuse to leave the child alone with the toy. In the *naive* condition, the experimenter acted as if they did not know how the toy worked and then discovered the squeaking by "accident" while showing the child. Finally, in the *baseline* condition, the experimenter did not demonstrate any functions of the toy; instead they simply looked at it with child and then left it on the table for them to play with independently (Bonawitz et al., 2011).

The researchers measured total time spent with the toy across each condition (Bonawitz et al., 2011). They also made note of the number of unique actions performed, time spent playing with the squeaker, and the number of other functions discovered during playtime. They found that children in the *pedagogical* condition played with the toy significantly less time than the other three conditions. They also performed fewer kinds of actions with the toy, spending more time playing with the squeaker than the other functions. Children in the *baseline* condition spent the most amount of time playing with the toy and engaged with the highest number of different functions, suggesting teacher direction could potentially hinder discovery (Bonawitz et al., 2011).

For the second experiment in this study, Bonawitz et al. (2011) explored how children in similar conditions interacted with the toy, based on information they overheard relayed to another child at a similar developmental level rather than an adult. They questioned whether the children would perform differently while listening to *"indirect child"* verses *"indirect adult"* interactions with the researcher. The second experiment entailed 64 children between the ages of 48 and 72. The setting and materials were exactly the same as the first experiment. In this experiment, the researchers defined

four conditions: *direct, indirect child, indirect adult, and intentional* (Bonawitz et al., 2011).

The *direct* condition in Experiment 2 was exactly the same as the *pedagogical* condition in Experiment 1: the experimenter commented on the toy and then showed the child how the toy "worked" by demonstrating one function (Bonawitz et al., 2011). The *indirect child* condition involved the experimenter giving the child the toy and then going over to a nearby table and demonstrating the same function of the toy to another child participant. In the *indirect adult* condition, the experimenter demonstrated the toy to the child's parent at a nearby table. Finally in the *intentional* condition, the experimenter introduced the toy to the child and then moved to a nearby table to engage with the squeaking function of the toy while commenting to themselves aloud, *"I like to make my toy squeak. Wow! I'm going to do that again"* (Bonawitz et al., 2011, p. 327).

As in Experiment 1, children in Experiment 2 engaged with few functions of the toy in the *direct/pedagogical* condition. Researchers gave the children a score for each of the undemonstrated functions discovered. Overall the mean score of children in the *direct* condition was lower than the rest (*direct: M* = .50, *indirect child: M* = .75, *indirect adult: M* = 1.31, and *intentional: M* = 1.00). These results are consistent with the first experiment where more adult direction seemed to limit discovery (Bonawitz et al., 2011).

Although the results of this study are interesting and certainly appear to suggest that free play, with limited adult interaction, could lead to higher levels of engagement, the study had several significant limitations and did not replicate a true guided-play condition (Bonawitz et al., 2011). First, the report did not indicate that the experimenter was working in the child's ZPD. Pulling a tube to make a squeaking sound is a rather

simple task for preschool-age children, as with some of the other functions of the toy. Second, the experimenter only showed the child one function of the toy in the *pedagogical/direct* conditions and then gave the child the impression that was simply "how the toy worked." They did not ask any open-ended questions such as "do you think the toy can do other things?" Third, the conditions did not replicate a natural setting for the children. They engaged with the toy in a very controlled setting only once. In a typical preschool classroom, children would have the ability to walk away from the toy, engage with something else, and return at a later time (Bonawitz et al., 2011). The researchers acknowledged some of these limitations and noted that an experienced teacher may have shown the children all of the toy's functions, thereby providing different results (Bonawitz et al., 2011). These limitations pose additional questions related to free play and guided play that could be further examined through classroom observations, specifically when a child's ZPD is deeply considered in a more natural setting.

Alfieri, Brooks, Aldrich, and Tenenbaum (2011) wanted to explore the extent to which discovery-based instruction enhances learning. They conducted two meta-analyses using a sample of 164 studies. The first meta-analysis examined the effects of unassisted discovery (i.e., free play) verses explicit instruction. The second meta-analysis examined the effects of enhanced/assisted discovery (i.e., guided play) verses other types of instruction, such as explicit and unassisted discovery. The data from the studies examined suggested that unassisted discovery does not benefit students academically. However, in contrast, elements found in guided play, such as feedback, worked examples, scaffolding, and elicited explanations, did benefit students academically (Alfieri et al., 2011).

Trawick-Smith and Dziurgot (2010) examined “good fit” teacher interactions during play as they related to the teachers’ education and experience. Eight preschool teachers were observed over a six month period. Three teachers were considered high education/high experience, three were considered low education/high experience, and two were considered low education/low experience. During the observations, each child’s specific level of need was coded for different situations. The teacher interactions were then labeled as “good fit” or “poor fit” based on the child’s level of need at the time. The differences in these interactions as they related to each teacher’s level of education and experience were examined. Four interviews were also conducted with the teachers as a secondary data source.

The findings of this study suggest that teachers with high levels of education and experience were more likely to perform “good fit” interactions with preschool students. In the interviews, these teachers noted specific elements of their teacher education that contributed to these interactions. Teachers with low levels of education and high experience were more likely to engage in “poor fit” interactions. Most often they gave direct support to children when none was actually needed. Teachers with low levels of education and low experience were generally unpredictable in their interactions and often failed to interact at all with the children when opportunities arose.

The Trawick-Smith and Dziurgot (2010) study suggests that teacher education, rather than experience, is more influential when it comes to providing “good fit” interactions with preschool children. Teachers in the high education/high experience group often noted elements of their coursework that contributed to their approach in the classroom. Teachers in the low education/high experience group were often more focused

on day-to-day classroom management than the long-term developmental goals of the children.

> A conclusion from this study that may be conveyed to early childhood teacher candidates is that playing with children is not simply an enjoyable way for teachers to spend time in the classroom; it is a cognitively challenging act that requires knowledge, reflection, and purpose. It is yet another example of why teachers of young children must become thoughtful professionals if they are to maximize outcomes in a play-based classroom. (Trawick-Smith & Dziurgot, 2010, p. 127)

Providing preschool teachers with more education and training around child development and play interactions may increase the level of good-fit interactions in a classroom. Doing so could create a more effective learning environment for the children.

Using Guided Play to Reach Academic Goals

Guided play can serve many purposes in the preschool classroom. One area where research is growing involves intentionally using a guided-play approach to implement academic content. Academic skills such as counting, shape recognition, phonics, and literacy awareness can all be taught through teacher guided-play activities. As mentioned before, applying the guided-play approach effectively involves careful planning, student observations, and scaffolding on the part of the teacher.

Hyson (2003) outlined five key guidelines for effectively including academic content in the preschool classroom: (a) Educators should select appropriate content, taken from state standards and age-appropriate curriculum; (b) Teachers should focus on promoting social and emotional competence, providing students with a foundation for

positive approaches to learning and problem-solving skills to help prepare them for later challenges; (c) Teachers should be well-prepared and trained to deliver curriculum effectively in age-appropriate ways; (d) Teachers should use appropriate instructional strategies, presenting academic content that is meaningful to the students; and (e) Preschool teachers should use appropriate assessment methods. Preschool children should not be assessed in a traditional sense; rather, teachers should use observations and other age-appropriate assessment tools to draw conclusions about student learning.

Hyson (2003) argued that teachers did not need to make a choice between academics and play; rather, they could intertwine both if programs followed the above guidelines.

> Instead, we are replacing the either/or thinking of 15 years ago, academics or play; adult-directed instruction or free exploration, with a more complex and realistic picture of appropriate, effective early childhood education. Excellent prekindergarten, kindergarten, Head Start, and child care programs put academics in their place as essential but not isolated components of an effective early education system. (Hyson, 2003, p. 20)

It is possible to find a balance between play and academic learning, especially when teachers select age-appropriate content and instructional methods.

Teaching Mathematics Through Guided Play

Trawick-Smith, Swaminathan, and Liu (2016) conducted a study that involved teaching mathematics through play and teacher-guided interactions. This study examined the classroom play interactions of 47 preschool children and their teachers. Researchers specifically observed interactions that supported mathematical thinking and problem

solving. Building on to the Trawick-Smith and Dziurgot (2010) study, this study also specifically emphasized “good fit” interactions: those in the child’s ZPD. The authors believed that these interactions would prove the most meaningful for the students.

> A situation in which adults can most effectively enhance play, from this perspective, is when children are in Vygotsky’s ZPD-a time when they can play independently, with just a little indirect guidance from an adult: a hint, a question, a play suggestion, or some encouragement. (Trawick-Smith et al., 2016, p. 718)

Over the course of the study, the researchers considered the relationship between three specific indicators of quality interactions (Trawick-Smith et al., 2016). The first indicator was the frequency of good-fit interactions, when the level of guidance matched the child’s current need. The second indicator was the frequency of intermittent play interactions, when the teacher moved in and out of play without overdirecting the children’s activities. Finally, the third indicator was the number of open-ended questions the teacher asked (Trawick-Smith et al., 2016). Asking open-ended questions is an important element of scaffolding and guided play because it allows the teacher to gently guide the child toward understanding without directly giving them the answers.

The children who participated in the Trawick-Smith et al. (2016) study were between the ages of 33 and 57 months. All attended a community-based child-development center located on a university campus. The data accrued during a 1-hour free-play period that took place each morning. Trawick-Smith et al. (2016) recorded each child who participated for 20 minutes during five observation periods. The study took place over the course of 9 months. The teachers were unaware of the specific goals of the study; they were only told that the researchers were there to study children’s

mathematical thinking during free play. Using a pretest and posttest model, the researchers assessed children using the Test of Early Mathematics Ability, third edition in the fall and again in the spring.

During the observations, the researchers coded interactions between the children and teachers as either a "good fit" or a "poor fit." Specifically, they sought to discern if the amount of guidance from the teacher matched the level of need from the student. Students either had "much need," "no need," or "some need."

> Children were determined to have *much need*, if they could not proceed with their play in a meaningful way without adult assistance. They were considered to be in *no need* of play support, if they were engaged in self-directed, sustained play on their own. They were considered to have *some need* for adult support if they were able to continue playing independently, but would clearly benefit from adult involvement to extend or elaborate on play themes. (Trawick-Smith et al., 2016, p. 721)

Teacher interactions were identified as either "direct guidance," "indirect guidance," or "observation/no interaction." An example of a good-fit interaction would be a child identified as having "some need" getting "indirect guidance." The frequency of 2-minute good-fit segments was divided by the total number of 2-minute segments and recorded. Researchers tallied all open-ended questions, the frequency and minutes of adult contact, number interactions, geometry interactions, measurement interactions, communication about mathematics, and mathematical problem-solving interactions.

Trawick-Smith et al. (2016) found that good-fit interactions and interactions that promote mathematics communication significantly aligned with posttest scores. Also, a

high correlation emerged between pretest scores and posttest scores, indicating that students who scored well on the pretest were more likely to score well on the posttest. Additionally, socioeconomic status did impact on pretest and posttest scores. Another important finding was that younger children showed greater gains on the posttest than older children when considering the effects of good-fit interactions. Overall the researchers found that appropriate interactions between children and teachers during playtime can positively impact academic achievement. However, ensuring that these interactions are a good fit or in the child's ZPD is extremely important.

> Based on our findings, it is not the frequency or duration of adult involvement in play that leads to positive outcomes. Certain types of interactions appear to have the greatest influence. Good-fit interactions, in which teachers provide just the right amount of guidance to children in their play, predict math learning. This suggests that teachers should observe and interpret children's play needs and select just the strategies that will help them to play in complex and independent ways. When teachers do this, according to our findings, they not only support play development, but also enhance academic outcomes as well. (Trawick-Smith et al., 2016, p. 728)

Fisher, Hirsh-Pasek, Newcombe, and Golinkoff (2013) conducted a study also involving guided play as an instructional method for mathematics. This study focused on preschoolers' acquisition of geometric knowledge. Participants were 70 children between the ages of 4 and 5 who participated in either a guided-play, didactic-instruction, or free-play intervention. The focus of the intervention was to increase students' ability to identify definitional properties of four shape categories (triangles, rectangles, pentagons,

and hexagons) using laminated cards and wax-covered sticks. In the guided-play intervention, educators encouraged children to touch and feel the shapes while the experimenter asked open-ended questions. In the didactic-instruction intervention the experimenter explored the shapes while the children passively watched and listened to their descriptions. In the free-play group, children could play with the shapes as they wished, without guidance from the experimenter.

After the interventions, the children engaged in a shape-sorting task where they had to identify if certain shapes were "real" or "fake." The experimenter showed children typical and atypical shapes. An example of an atypical shape would be a very long and skinny rectangle (it still has four sides and would be considered a rectangle, but looks different from most typical rectangles). The children were also shown invalid shapes (i.e., broken lines or shapes displaying incorrect properties). During the shape-sorting task, the experimenter asked children to identify if the shape was "real" or "fake" and explain why. If the shape was determined to be "fake," they would place it in a pretend "trashcan."

The results of this study revealed that, compared to the other two conditions, children in the guided-play group showed improved shape knowledge. "Children in the guided-play group were able to identify more typical and atypical shapes as "real" compared to children in the didactic and free play conditions" (Fisher et al., 2013, p. 1876). These results were maintained over a 1-week period. The researchers made note that the children in the didactic condition learned about the properties of the shapes but had difficulty explaining *why* a shape was "real" or "fake." The children in the free play condition typically chose to create designs or tell stories about the shapes, rather than

focusing on their properties, and thus struggled more with the shape-sorting task after the intervention. The Fisher et al. (2013) study highlights the importance of scaffolding techniques and the role of the teacher in guiding student learning and asking open-ended questions.

Jung and Conderman (2013) also advocated the importance of intentional teaching of mathematics in early childhood classrooms. “Intentional teachers are identified as maintaining the habit of informed reflection as they plan, teach, reflect on, and revise the effectiveness of their practices” (Jung & Conderman, 2013, p. 173). The researchers highlighted several examples of effective teachers.

One teacher, Becky, taught a mathematics lesson on a word problem using Unifix cubes (Jung & Conderman, 2013). The children were to determine how many marbles a child would have left if they started with 10 and seven were lost. Some children used the Unifix cubes to determine the answer whereas others used their fingers. Becky asked open-ended questions along the way to determine how the children arrived at their answers. This lesson was particularly effective because it involved careful observation and planning by the teacher. Based on previous observations, Becky knew it would be at the children’s ZPD and thus they could understand with a reasonable amount of teacher guidance and support (Jung & Conderman, 2013).

Another example in this article involved a teacher named Cathy, who took the daily routine of checking the weather one step further (Jung & Conderman, 2013). She asked the class for predictions on which type of weather (i.e., snowy, cloudy, sunny, etc.) they would see most in January and then tracked the weather for the month in the form of a graph. In this example, Cathy recognized that simply reporting the weather had become

fairly easy for the children, and although they still enjoyed the task, adding another element could increase their opportunity for learning (Jung & Conderman, 2013).

A third example from this article involved a preschool teacher named Sarah who used scaffolding with a child who was not fully grasping an activity (Jung & Conderman, 2013). Sarah was trying to help the class understand that larger shapes could be made up of smaller ones through an activity where the children used different pattern blocks to fill in a shape puzzle with the outline of multiple hexagons. Although many of the children quickly got the concept and used different shaped pattern blocks to make up the hexagons, one child only used the hexagon-pattern blocks. To guide this child toward understanding, Sarah asked the child to roll a die with different shapes on each side. If the child rolled something other than a hexagon, she would have to start filling in the puzzle with that shape and then determine what other shapes she could use to make a full hexagon. Through proper scaffolding, Sarah was able to help the child understand a concept the child may not have grasped without such guidance (Jung & Conderman, 2013).

To be effective, teachers must be intentional in planning and implementation (Jung & Conderman, 2013). Not only do lessons need to be well considered and intentional, interactions while delivering the lesson must be as well. Jung and Conderman (2013) outlined three ways teachers can make learning more intentional. First, they should always be open to the ideas of the children. The ideas the children express have the potential to guide learning and also indicate their current level of understanding. Even if the child's idea is incorrect, it offers the starting point for instruction. For example, a child may think that adding three and four equals nine. Helping the child understand why

this assumption is incorrect would be a good starting point for instruction. The teacher should acknowledge and thank the child for their idea and then provide a way for them to check their assumption (Jung & Conderman, 2013, p. 177).

Second, teachers should help children pose questions when they are struggling to articulate their ideas (Jung & Conderman, 2013). If a child presents an incorrect assumption, the teacher could approach this by offering a question or idea. For example, with the child who thinks 3 plus 4 equals nine, the teacher could say "I wonder if we take three blocks and add them to this tower with four, how many we will have in all." When it is determined that the number is actually seven and not nine, the teacher can help guide the child toward understanding (Jung & Conderman, 2013).

Finally, mistakes should not be downplayed or discouraged (Jung & Conderman, 2013). Mistakes are simply a learning opportunity for everyone. An incorrect assumption is simply a starting point for instruction. Children should be valued and praised for bringing these ideas to the table. "When teachers routinely incorporate these (above) elements into their instructional repertoires, children see mathematics as engaging, meaningful, and an important part of their everyday lives" (Jung & Conderman, 2013, p. 177).

Teaching Literacy Through Guided Play

Neuman and Roskos (1990) conducted a study examining how classroom setup can influence literacy play. They observed students during free play before and after an intervention. For the intervention, the researchers rearranged the classroom to have more clearly defined play areas and added play materials that might help inspire the students to engage in literacy-based play. Most classrooms typically have a dramatic-play area with a

child-sized kitchen, dolls, and dress-up items. Neuman and Roskos added additional items to this area such as menus, paper, pens, recipe cards, and cookbooks. They also set up a different area of the classroom to be an "office" and another area to be a "post office." In addition, they added labels to all of the classroom areas as well as many toys and materials.

Through their observations, Neuman and Roskos (1990) found that providing a specifically designed print environment increased literacy play in a preschool classroom. "In total, 37 literacy play frames were observed in videotape analysis; seven occurred prior to the enrichment and 30 following it" (Neuman & Roskos, 1990, p. 218). The researchers included qualitative data in the final results to highlight extended engagement time, more context to play, and increased interactions between peers. This data accrued through written observations of each situation or "play frame." Formatting specific areas for learning in the classroom and providing children with purposeful materials is an important aspect of guided play. In this study, the teachers took a passive role after providing the materials. However, it would be valuable to see the differences in play when teachers take a more active role in this type of setting.

> Creating a literacy-enriched environment, however, represents only one dimension of a literacy program. Although our study did not explicitly examine the adults' role, we did find that teachers demonstrating literacy practices helped to extend and give meaning to the children's reading and writing behaviors. (Neuman & Roskos, 1990, p. 220)

Tsao (2008) also discussed the use of guided play with preschoolers to improve literacy skills. By formatting areas for dramatic play in the classroom, specifically based

on familiar stories, students can act out the plot dynamics and enhance their comprehension. Acting out stories can also help children build vocabulary through conversations with peers. Providing children with appropriate materials and support can help them gradually build their literacy skills in a natural setting.

> Moreover, the current thought on children's literacy is from a socio-cultural perspective, which assumes that learning is a social process. In other words, children's developing literacy occurs in a social setting through processes of scaffolding. … That is to say, teachers' scaffolding can occur in the course of play in literacy enriched settings. (Tsao, 2008, p. 517)

Tsao (2008) explored two approaches to teaching literacy though play, both involving guided-play methods. One approach is a literacy play model in which educators integrate elements of literacy into the play in which children naturally engage. Adding paper and pen to a dramatic-play area for children to create "menus" or "grocery lists" is an example of this approach. Teachers could support children by modeling making a grocery list or menu as a whole class during circle time. During play, the teacher could help students find words to copy from around the classroom. Another approach involves using a storybook-based curricula. A storybook-based curricula consists of focusing the entire program and classroom on one story at a time. Teachers prepare the classroom with places for reading the story, dramatizing the story, and engaging in sensory and motor play related to the story (Tsao, 2008).

Tsao (2008) argued that educators can teach important literacy skills through play when guiding, based on a specific theme (i.e., story) or learning goal. "In other words, children's developing literacy occurs in a social setting through the process of

scaffolding. … With appropriate materials and supportive adults, young children construct knowledge about print and gradually become more literate" (Tsao, 2008, p. 517). This type of focused play can enhance the creativity and conversation skills of preschool children.

Saracho (2002) examined the use of teachers' roles in promoting literacy through the context of play with kindergarten students. Saracho observed and analyzed the interactions between five teachers and their classroom students. The researcher found that teachers took on different roles in promoting students' literacy skills. One role teachers donned was that of the *discussion leader*, leading a discussion based on open-ended questions to helped guide the children toward understanding. The second role was *storyteller*, where the teacher reads stories to the children and asks questions about the story while monitoring each student's listening comprehension and ability to retell what is happening. The third role observed was *examiner*, where the teacher asks questions to determine what previous knowledge a child might have on a given topic. The line of questioning can continue to help the children build more understanding based on what they already know (Saracho, 2002).

Another role that was classified was *instructional guide*, where the teacher planned appropriate experiences and set up the learning environment in a way that would help motivate the children to learn (Saracho, 2002). The teachers could also act as *informers,* helping the children transition from old concepts to new information. *Learning-center monitor* is another role teachers take on during student playtime. In this role the teachers monitor the centers set up throughout the room and move in and out of play, depending on the needs of the students. In the Saracho (2002) study, the final role

teachers take on during student play is *decision maker*, where the teacher makes either spontaneous or reflective decisions about the learning environment of the classroom.

In all of the above listed roles, teachers play an important part during student playtime (Saracho, 2002). These roles help children develop literacy skills because the teachers are scaffolding the experiences of each child, based on their needs. Varying levels and categories of support and interactions are needed for individual children across different situations. Through careful observation, teachers can identify what each child needs and support their learning and literacy development by taking on a rich variety of interactive roles during the process of guided play.

> Early childhood teachers need to understand their teaching roles in developing the children's literacy in the context of children's spontaneous play. To help teachers understand these roles, it is essential that more studies be conducted that examine the roles that teachers undertake to promote the children's literacy development during their play. (Saracho, 2002, p. 33)

Goouch (2008) discussed the role teachers can play when helping children create play narratives and stories in the preschool setting, advocating the importance of play-based learning and teachers taking an active part in this learning. "Adults, sensitive to children's intentions in play and in functional acts, are said to 'scaffold' children's learning in conversational contexts" (Goouch, 2008, p. 97). "Intuitive teachers are able to lead by following the interests, desires, intentions of the children, with children maintaining agency" (Goouch, 2008, p. 100). Thus, teachers can gently guide play to help children create narratives without coercing the children.

Educators can use dramatic play to help preschool children practice many important skills related to reading readiness (Lillard et al., 2013). Creating a narrative and then acting out the story with peers may help preschool children increase their vocabularies and develop important comprehension skills (Lillard et al., 2013). Gupta (2009) discussed the use of such an activity in a preschool classroom. Children took turns dictating a simple story for the teacher that classmates would then act out. The child who dictated the story would become the "director" and would take volunteers to be the actors in the story they created. Children volunteered to be actors for each part needed to complete the play and a "waiting list" for children who wanted parts but were not selected. This increased their chance of being picked for another story later on and limited disagreements. Children who were not selected as actors became the audience and gave feedback at the end of the play (Gupta, 2009).

The approach taken by Gupta (2009) was unique in that it allowed for a literacy-based activity that was child-centered, but teacher supported; an important aspect of the guided-play approach. The children created their own stories and helped organize the plays, yet the teacher structured and guided the format of the activity. Children in the classroom regularly participated in dramatic play while engaged in the "home living" area of the classroom; however, creating and acting out more structured "plays" was new to the class and would require some scaffolding (Gupta, 2009).

> The teacher employed a three-phase process in order to achieve this: (1) she first established a comfort level for the children by having them act out popular stories based on the familiar books found on their classroom bookshelves, the most popular being *Little Red Riding Hood*, *Heckedy Pig*, *Strega Nona* and *Three Little*

> *Pigs* which they had enjoyed reading that month; (2) the teacher then introduced the children to the idea that they could write their own original stories, which were simply dictated narratives in which they verbalized their thoughts, ideas and experiences; and (3) finally, the teacher attempted to synchronize those stories that the children had conceptualized or "written" themselves rather than published books. (Gupta, 2009, p. 1043)

During this process, the teacher found that students were much more engaged and willing to participate when the children themselves wrote the stories (Gupta, 2009). Children sustained their attention levels over a longer period of time than when teachers used published books. To get the children used to creating their own stories, the teacher began by asking them to tell stories about their drawings, paintings, collages, and block buildings. Gradually the stories became more and more complex, especially when the students began acting them out as "plays" with their peers. Eventually the children began incorporating props, scenery, and costumes into their plays as well (Gupta, 2009).

These classroom activities have many perceived benefits (Gupta, 2009). Children were able to exercise many important skills linked to academic success. The activity involved reading, writing, dictating, storytelling, listening, speaking, and collaborating. The activity provided children a chance to build their self-confidence, increase their vocabularies, and express emotional needs by acting out internal conflicts and struggles (Gupta, 2009).

Summary

The current body of research highlights clear benefits for the use of play-based learning with preschool children. Children in play-based programs have a better grasp on

important social skills (Walsh et al., 2006) and may even do better academically (Pui-Wah et al., 2015). Although uninterrupted free play has certain benefits, an argument can be made for the importance of introducing academic concepts through a guided approach. These concepts can be introduced in a variety of ways in a play-based setting. One key aspect of effective learning in a play-based setting is appropriate teacher interaction and scaffolding.

Vygotsky's ZPD and scaffolding are common themes mentioned in much of the research involving the guided-play approach. Teachers should use careful observations and knowledge of each student's ZPD when implementing guided play in the classroom. Asking open-ended questions allows the teacher to assess the child's current level of understanding and guide them gently to higher levels of understanding. Providing an appropriate level of support in the student's ZPD is typically the most effective way to implement guided play. Through this method, teachers can address many important concepts. These concepts can involve a range of skills, including many academic goals.

More research is needed on guided play and teacher interactions in the preschool classroom. As pressure grows to implement more academic concepts in preschool curriculum, it will be vital to form an argument for developmentally appropriate approaches. Guided play allows teachers to implement academic learning in an age-appropriate, hands-on way. Not only is this approach enjoyable for children, but more and more research suggests that it is actually more effective than other more traditional instructional methods, such as direct instruction (Pui-Wah et al. 2015).

CHAPTER III

METHODOLOGY

Restatement of the Purpose

The purpose of this study was to examine and better understand the use of guided play in the preschool classroom and specifically, how teacher interactions impact student learning at guided-play centers. Many high-quality preschool programs currently use a combination of free play and direct instruction (Samuelsson & Johansson, 2006). Guided play may happen naturally in the classroom, but in many programs, it is typically not used as a purposeful instructional method, despite the research suggesting its effectiveness.

Play and instruction are both important aspects of most programs, however they often remain separate in today's schools. In most preschools, children engage in unstructured free play throughout the day, and intentional instruction is limited to group "circle times." In many classrooms, teachers typically engage in other tasks during the times the children are playing (Hirsh-Pasek et al., 2009; Tsai, 2015). Students can benefit from play-based activities that involve more structure and teacher interaction, especially when possible academic concepts could be introduced (Fisher, Hirsh-Pasek, Newcombe, & Golinkoff, 2013; Golinkoff & Hirsh-Pasek, 2016). Studying how teachers familiar with the guided-play approach interact with students can provide useful information for other programs seeking to adopt the approach and train teachers.

Guided play involves teacher-directed learning though a play-based activity. Lessons have clear academic objectives and are designed to teach the children a skill or concept through hands-on learning experiences. Teacher interactions during play have the

potential to enrich learning because they give the child guidance and goals to work toward, especially when the interactions are in each child's ZPD for the given activity. Looking at how teachers familiar with the guided-play approach intentionally scaffold interactions provides a new layer of information regarding guided play and best practices.

Research Design

The present research used a case study design in three preschool classrooms. Case studies contribute useful information to the field of education and can be conducted in a traditional classroom setting with minimal disruption to the students (Abdelfattah, 2015). Case studies are particularly useful for studying a unique situation or phenomenon. (Roberts, 2010).

> Researchers seek a holistic picture, a comprehensive and complete understanding of the phenomena they are studying. They go into the field to collect data. They may make observations; conduct in-depth, open-ended interviews; or look at written documents. Rather than numbers, the data are the words that describe people's knowledge, opinions, perception, and feelings as well as detailed descriptions of people's actions, behaviors, activities, and interpersonal interactions. (Roberts, 2010, p. 143)

Every day in a preschool classroom is a unique phenomenon. The day can vary depending on a number of factors including the mood of the children and the weather. Even what was served for a snack can change the course of the day. Observations and field notes, paired with follow-up interviews, paints the most cohesive picture in this type of setting (Merriam, 2009). Data regarding the interactions between children and teachers

during guided play were collected through qualitative practices. Themes were identified through this data as they relate to the three main research questions of the study.

Research Setting

This study took place at a chain of three private preschools in northern California which will be referred to as Little Scholars. A pseudonym for the preschools has been used for the purpose of this study. Two of the schools were located in Sacramento County, CA, and one in Placer County, CA. Sacramento County has a population of about 1,514,460 people and the median household income is $57,509 (U.S. Census Bureau, 2016). About 6.7% of the population in Sacramento County comprises children under 5 years of age (U.S. Census Bureau, 2010). Placer County has a population of 380,531 people and a median household income of $76,926 (U.S. Census Bureau, 2016). Approximately 5.3% of the population in Placer County is under 5 years old (U.S. Census Bureau, 2010).

All three preschools that participated in the study operate under the same owners, follow the same academic philosophy, and adopt the same curriculum and approaches. Teachers at the three schools were familiar with the guided-play approach and used guided play at varying levels in the classroom, depending on their training and experience. Children who attend the selected preschools have the option to attend either part-time or full-time.

One school in Sacramento County, Little Scholars Natomas, currently has 120 enrolled students, 83 of whom attend full time and 37 attend part time. Parents do not report their socioeconomic status, however 18 children receive supplemental funding from the state, due to parental income. A second school in Sacramento County, Little

Scholars Folsom, currently has 113 students enrolled; 106 are full time and seven attend part time. Six students receive supplemental funding. The school located in Placer County, Little Scholars Roseville, currently has 140 students enrolled; 74 attend full time and 66 attend part time. Four students receive supplemental funding at this location.

At each school, students are grouped in classrooms by age and development. The schools have classrooms for infants through school-age children. The classroom names and age groupings are as follows: Brilliant Babies (ages 0–1yrs), Early Explorers (1–2yrs), Little Learners I (2–3yrs), Little Learners II (3–4yrs), Kindergarten Readiness (3.5–5yrs), and Transitional Kindergarten (4–5yrs). Some children graduate the preschool after finishing Kindergarten Readiness whereas others complete a year of Transitional Kindergarten, depending on their birthday. Two locations have an after school program (Roseville and Natomas) that accommodates older children from neighboring elementary schools.

The schools operate year-round and most children move from one classroom to the next either in the summertime or in January. These transitions rest on age and development. The schools are licensed and operate under California's Title 22 regulations for center-based childcare programs. Classrooms are fully equipped with child-sized furniture, age-appropriate toys, and a large selection of learning materials. Children in each classroom follow a regular schedule with allotted time for large- and small-group activities, as well as outdoor time (Downing, Peckham-Harden, 2001).

Population and Sample

The population of Sacramento County, CA, is fairly diverse: 64% of the population identifies as White and 10.9% as Black or African American, 23% as

Hispanic or Latino, and 16.2% as Asian (U.S. Census Bureau, 2016). One school in Sacramento County, CA (Little Scholars Folsom), has a number of international families due to a nearby company that regularly hires employees from overseas. Placer County, CA, has a bit less diversity where 85.3% of the population identifies as White, 13.8% as Hispanic or Latino, 7.4% as Asian, and 1.8% as Black or African American (U.S. Census Bureau, 2016).

Two teachers at each of the three preschool locations were selected for the study for a total of $N = 6$ teachers. Three teachers held the title of "lead teacher" and three held the title of "co-teacher." Typically, lead teachers have more experience, higher qualifications, and more responsibilities than co-teachers.

A total sample of 75 preschool students participated. Each school site has seven classrooms for early-childhood-aged children, however only classrooms with students aged 3 to 5 years old were eligible to take part in the study. Each site has three classrooms eligible to participate; however, only one classroom at each location was selected based on recommendations from the director and consent from the teachers. Thus, this study entailed a convenience sample of teachers and students.

Because written consent from teachers and parents was required, there may have been individuals unwilling to participate in the study; thus, a plan was put in place for these scenarios. If the teacher recommended by the director chose not to participate in the study, the director would have been asked to make a secondary recommendation. If any parents did not wish to have their child participate in the study, that child would have been moved to a different classroom during all observation times. In this particular study, no eligible participants opted out of participation.

Instrumentation

The researcher made video and audio recordings, using a camcorder, during classroom observations. To keep the environment as close to the natural classroom setting as possible, the researchers used a small portable camera. The camera was set up in the classroom intermittently for a week prior to the start of the study to ensure children and teachers became comfortable with its presence. Children were allowed to ask questions and touch the camera during this one-week timeframe. Photographs were also taken and used in the findings to provide context for certain activities and materials. The children were already accustomed to regular photos being taken, because this is part of the schools' daily communication processes with parents. After each observation, teachers were interviewed using a set of open-ended questions as a guideline.

Data Collection

Prior to the study, the researcher asked the school director to recommend a teacher, or teaching team, at their school who were currently implementing the guided-play approach. The teacher or teachers needed to be creating lesson plans that address academic concepts through hands-on activities. The lessons needed to have learning objectives listed for each activity presented. In addition, the teacher or teachers needed to be setting aside a designated time in the school day for guided-play "centers" where students rotate through planned hands-on activities in the classroom. During this time, a high level of engagement between the teacher and students needed to be apparent. Only classrooms with students aged three to five years old were eligible to participate.

Once the director made a recommendation, the researcher approached teachers in that classroom about their willingness to participate in the study. It was made clear that

participating in the study was strictly voluntary and had no bearing on their employment status with the school. At total of six teachers agreed to participate the study. Each of the three classrooms participating had a designated lead teacher and a designated co-teacher. In all three cases, both teachers agreed to participate and provided written consent for participation (see Appendix A). After the teachers agreed to participate, parents of children in each of the three classrooms were contacted through a letter notifying them of the study (see Appendix B). All legal guardians of each child provided written consent.

Similar to the Tsai (2015) study, data accrued through observations and interviews with the teachers. The study took place over the course of 4 weeks. Observations of the interactions between students and teachers were documented using notes and video recordings. Video recordings were taken in real time during each classroom observation. Interviews were also video recorded and conducted weekly after each observation (see Appendix C). Interviews allowed teachers to explain the reasoning behind their interactions with the students. Speaking directly with the teachers also helped provide insight into their knowledge of each child's ZPD for the activities presented and if they used this knowledge as a starting point for their interactions. In addition, interviewing the teachers provided them a chance to reflect on how their interactions impacted student learning in the classroom.

Each of the three classrooms were observed for one hour per week. The hour-long observation times included the portion of the day called "center time," when teachers set up specific hands-on activities throughout the classroom. These activities were typically a mix of permanent play areas in the classroom (i.e., block area, dramatic play) and specific table activities that are only put out during center time. The areas of the classroom

available to the students and materials used in the table activities rotated on a daily basis and tied into a specific learning goals and curriculum standards.

The curriculum standards used are unique to the program but fall in line with the High/Scope program which is a well-rounded framework for preschool education that focuses on five key areas of early childhood development including: intellectual, social-emotional, creative, physical, and cognition of the world. Programs following this framework have been shown to provide significant benefits to children as they progress through elementary school and beyond (Schweinhart, Barnes, & Weikart, 1993). California Preschool Curriculum Frameworks and occasionally Kindergarten Common Core Standards are also incorporated.

Every week the lead teacher was interviewed following each observation. Co-teachers were interviewed on an as-needed basis, depending on how much interaction was observed between the co-teacher and students during the hour-long observation. During the interviews, teachers were asked to identify a time when they were working with a child toward a learning objective. They were asked to reflect on this interaction, dubbed a *play frame* for this study; a term that builds on the work of Neuman and Roskos (1990). Video and audio recordings of the play frames were analyzed and transcripts of the interviews between the teachers and researcher were recorded.

A rich description of the activities and context of the interactions are included in the findings section of this study. This qualitative data accrued through notes and recordings taken during the hour-long observation. These data provide useful information related to the student learning that occurred in each situation and provided a context for the teacher interviews.

Data Analysis

Data analysis involved seeking patterns and themes across the observed interactions and how these themes relate to teachers' intentions and perceptions reported in the follow-up interviews. Recommendations are made for future studies as well as potential training suggestions for teachers currently implementing the guided-play approach.

To answer the first research question, *What kinds of interactions do experienced preschool teachers use during guided play?* descriptions of the classroom setting and activities presented to the children during each observation were documented. Interactions between the teachers and students were discussed in an interview following each of these observations. The researcher analyzed interactions teachers chose to discuss after each observation as play frames. During data analysis, several key components of the play frame were considered: (a) a description of the activity presented as well as other activities available in the room, (b) what the child was doing with the materials before the teacher intervened, (c) the proposed learning objective according to the teacher, and (d) why and how the teacher chose to engage with the child to help them reach an objective. Three main themes emerged from this data analysis, discussed in Chapter Four.

To answer the second research question, *How do preschool children respond to different types of teacher interactions during guided play?* teachers were asked during the interview to reflect on how the child responded to their interactions. The teacher's responses, along with data from the corresponding play frames, are included in the findings section of this study. Three main themes emerged from this data analysis, discussed in Chapter Four.

To answer the final research question, *How can school leaders help preschool teachers use their knowledge of each child's ZPD for a particular activity to make guided play more effective in the classroom setting?* all data gathered were considered. After the third observation in each classroom, the teachers and researcher discussed ways to use knowledge of each child's ZPD to make guided-play centers more effective. After this discussion, a fourth and final observation took place. Findings during this final observation are detailed in Chapter Four.

Ethical Considerations

Working with young children always entails some ethical considerations. However, the activities presented in this study were not outside the realm of normal preschool instruction. Students participating in the study were familiar with the guided-play approach because it is a method already in use at the selected school sites. Teachers simply went about their regular daily routines, but with the presence of an additional observer and video-recording devices. Parents were given a full explanation regarding the purpose of the study and provided written consent for their children to participate. The results of the study can be made available to parents and teachers by request. Because this study involved the use of human participants, an application to the University of San Francisco Institutional Review Board was submitted and the study was granted "exempt" status.

Background of the Researcher

The researcher who conducted this study has been an early childhood administrator since 2013. She holds bachelor's degree in education with a multiple-subject teaching credential. She also holds a master's degree in teacher leadership.

Research leading to her master's degree involved guided-reading instruction and reader's theatre. This academic background brings research-based knowledge of these two concepts to the study.

Before becoming an early childhood administrator, she was first a preschool teacher, then an international teacher for preschool age children in Taiwan, and finally an elementary school teacher. During her time as an elementary school teacher, early literacy development though the use of guided-reading instruction was an area of interest. The researcher has been trained to administer the Reading Recovery program, which is a type of one-on-one guided reading instruction for struggling first-grade students. Guided play involves many aspects of guided-reading instruction, as both approaches are teacher supported, yet child-led. Guided play and guided reading work closely in the child's ZPD.

The researcher currently owns and operates the three preschools that took part in this study. Teachers create curriculum at the schools weekly, based on educational standards, monthly themes, and student interest. Guided play is the main method of curriculum implementation and is evident in all classrooms.

CHAPTER IV

FINDINGS

As stated in Chapter One, this study examined preschool student and teacher interactions during the use of guided-play centers. Through observations and teacher interviews, this study sought to provide greater understanding of how guided play can be effectively implemented with preschool-aged students. Four sets of observations and interviews were conducted at three different school sites. The observations occurred once per week for one hour. Interviews with teachers were conducted following classroom observations.

After the third observation, feedback was given to the teachers regarding the types of activities planned and the need to intentionally think through the level of support the children would need from adults to complete each activity. This feedback was intended to help the teachers plan for a better balance between independent and guided-play activities in a large group setting. It was also intended to help teachers decide where they would need to be positioned in the classroom, to provide the adequate support required for teacher-guided activities.

Overview

This chapter documents the classroom observations and subsequent teacher interviews that are relevant to the three research questions.

- What kinds of interactions do experienced preschool teachers use during guided play?

To answer this question, this chapter provides a description of activities presented to the children, as well as how the teachers interacted with them. The interview questions

addressing this research question were “Tell me about a time during the observation where you and a child worked toward a specific learning goal?” and “What made you decide to help the child with this objective?” The responses to these interview questions are documented in this chapter as they relate to the research question, partitioned into three themes.

- How do preschool children respond to different types of teacher interactions during guided play?

To answer this question, teachers were asked questions related to how they perceived a child responded to their interactions. One of the interview questions was “How did the child respond to your interactions.” Another question was “How do you feel that your interactions helped this child’s learning?” The responses teachers gave to these questions are documented in this chapter as they relate to the research question, partitioned into three themes.

- How can school leaders help preschool teachers use their knowledge of each child’s ZPD for a particular activity to make guided play more effective in the classroom setting?

This final research question was answered over the course of the study as the researcher spent careful time observing the types of activities being planned, talking with the teachers, and providing feedback. The interview question most relevant to this research question was “After reflection, is there anything that you would have done differently?” This research question has implications for the field, which are discussed in great detail in Chapter Five.

All observations and interviews took place over the course of four weeks during the months of February and March. The observations always occurred during center time, which is the period of the day when teachers put out specific activities through which the children rotate. The children work in small groups with their peers during center time which allows for not only meaningful teacher interactions, but also collaborative peer interactions (Goncu & Weber, 2000). The observations did not occur on a designated day each week, but varied from week to week depending on the researcher's schedule. Every intention was made to interview the teachers immediately following the observations. However, several times the interviews were completed on another day, due to scheduling constraints. Interviews were always completed prior to starting the next observation.

Six teachers participated in the interviews. Lead teachers were always interviewed following every observation and co-teachers were interviewed if their interactions during the observations were deemed relevant to the research questions. Table 1 displays a profile of each teacher.

Table 1

Overview of Teacher Participants

Name*	School site	Job title	Highest level of education	Age	Years of experience	Ethnicity
Rochelle	LS Natomas	Lead Teacher	Bachelor's degree	26	2	African American
Margret	LS Natomas	Co-teacher	Bachelor's degree	30	2	Caucasian
Linda	LS Folsom	Lead Teacher	Associates degree	47	21	Caucasian
Sandra	LS Folsom	Co-teacher	12 ECE units	26	2	Caucasian
Gwen	LS Roseville	Lead Teacher	Associates degree	26	6	Caucasian
Miranda	LS Roseville	Co-teacher	12 ECE units	26	5	Caucasian

Note. Names have been changed, LS = Little Scholars, ECE = early childhood education.

Classroom 1

Little Scholars Roseville, located in Placer County, served as the setting for the first set of observations and interviews. At this location the Kindergarten Readiness classroom participated in the study, here referenced as Classroom 1. This class consisted of 4–5-year-old children. A total of 26 students were enrolled in the class; however, no more than 24 attended each day. Some students attended five days per week whereas others had part-time schedules that complemented other children's schedules in the class (i.e., Monday, Wednesday, Friday or Tuesday, Thursday). On average, 18–24 students attended each day. All schedule options were enrolled to capacity, so any absences during the course of the study were due to illnesses or family vacations. Teacher participants were Gwen, the lead teacher, and Miranda, the co-teacher. Names were changed to respect their privacy.

The classroom is set up with various areas for play and learning. It is equipped with child-sized tables and chairs. Areas are specified for circle time, blocks and building, dramatic play, sensory, science, music, and a cozy area for looking at books. During most parts of the day, the children have access to these areas. However for an hour each morning, the teachers facilitate center time. During center time each day, Gwen and Miranda typically set up five to six activities for the children. Children participate in these centers immediately following a teacher-led circle time. Over the course of the observations, Gwen always led the circle time while Miranda set up the activities. At the end of circle time, either Gwen or Miranda would explain what activities were available for the children.

The activities included specific centers. They almost always included an art activity such as painting, decorating with stickers, or drawing. A sensory table was always available with items such as rice, cotton balls, slime, or sand. A building activity with different kinds of blocks was typically available at the carpet. Finally, Gwen and Miranda set up two or three hands-on table activities related to mathematics or literacy. These activities included matching games, patterning activities, journal writing, and puzzles.

Wearable name tags were placed at each center and children were individually dismissed from circle time and directed to find the center with their name tag. Teachers used egg shakers to signal a rotation for the students every 8-10 minutes. The children then cleaned up their center and moved to the next activity. Stollar (1994) studied this method of "switching" activities during play and found that it added relatively unobtrusive structure to the classroom and reduced inappropriate behavior.

The children stayed with the same small group of three to five children for each rotation. After all children experienced all of the centers, Gwen would ask everyone to clean up and meet her back at the carpet. While Miranda set out lunch for the children, Gwen asked each child for their favorite part of center time and if they could tell her one thing they learned from it. Most children were very engaged during this time and excited to talk about what they had learned.

Classroom 2

Little Scholars Natomas, located in Sacramento, served as the setting for the second set of observations and interviews. At this location the "Little Learners II" classroom participated, referenced as Classroom 2 for this study. This classroom

consisted of 3–4-year-old children. A total of 28 students were enrolled in the class; however, no more than 24 attended each day. Scheduling options were the same as Growing Brilliant Roseville, with Tuesday, Thursday; Monday, Wednesday, Friday; and Monday through Friday options. On average 18–24 students attended each day. All schedule options were enrolled to capacity so any absences during the course of the study were due to illnesses or family vacations. The teachers were Rochelle, the lead teacher, and Margret the co-teacher.

The classroom was set up quite similar to Classroom 1. It was equipped with child-sized tables and chairs. There were also areas for circle time, dramatic play, blocks, sensory, science, and art. The children were allowed free access to most of these areas during the day; however, for one hour per day, the teachers organized center time. During center time, Rochelle and Margret typically set up four centers, usually at the tables in the classroom. Rochelle always led circle time and then explained the centers to the students while Margret set up the activities. Rochelle then called on each child, one by one, to go to a specific center.

Typically the centers included several specific activities. Usually, a sensory activity that had individual trays with items such as slime, dirt, or sand. An art activity was always included at the designated art table. In addition, two other tables were set up with hands-on activities related to mathematics, literacy, or engineering. These activities included things like Legos, matching games, dry-erase boards, chalk boards, and counting activities.

The children started out at one center, then rotated freely through the centers. They were also allowed to access other areas of the classroom such as trains, cars, or

dramatic play, even if those were not introduced as part of the official guided-play centers. These additional areas allowed for a great deal of pretend play. Many researchers, including Gmitrova, Podhajecka, and Gmitrov (2009), emphasize the importance of pretend play for preschool children. During the observation, both teachers moved around the room and engaged with children at the different centers.

Classroom 3

Little Scholars Folsom, located in Sacramento County, served as the location for the third set of observations and interviews. At this location, the Kindergarten Readiness classroom participated in the study, referenced here as Classroom 3. This class consisted of four to five year-old children. A total of 21 students were enrolled with scheduling options being the same as Little Scholars Natomas and Little Scholars Roseville. On average 15–18 students attended per day. The class was not enrolled to capacity and had the lowest student-to-teacher ratio during all four observations. The teachers were Linda, the lead teacher, and Sandra, the co-teacher.

The classroom is equipped with many areas for learning and play including a dramatic-play area, block area, science center, sensory bin, cozy area for reading books, and many options for various toys and manipulatives. Children have access to all of these areas throughout the day. However for one hour each morning, Linda and Sandra facilitate their center time.

During center time, Linda and Sandra typically set up four to five centers throughout the room. On most days, at least three centers would be at tables and one center would be in another area of the classroom, such as dramatic play or blocks. The table centers usually included a sensory activity such as shaving cream and vehicles or

kinetic sand. An art activity, such as painting or drawing, was usually included as well. At the third table, one additional activity related to literacy or mathematics was usually included. Sometimes the teachers used an actual sensory table filled with beans or rice as a center.

After circle time, Linda explained the centers to the children while Sandra finished set up. Occasionally Sandra was the one to explain the centers. The children were called individually from the carpet to go to each center and then rotated as small groups through all of the centers in the classroom. Rotations occurred about every 10 minutes and were signaled by the teachers ringing a small bell.

Findings

Findings Research Question 1

1. What kinds of interactions do experienced preschool teachers use during guided play?

Teachers interacted in many different ways with the children, sometimes in small groups and sometimes one-on-one. They typically moved from one activity to another, helping children with tasks with which they had difficulty or found challenging. They also used guided play to extend children's learning and make it more complex. The three themes emerged from the findings are Theme 1: Assisting with Challenging Tasks, Theme 2: Encouraging Engagement, and Theme 3: Extending Learning.

Theme 1: Assisting With Challenging Tasks

During the course of the observations, certain activities would present a challenge to the students. Sometimes these challenges would be expected and a teacher would already be dedicated to that table to work with the children on a certain task. For

example, during the second observation in Classroom 2, Rochelle printed and laminated a Community Helper matching game for the children (see Figure 1). She anticipated that this activity would be difficult for the children to do on their own because many children in the class may not know the proper vocabulary for the items. She positioned herself at this table duirng the observation and was readily available to assist the children by asking questions and explaining new vocabulary words. During the interview she reflected on an interaction she had with a child while working on this activity.

Figure 1. Community helper matching game.

> INT: Rochelle, can you tell me about a time during the observation where you and a child worked toward a specific learning goal?
>
> ROCHELLE: Let's do—The community helper activity, where they had to match certain things to the actual community helper. For instance, firefighters, they had to match—sort through all the pieces and find the matching water hose, the fire truck, and ladder, anything that's associated with a firefighter or any other community helper.

INT: Okay. And then can you tell me about a time that you worked with one particular child on that [activity] toward a certain learning goal?

ROCHELLE: Let's do Brittney. I want to say Brittney had the firefighter mat. And I told her, "Brittney, of all these pieces, find the pictures that match with the firefighter." So while she was finding those actual pictures, I would ask her what each picture was. So if she found a fire extinguisher, I would ask her, "What is that?" and she would say—she would try and say fire extinguisher, but she didn't actually know the actual words for it so I'd have to help her with that.

INT: Okay. What made you decide to help the child with this objective?

ROCHELLE: She didn't know the actual terminology for each piece. She knew that it went with the firefighters but she just didn't know the actual vocabulary.

After the third observation in Classroom 2, Rochelle described a similar situation during the interview. The children were tracing their names using sheet protectors and dry-erase markers (see Figure 2). Once again, Rochelle was already positioned with this group because she anticipated that the children would need help tracing their names. One child was tracing her name from right to left, starting with the last letter and working her way back. Rochelle saw this as an opportunity to work with her.

Figure 2. Dry-erase name tracing.

INT: Rochelle, tell me about a time during the observation where you and a child worked towards a specific learning goal?

ROCHELLE: We did our letters, the activity for the day, name-tracing and drawing body parts [on the opposite side of the name tracing sheets]. We used the dry-erase mats to achieve that goal. For name writing, tracing the dotted lines of their names to achieve that goal.

INT: Can you think of a specific interaction with one child that stands out to you?

ROCHELLE: I'd say Bridget.

INT: Okay. And what went on with her?

ROCHELLE: First she would start—she would start tracing her name by the last letter, so the T, and I had to show her, "Start from the B. Work your way over." So after a few tries she eventually got it down and was able to trace her name three times, letter by letter, from left to right.

INT: Okay. What made you decide to help the child with this particular objective?

ROCHELLE: Because she would start at the end of her name first, the last letter.

Other times teachers recognized when some children needed help and went to them when needed. During her fourth interview, Linda, the lead teacher in Classroom 3, described a time she helped a child with scissor skills during a table activity. The children at that center were cutting out shapes with scissors and then coloring them afterwards (see Figure 3). Many did not need help, but a few children were not holding the scissors correctly and needed support. During the interaction described below, Linda was playing with a group of children in the dramatic-play area but could tell that a child needed some support due to not holding the scissors properly, so she went over to the scissor-cutting table.

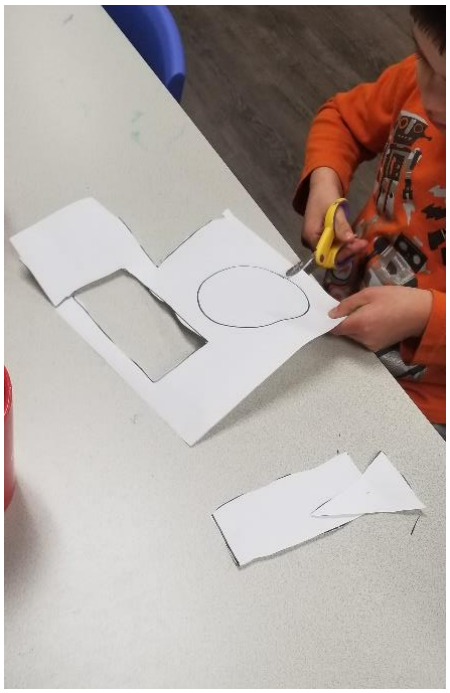

Figure 3. Cutting out paper shapes.

INT: Linda, tell me about a time during the observation where you and a child worked toward a specific learning objective.

LINDA: That would be probably Nicole with her cutting.

INT: Okay. Can you describe that interaction?

LINDA: Well she was getting frustrated, I could tell, and then I saw that—she wasn't holding the scissors correctly. So I went over and was teaching her to always make sure that her thumb is up to the sky. And so she picked up on it pretty quickly, and then I held the paper and kind of helped guide her.

INT: Okay. What made you decide to help the child with this objective?

LINDA: When I looked over there, I could tell she was getting frustrated. And the whole "I can't do this" came out.

Gwen, the lead teacher in Classroom 1, described a similar situation when a child was struggling at the writing center. Gwen had written each child's first and last name in highlighter in their journals and they were tracing the letters.

INT: If you can, tell me about a time during the observation where you and a child worked toward a specific learning objective.

GWEN: When Jessica and I were doing the journals, we were practicing our first name and last name, because they have been pretty good about their first name. Now their last name. And looked at each individual letter and spelling it out and the letter sounds, but it seemed to click with her, that she was understanding her last name and all the letters in that also, along with her first.

INT: Was she tracing or writing them down?

GWEN: Yeah, she was tracing them and then we worked on just filling out her last name too, because a lot of them are familiar with their last name but they don't know the actual letters in it. And then I had her try her first name on the bottom. She's been practicing working on her first name without tracing.

INT: Oh, on her own? Okay.

GWEN: Yeah.

INT: Okay. What made you decide to help the child with this objective?

GWEN: Because I know she's been—she's starting to get her first name now and she's really been very good about tracing it out by herself. And so I wanted to get her to start learning her last name. She just looked a little lost, starting to get overwhelmed, so I just decided to go and sit with her to help her through it, to help her get the full effect of it.

At times, multiple children needed help with the same activities. After the third observation in Classroom 3, Linda described the interactions she had with several students. They were all quite engaged in the activities, but it was clear that the literacy activity was challenging for the children and they needed her help. She was asking them to make the letter G out of playdough and some were either having difficulty or just playing with the playdough.

INT: Linda, tell me about a time during the observation where you and a child worked toward a specific learning objective.

LINDA: You know, it's kind of hard today because I feel like I helped a lot of children today.

INT: Okay.

LINDA: I felt they needed a lot of hands on, mostly with making the "G" out of the Playdough. I felt like I had to help them a little bit.

INT: Okay. And what else were you spending your time helping with?

LINDA: Oh, and then also the puzzle.

INT: Okay. What made you decide to help the children with these objectives?

LINDA: I always try to have them do it first but then when they—after they try and they need help and ask for help, then I'll help them. Or I have some friends that might just not know what to do and they just, kind of play with it. So I try to encourage them with, "Oh, let's do a circle for the head of the "G" and let's do"—you know, try to teach them to roll it out like a snake and then make it curve. And then it helps—I put that picture too, because I have some children that are visual learners.

INT: Okay. What made you decide to help with that?

LINDA: They were asking for a lot of help—you know, "Where is the train at?" or "where is this at?"

Sometimes students needed help with social interactions as well. In Classroom 1, during the fourth observation, Miranda, the coteacher, described stepping in to help a group of children with a puzzle. The children were not struggling with the puzzle itself, but rather having trouble sharing the pieces and taking turns. One child was visablly getting upset and close to tears because other children were taking all the pieces.

INT: Can you tell me about a time during the observation where you and a child worked toward a specific learning objective?

MIRANDA: I helped one of the groups. I don't know if it was a specific child. I feel like I helped all four of them, kind of, because they seemed to be struggling with taking turns in the letter puzzles that we did on the carpet. So I just worked with them and told them, "Okay, John, it's now your turn to go get this letter and

Mila can get this letter and Kay get this letter." So then they were able to put together the whole puzzle.

INT: Okay.

MIRANDA: They all wanted to do the same thing at the same time.

INT: Okay. What made you decide to help the children with this objective?

MIRANDA: Kay was getting really upset and it kind of seemed like she was going to start crying. And I could just hear them getting really frustrated saying, "Oh, I wanted to [do] that" or "I wanted to do that one." So I just went over there trying to help out.

Theme 2: Encouraging Engagement

In addition to helping children who were struggling with an activity, teachers also recognized when some children were having trouble focusing or becoming engaged. They took this as a cue to interact with particular children. After the second observation in Classroom 2, Gwen, the lead teacher, reflected on a time she worked with a child who was having trouble focusing on the task at hand. Gwen had set up a table with different areas for each letter taped off and the children were trying to figure out the letter that each item card started with. Once they identifited the letter they would then put the card in that section of the table (see Figure 4).

Figure 4. Phonics-matching activity.

INT: So tell me about a time during the observation where you and a child worked toward a specific learning goal.

GWEN: I would say when we were matching the objects with the letters, and we were asking "what letter does this sound like" or what words, the beginning letter, and what does it sound like and what does it look like, and trying to get them to recognize it by themselves without me helping them too much on it, and kind of add. But I just sat there and I just was giving them letter sound and they started slowly getting it. And then other friends would start to help them, saying things like, "Oh, that's right there."

INT: Okay. So do you have a specific example where you were just working with one child?

GWEN: Ryan. So I was working with him and he was trying to—at first, he was just kind of playing and then trying to get him to like refocus "this is what we're doing." And he had one of them and I asked, "Y, Y, Y." He's like "uh" and he never said it but then he pointed to it and he's like, "So it's Y, Y makes the yes sound."

INT: I think I wrote that down too. Yeah.

[Simultaneous comments]

INT: And then they didn't know what the wagon wheel was.

GWEN: Yeah, not until they got to make the wheel and we were teaching them about a wheel.

INT: Okay. All right. So he did eventually find the letters.

GWEN: Yeah. I kind of helped him. I said, "Okay, it's in this column, so which one goes here?"

INT: What made you decide to help the child with this objective?

GWEN: Because he was kind of getting distracted and needed to be refocused on what we were doing with the cards. Sometimes he needs a little more help with letters and stuff. It's hard for him to focus on them. So just sitting down, putting my hand on his back and getting him to just look me in the eye and focus on the task at hand. And he was able to come around and do it once he was able to calm himself and focus on what he needed to be focusing on.

Linda described another situation where she worked with a child to help him engage in a particular activty. The class was drawing pictures of dinosaurs and then Linda was taking dictations of the stories they told to go along with the drawings (see Figure 5). They had watched a dinosaur movie that morning as a special reward for completing a classroom goal. The child she was working with typically did not engage with art activities and often had difficulty socializing with both children and teachers.

Figure 5. Linda taking down a student's dictation.

INT: Tell me about a time during the observation where you and a child worked toward a specific learning objective.

LINDA: That would probably be me and Jason. We watched a [dinosaur] movie that morning and then I asked them to draw something that was their favorite part of the movie. And he just had a hard time getting engaged, so I helped him by drawing a dinosaur, trying to get him engaged. And just kept trying to ask him questions: "Oh, do you want to color the dinosaur? Look, I drew it for you." That was a good-looking dinosaur I drew for him too.

INT: Okay. What made you decide to help the child with this objective?

LINDA: Because I just saw him just kind of sitting there and he did actually write his name. He was writing his name on his own. But then when he got done, he just kind sat there and wasn't engaged. So I decided to help, "Hey, let's draw your favorite part of the movie?" And he couldn't really tell me so we just started talking about dinosaurs and then that's when I helped him draw a dinosaur to get him more engaged.

There were a few times during the course of the observations when an entire class of children did not seem engaged with certain centers, especially ones with an academic focus. This was particularly apparent in Classroom 2, the three to four year old classroom where the students were allowed to select their own actitvities. Often, the only times the children would select the table activities over other centers available, such as dramatic play or blocks, would be if a teacher was present at the table. Rochelle reflected on a time, after the first obsevation in Classroom 2, when a child asked for her help at the writing table. Before that point the table had been empty for several minutes, but after Rochelle joined the child at the table and began helping her, other children came over too.

> INT: Tell me about a time during the observation where you and a child worked toward a specific learning objective.
>
> ROCHELLE: I would do—Molly, they were doing chalkboards and we were drawing letters, which she did amazing at. For the letter of the week, I showed her how to draw a Q and there were some other students that joined us too. Showed her how to draw a Q and then she drew a Q and then once we worked on that letter, we just went through a few other letters.
>
> INT: Okay. What made you decide to help the child with this objective?
>
> ROCHELLE: She invited me over. She wanted me to come.

Theme 3: Extending Learning

In addition to helping children with challenging tasks or encouarging those who needed extra help with engagement, teachers also stepped in when they saw a child who was already excited about something. They saw this as an opportunity to take their

learning to a more complex level. This was hightlighted in a play frame when Gwen, the lead teacher, helped a child write the number 101 during the first observation in Classroom 1. The children were using dry-erase markers to trace numbers on laminated cards and also practicing writing them freely on white boards (see Figure 6). One particular child was especially excited about writing numbers so Gwen decided to extend his learning.

Figure 6. Dry-erase number cards and white boards.

INT: Tell me about a time during the observation where you and a child worked toward a specific learning objective.

GWEN: Okay. When Jackson and I were sitting there and he just put random numbers together and then we talked about what number that made in the end, and he was able to say, “Oh, wow, that’s 101,” after he put all those numbers together. Then it stuck with him, and he was even wanting to talk about it in circle and how excited he was, and just learning that that’s a really big number and when numbers make up other numbers, and that kind of concept.

INT: Okay. What made you decide to help the child with this objective?

GWEN: He seemed really interested and was just writing numbers down and exploring the different numbers. So I wanted to point out that the single numbers also make bigger numbers and that there's always—you can always do more with them, and to just kind of get him to expand on it instead of just keeping at the basics, one through 10, and start to emerge into that new concept.

During the fourth observation in Classroom 1, Gwen discussed an interaction with another student whom she worked with to extend their knowledge of patterns. The children were making patterns on shapes made of masking tape using small colored animals (see Figure 7). Gwen believed that the child had a good understanding of A–B patterns and was ready to learn something more complex. Before Gwen intervened, the child had covered most of the shapes with A–B patterns and was looking around the room, visibly growing bored with the activity.

Figure 7. Making patterns on shapes with colored animals.

INT: Tell me about a time during the observation where you and a child worked toward a specific learning objective.

GWEN: Well it's not really a specific child, necessarily, but all of them when we were doing the shapes [and patterns]. We were all talking about how

many sides each shape had and how it was different from other shapes and then patterning with the animals. So somebody, like Nancy, she normally only does A–B patterns. And I said, "Well what if we add in a third color?" So we added in a third color, and then I said, "Okay, so it's purple, yellow, red. What would come next?" And then she said, "Purple." And then she kind of continued it and then I left her for a little bit to see if she could do it on her own. And I came back and she had finished the pattern all the way around the diamond. Then I talked to her about the different patterns and she seemed really excited about it.

INT: A–B–C patterns? Okay. What made you decide to help the child with this objective?

GWEN: She's been really good about A–B patterns, so I want to try to challenge her a little bit more to take it a step further, because she'd gotten that step down. So I wanted to see if she can do the A–B–C patterns and then just see where she's at with patterning and shapes and all that.

Sandra described a time when she worked with a particular child on learning the vocabulary words related to different construction vehicles. The children had been playing with the vehicles and foam blocks in shaving cream as a sensory activity (see Figure 8). One child was especially interested in the names and purposes of each vehicle he was asking questions and engaging in conversation with Sandra.

Figure 8. Construction vehicles, foam blocks, and shaving cream.

INT: Tell me about a time during the observation where you and a child worked toward a specific learning objective.

SANDRA: Okay. With the shaving cream, the children were kind of getting an understanding of the construction trucks and what they do, and we were pretending that the shaving cream was dirt and rocks and learning how the trucks work. And it's getting their fine motors working and memory and thinking, using their imagination. Specifically with Adam, he wanted to make a castle and when he was done he wanted to knock it down and he asked me which truck we should use.

INT: So what were you and Adam working toward together then?

SANDRA: Just learning which object did what in construction.

INT: So then which truck did he end up using?

SANDRA: He ended up using—I think it was the bulldozer.

INT: Okay, did you guys talk about that and why it was a good choice?

SANDRA: Yeah. And then I told him if we had one—we used to have one with a little ball, a wrecking ball, but we couldn't find it. I told him that one would have been a good choice too.

INT: Okay. What made you decide to help the child with this objective?

SANDRA: He was just really interested in wanting to learn how to do it, and he was asking questions. He seemed more engaged in it as far as what each truck did, more so than the other two at the group, who were just kind of playing and building. So he was asking questions and just kind of getting more engaged in it and seemed excited, wanting to learn.

After the fourth observation in Classroom 2, Rochelle discussed a time when she worked with a child as he created a fire truck with water colors. The child already had planned to create the fire truck, however Rochelle asked him open-ended questions along the way. He knew what color the truck would be and what parts it would have, however he seemed confused when asked what shape it would be.

INT: Tell me about a time during the observation where you and a child worked toward a specific learning objective?

ROCHELLE: I'll do art. We painted with water colors. It was me and Jameson. So before he started drawing, I asked him what he was going to draw a picture of. And he told me a fire truck. I said, "Okay, what colors are you going to use to draw your fire truck?" And he told me red and then I asked him what shape did he might want to use to draw the fire truck, but he couldn't really come to a conclusion of what shape. But he did—in the end it looked like a fire truck. I was kind of shocked. So he used the actual red. He put wheels on it.

INT: Okay. What made you decide to help the child with this objective?

ROCHELLE: Just basically seeing if he could draw somewhat of a picture of what he wanted to create.

Findings Research Question 2

2. How do preschool children respond to different types of teacher interactions during guided play?

The teachers were asked during the interview to reflect on how the children responded to their interactions. Often the teachers mentioned that the children were "excited" about the interaction. In situations where children chose their own activities, as in Classroom 2, a teacher's presence at an activity often drew more children over. In these situations the teachers' interactions increased engagement. Students were also able to complete tasks they would not have otherwise been able to do without support from a teacher. Finally, some students were able to master a new skill based on the interactions they had with a teacher. The three themes that frame the findings of this research question are Theme 1: Increased Engagement, Theme 2: Completion of a Task, and Theme 3: Mastering a New Skill.

Theme 1: Increased Engagement

In almost all situations, having a teacher interact with the students increased their engagement in an activity. During the last observation in Classroom 3, Linda spent some time playing with children in the dramatic-play area of the classroom. She asked them open-ended questions while they played and even sat with them in a pretend "jeep" made out of two rows of chairs (see Figure 9). Linda did not choose to discuss any of these

interactions during the interview, but it was apparent that the children were highly engaged and enjoyed her presence.

Figure 9. Jeep dramatic play.

During the second observation in Classroom 1, Gwen went to help Ryan, the child at the phonics matching activity who had seemed distracted and was having trouble focusing. After she joined Ryan, he was observed to be much more engaged with the activity. Gwen spoke more about this during the second part of her interview.

INT: How did the child respond to your interactions?

GWEN: He was fantastic with me. He was able to talk about the letters, which ones did which and then he started picking up cards by himself and, “Okay, what’s this and what sound does this one make and let’s find this one.”

INT: How do you feel that your interactions helped the child’s learning?

GWEN: I believe it helped him, especially with the Y. He wasn’t really understanding Y too well and then we were learning about what sound it made.

And also with W because he was confusing W and M because they kind of look similar. And so just making those distinctions and the letter sounds.

After joining the child at this activity, he went from being disengaged to asking questions and making distinctions between different letters.

During the second part of her third interview, Linda reflected on how Jason responded to her interactions at the art table. She worked with him to draw a dinosaur and was able to get his attention through her interactions, even it was for just a short time.

INT: How did the child respond to your interactions?

LINDA: He liked the dinosaur that I drew. He was happy with it. And he colored it a little bit but then he was done. He wasn't really engaged.

INT: How do you feel that your interactions helped the child's learning?

LINDA: I think I actually got him focused and he did try to color it. He just—you know, his engagement, he just wanted to do something else. But I did get a little bit of his focus.

After the first observation in Classroom 1, Sandra reflected more on her interactions with Adam, the child who was interested in the names and purposes of different construction vehicles. As they played with the blocks, vehicles, and shaving cream, Sandra and Adam discussed what each vehicle was called and what it could do. She believed he was very engaged with her interactions and excited to learn the new vocabulary words.

INT: How did the child respond to your interactions?

SANDRA: He seemed excited and said things like, "Oh, yeah, that does do that." He was on board to play that way.

INT: Okay. How do you feel that your interactions helped the child's learning?

SANDRA: I think they get excited when we just kind of sit and play like that with them. Sometimes we do art or writing, things like that with them, but they kind of interact more and ask more questions when we sit down and just play with them and teach them about the trucks. I was even writing the letter of the week in the shaving cream, and they thought that was fun. I think it just helps them engage more and ask more questions and understand.

The interaction Sandra had with Adam was a good example of a true guided-play interaction. She was able to teach him new vocabulary words through a completely play-based activity.

Theme 2: Completion of a Task

Miranda reflected on her interactions with the group of children she helped who were working on the letter puzzle at the carpet. Kay had been upset and the children were having trouble taking turns, so Miranda decided to step in. The children were very responsive to her interactions and simply having her there to help them take turns with the puzzle was what they needed to complete the task.

INT: How did the children respond to your interactions?

MIRANDA: I think they took it very well. They loved that I gave them each their own letter to do and stuff like that, so they were able to go over to the pile of the letters and look through without having somebody else help them or—Mila tried to help them a few times but I had to remind her that we're going to let our other friends pick them out. She could do her own letter. And then I gave her another letter, so then she was busy finding her own letter.

INT: How do you feel that your interactions helped the children's learning?

MIRANDA: I feel like it went awesome. They really got it down and we finished the puzzle.

Rochelle reflected more on her interactions with Brittney, a child she helped with the community-helper matching game. Rochelle's interactions with Brittney allowed her to finish the matching game and find all the items that belonged to a firefighter. In addition, Rochelle and Brittney were able to discuss some of the names and uses for the items on the cards while completing the activity. Rochelle described Brittney's reaction to completing the activity as "excited and proud." During the observation she was smiling and very engaged with Rochelle.

INT: How did the child respond to your interactions?

ROCHELLE: I'd say excited. Once she finished the sorting, she was excited that she found all the pieces and matched them up. I'd say excited and proud.

INT: Okay. How do you feel that your interactions helped the child's learning?

ROCHELLE: It helped her develop certain vocabulary words that she didn't know. And it helped her learn certain things that are associated with certain community helpers.

Sandra reflected on the interactions she had with Nicole, a child who was struggling to make her name with popsicle sticks. The activity was difficult for Nicole to complete, specifically because the sticks were straight and her name had several letters that curve. Some children had no problem using their imaginations and making the letters look as close to accurate as possible. However, Nicole needed help from the teacher to

figure out ways to make the letters in her name with straight lines. With Sandra's help, she was able to complete the activity despite its challenges.

INT: How did the child respond to your interactions?

SANDRA: She was excited once she—after each letter and then forming her name she was excited, realizing that she could do it.

INT: How do you feel that your interactions helped the child's learning?

SANDRA: I think it helped her understand that if she tries a little, you know, and asks for help, she can achieve it, because she was pretty set on not being able to do it.

During the third observation in Classroom 3, Linda sat between two tables and helped a number of children. One group was trying to make the letter G out of playdough and the other group was working on a letter-and-number-matching puzzle. With Linda's help, they were able to complete the tasks presented. It helped that she was positioned between the two tables because both groups needed quite a bit of help.

INT: How did the children respond to your interactions?

LINDA: Oh, they loved it. I mean, I think it's that joy of accomplishment. I mean, I'm still not like doing it for them, but I'm enhancing, helping them, but letting them achieve.

INT: Okay. How do you feel that your interactions helped the children's learning?

LINDA: I feel like today they definitely—they learned how to make a "G" out of playdough, and I think a lot of them have learned what a "G" looks like by doing it more hands on. And then with the puzzle, I also feel that helping them,

doing the sounds with them, you know, “Oh, it makes a woof—what makes a woof ?” So I’m making them think, you know, and you could watch how they were actually thinking “okay, what does make that sound,” and trying to come up with words.

During this same observation, Sandra also spent some time at the table activities. A number of children needed help with the different tasks, especially the number and letter puzzle. Sandra had been helping at the art table but decided to come over when Sue signaled that she need help. With Sandra’s help, Sue was able to complete the letter-puzzle activity.

INT: How did the child respond to your interactions?

SANDRA: She was excited when she finally figured out which picture goes to which letter and she was eager to do more.

INT: Can you describe what your interaction was?

SANDRA: She just kind of kept—she still needed help but she kept finding letters and asking me to help her, you know, if I knew pictures and asking me to help her with what letter that picture would start with.

INT: So basically she was able to do—where if you told her the letter or you told her the picture, she could find the letter then.

SANDRA: She could—yeah. Or it was more if I told her the letter—she could identify the picture, yeah.

INT: How do you feel your interactions helped the child’s learning?

SANDRA: She kind of struggles with her letters so I think it helped her get excited and hopefully be able to identify a couple more letters than before.

Theme 3: Mastering a New Skill

Gwen described Jessica's reaction, a child she helped with the name-writing journal activity. Jessica understood how to write her first name and was proud to show off this skill to Gwen. In addition, Gwen's support was needed for her to begin mastering the new skill of writing her last name.

INT: How did the child respond to your interactions?

GWEN: She seemed to really get it and kind of enjoy it, and she seemed to really enjoy that one. And then she was really proud of herself because then she was like, "I'll show you how I do my first name" by herself on the bottom of the page. So she seemed to really get more out of it by getting that.

INT: Okay. How do you feel that your interactions helped with the child's learning?

GWEN: It helped her understand that even though she knew her last name, she didn't fully understand the letters and the way it went together and the sounds they made. And so it really helped her put that into perspective of her first name and her last name and they both have all these letters that come together and make it that. And just that confidence building of her being able to actually write her name by herself and the progress she's made throughout the months of doing it.

Gwen also spoke more about Nancy, the child who mastered the A–B–C patterning skill. Nancy had already learned the A–B patterns and was able to master this additional skill, as well as demonstrate to Gwen what she had learned. Gwen reflected on how her interactions helped Nancy's learning during the second part of her fourth interview.

INT: How did the child respond to your interactions?

GWEN: She seemed to really get it. She took a few minutes to try to figure it out and I just kept saying, “Look at the pattern” over and over again, and then she’d sit there and grab one and she kind of looked at, and I just sat there. Then she put it down to try to see if it was the right one, but she seemed really excited once she got it. And after about three rotations of it, she finally understood the pattern and she was able to do it easily by herself.

INT: How do you feel that your interactions helped the child’s learning?

GWEN: Yes. I feel like she got a whole new aspect of those early math skills and being able to expand her knowledge by herself too, because she kind of directed it and I just helped her a little bit at a time, gave her the idea and she ran with it.

After the first observation in Classroom 2, Rochelle reflected more on the time when she worked with Molly at the writing center. Molly had called Rochelle over to work with her and together they wrote different letters on chalkboards. With Rochelle’s help, Molly was able to write letters that she was unable to write before.

INT: How did the child respond to your interactions?

ROCHELLE: I’d say she was excited when she saw that I was excited about her actually drawing out the letters. And she of course was happy that we worked together, because she loves attention from me.

INT: How do you feel that your interactions helped the child’s learning?

ROCHELLE: By showing her how to draw certain letters and maybe challenging her to actually draw certain letters that she probably never drew before.

Rochelle also reflected on her time with Bridget during her third interview. Bridget had been learning how to trace her name, but kept starting with the last letter. Through the interactions she had with Rochelle, she was able to learn to trace her name from left to right.

INT: How did the child respond to your interactions?

ROCHELLE: She was interested when I showed her how she should do it. And then once it took her a few tries, she was so excited.

INT: How do you feel your interactions helped the child's learning?

ROCHELLE: She's beginning to write her name, which is a huge step. And she learned or she's learning that instead of starting at the last letter, you start from the left side and work your way over.

During the first observation in Classroom 3, Linda helped a young boy named Nick at the writing center. He was having trouble holding the pencil the right way, preventing him from writing the letters he wanted. Linda stepped in to show him how to hold the pencil and he was able to finally master this skill with her support.

INT: How did the child respond to your interactions?

LINDA: Very excited.

INT: Okay. Did he say anything?

LINDA: He just was very, "Look, I did it," you know. And, "Look, Ms. Linda, I'm doing it," and just very—he was extremely excited because he's been working on this for a long time so it's exciting. And he was very pleased with himself, which is nice, because it helps build self-esteem.

INT: Yes.

LINDA: I guess that's kind of my goal I try to do in the classroom, is I like to build self-esteem because it helps later on in life.

INT: How do you feel that your interactions helped the child's learning?

LINDA: Well he can do it now and he succeeded, you know, and this will help him succeed in other similar tasks, whatever he decides to do moving forward. I don't know. I think his excitement's worth it all.

Linda also reflected on Nicole's reactions after she showed her how to hold the scissors properly. She had been having trouble cutting out shapes, but after Linda showed her how to hold the scissors, and she was able to master that skill, making the activity much easier for her.

INT: How did the child respond to your interactions?

LINDA: She liked that I actually was helping her. She responded very well.

INT: Okay. How do you feel that your interactions helped the child's learning?

LINDA: She got the confidence that she is able to do it.

Findings Research Question 3

3. How can school leaders help preschool teachers use their knowledge of each child's ZPD for a particular activity to make guided play more effective in the classroom setting?

This question was addressed after the third observation in each classroom. During the third set of interviews, all three lead teachers, Linda, Gwen, and Rochelle, asked for feedback regarding how to make their center time more effective. Linda struggled with not being able to open up the dramatic-play area because her attention was needed at the table activities and she was afraid it would not be properly monitored.

LINDA: I think—well, before I opened blocks and cars I was going to open a home area, because I had just turned it into a Jeep. So I put the table down and everything. … But then sometimes home area is hard because I have certain children that I have to really monitor in there, so that's also where I would have to leave Sandra to do more tabletop [activities]. So we're still trying to figure out how to do it all.

Linda was given the suggestion to plan fewer table activities that needed teacher support. Limiting areas needing support to one activity would allow one teacher to focus on that while the other teacher could monitor dramatic play and the other more independent centers. The teachers would need to take each child's ZPD into account when planning the activities so that only one center would need consistent teacher support.

Rochelle was struggling with the amount of time she was able to devote to academic activities. This was apparent when the children left certain activities and then came back again only when a teacher was present. She discussed this during her interview.

ROCHELLE: That's like that with any math activity.

INT: Yeah, they seem to just do it quickly or can't do it at all.

ROCHELLE: I try and say, "Guys, come on. Sit longer." But they're like, "No, we're all done."

Rochelle was given suggestions for extending engagement time with the students at the mathematics and literacy centers. For example if a child finished a matching game quickly, she could show them how they could then trade their board with a friend and

complete another one rather than just moving away from the table. The children who were struggling would need more of her attention, so it was suggested that she consider this when planning the activities. Using her knowledge of each child's ZPD would allow her to do this more effectively.

Gwen's classroom had several centers that needed teacher support during the third observation. If a teacher was unavailable to be present, the children in those centers were either not engaged or not completing the activities correctly.

INT: After reflection, is there anything that you would have done differently?

GWEN: I wish … probably just having more time to be able to go with each child and say, "Okay, what are the letters of your last name and what sounds do they make?"

INT: Okay. So you mentioned wanting to have more time with each child individually.

GWEN: Yes.

INT: How do you think you could make that happen?

GWEN: Maybe doing the journals in a different part of the day, afternoon or something, where I could pull each child aside—maybe doing the journals on a lower number day where I have less kids and I can have them spend more time at each center, so that I can go over their last names with them. Maybe in the mornings, if I have them one-on-one, I can do that too.

INT: What types of centers have you noticed that they typically can do on their own, that they don't ask for a lot of teacher support with?

GWEN: A lot of the STEM-building that we do, and then even a lot of the art, for the most part, they'll pretty much do [that] on their own. Sensory bin, I just usually go and check on them but they can usually do with that by themselves. The only time they really care, worksheets or journals, sometimes they need extra help, depending on what it is, what's involved, some of them. And if it is with certain things on the table, they'll need a lot of extra help on that sometimes. But yeah, a lot of the building and things like that, they can usually—they're pretty self-sufficient at.

It was suggested to Gwen that she try more independent activities and limit the activities that need teacher support to only one or two. Worksheets should be very limited and only serve as an introduction to the type of work the children will see in kindergarten. If she is providing a worksheet or journal activity, she should assume that the children will need consistent support with that. Many of the other mathematics and literacy activities, such as phonics matching games and patterning activities, also required teacher support. She would need to use her knowledge of each child's ZPD for the activities when planning her lessons.

Once the teachers made a conscious effort to consider each child's ZPD and also plan more activities they knew the class could do independently, they had time for more meaningful interactions. Limiting the lesson plan to only one or two activities that are likely in most of the children's ZPDs allowed the teachers to support the children properly when they needed help and could not complete a task alone.

After the fourth observation, changes were noticeable in all three of the classrooms. In Classroom 1 it was clear that teachers were more aware of each child's

ZPD for different activities. They were also planning a larger number of independent activities, which freed them up to work with the children as challenges naturally arose. The art activity was simply painting by rolling marbles around in paint on a cardboard tray, which needed minimal support. At the carpet, students worked on a letter-train puzzle. The puzzle was an activity most children could do independently; however, as noted in Miranda's interview, they needed help taking turns and working cooperatively as a group. In the sensory bin, the children worked on melting cars stuck in ice with toothbrushes. They enjoyed this activity and had no trouble working independently. One of the table activities was a building center with wooden shapes and dowels (see Figure 10). This was also something the children enjoyed and could do independently. It was also more open-ended than some of the previous activity choices.

Figure 10. Building with wooden shapes and dowels.

The other table activity was the patterning activity with taped off shapes and colored animals. They could do this activity independently; however, some teacher support was able to extend the activity further, specifically when Gwen worked with the

children on A–B–C patterning. During her last interview, Gwen reflected on changes she saw in the classroom.

INT: Okay, great. I noticed that you—a lot of the centers were independent today, where the kids were working independently. How did you feel that that went?

GWEN: Good. So I feel like it was good, especially since at the carpet, where I could help them if I needed to, but it was pretty much something that they could do and figure out. And a lot of them, I wanted them to do it by themselves just like the self-regulation we've been working a lot on with them, and they problem-solve by themselves in between their group, if they have an issue with something. But yeah, it seemed to work really well, because after we talked last I was talking to Miranda about it. And she's like, "Yeah, let's try that." So it worked out well because we had less kids too today so it was like a nice time for it.

INT: Have you done that other times this week then?

GWEN: Yeah. So we've been trying to just make—if we have an idea and it is more teacher-directed, trying to change it in a way that we can make it less teacher directed, with everything less complicated or has parts to it. And even art, we've been working on having it more independent too. And I liked art today because it was a lot more independent for them. We just had to get them set up for it.

In Classroom 2, during the fourth observation more activities were available to the children that they could do independently or with minimal teacher support. The art

activity was painting with water colors, which, unlike some of the other projects, did not need step by step directions from the teacher. Slime was available at the sensory trays, which only required teacher support for cleanup, as some students got very messy and had trouble with the smocks. One of the table activities was Legos and the other was name tracing on dry-erase sheet protectors. The dramatic play center was open and students had access to blocks and trains at the carpet. The center that required the most support from teachers was the name-tracing activity. Rochelle reflected on the different approach she and her co-teacher were now taking.

> INT: How has that been going, trying to plan according to how much support they need?
>
> ROCHELLE: It's good. We sit down and think, "Okay, do you think they can do this?" or "You can sit and do that with them and then I'll just go around and check on everyone else at their centers." It's been working.

Classroom 3 also made some changes after the third interview. During the fourth observation Linda was able to open up the dramatic-play area for the children. She planned the activities so Sandra would be the only one needed at the tables. Linda was free to rotate through the different centers and spend a large portion of her time playing with the children in the dramatic-play center. The main center that required teacher support was the art center. The children were painting rainbows and the teachers wanted them to learn the correct order of a rainbow through this activity. Some students were able to do it on their own, whereas others needed step-by-step directions. The other table activity was the cutting activity where students cut out shapes and colored them. This activity only required teacher support for the children who did not know how to properly

hold scissors. Linda was able to move back and forth between the dramatic-play area and this table, to help as needed. The last activity was kinetic sand and playdough tools, which did not need teacher support. During the last interview, neither Linda nor Sandra stated that they would have done anything different that day.

INT: Okay. After reflection, is there anything that you would've done differently?

LINDA: I don't really think so. You're making me think on that one.

Sandra had a similar perception of how the day went. She also believed she would not have changed anything.

INT: Okay. And after reflection, is there anything that you would've done differently?

SANDRA: Today, I don't think so.

INT: All right, good. Yeah, I think you had a lot of great activities—I like that you opened up the dramatic play and you had a lot of things the children could do mostly on their own, like the kinetic sand.

SANDRA: Yeah, they love that.

INT: And the cutting they were able to do, most of them, on their own.

SANDRA: Yeah.

INT: Some needed help with the scissors, but it wasn't something you needed to be there the whole time for, and you were able to get them set up and then help with the art. And then it was fun to see Linda actually playing in the dramatic-play area.

SANDRA: Yeah, yeah.

INT: Yeah, it was a good day.

Summary

The findings from this study provide important information related to all three research questions. The first question, "What kinds of interactions do experienced preschool teachers use during guided play?" was answered during the observations and interviews. Teachers had different types of interactions with children during their guided-play center time. Sometimes the teachers simply set up activities they knew the children could engage with independently, which is one component of guided play (Weisberg et al., 2013). Other times, they worked one-on-one with a child to work toward a specific learning objective. These were the situations discussed in the interviews. Teachers used guided play to assist children with challenging tasks, encourage engagement, and extend learning. These three themes were discussed in detail during the interviews.

The second question, "How do preschool children respond to different types of teacher interactions during guided play?" was also addressed in the interviews. In every situation, the children responded positively to the teacher interactions. Working with a teacher served several different purposes for the children. For some children it helped increase their engagement in an activity. For others it simply allowed them to complete a task that may have been in their ZPD and therefore too challenging to do without support. Some children were even able to master a new skill, such as holding a pair of scissors or pencil correctly, based on their interactions with a teacher.

Answering the third question, "How can preschool leaders help teachers use their knowledge of each child's ZPD for a particular activity to make guided play more effective in the classroom setting?" was perhaps the most challenging, yet exciting part of

the study. Through careful observations, and discussions with the teachers about what they would do differently after each center time, it was determined that more attention should be paid to each child's ZPD when planning lessons. A careful balance between independent activities and activities requiring a teacher's support was needed to best serve the students. Planning too many activities that were in the ZPD of most children would stretch the teachers too thin. In addition, they needed to make sure they were positioning themselves at centers they knew would require support. Knowledge of the ZPD of the children helped them do this most effectively. It was identified that even experienced preschool teachers, need more training in these areas.

Overall, the children were very engaged during center time in all three classrooms. They clearly enjoyed interacting with their peers and the teachers during planned hands-on activities. Interviews helped the teachers reflect on their practice and become more intentional about their interactions with the children, as well as about planning the activities. The interviews also brought to light some challenges and the areas where teachers implementing guided play may still need more training in order to be more effective.

CHAPTER V

SUMMARY, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Summary of the Study

This study entailed observing teacher interactions in three different preschool classrooms during guided play. Three school sites took part in the study. A total of 77 students and six teachers in the Sacramento area participated in the study. The researcher conducted four hour-long observation in each classroom over the course of four weeks. The observations occurred during center time, when teachers engaged with children through guided-play activities. After each observation, the researcher met with at least one teacher from the classroom to discuss their interactions in the classroom and address the research questions below.

- What kinds of interactions do experienced preschool teachers use during guided play?
- How do preschool children respond to different types of teacher interactions during guided play?
- How can school leaders help preschool teachers use their knowledge of each child's ZPD for a particular activity to make guided play more effective in the classroom setting?

Discussion

Research Question 1

1. What kinds of interactions do experienced preschool teachers use during guided play?

Many planned activities and interactions observed were extremely beneficial to the children. A high level of engagement was observed and children were clearly familiar with the routines and comfortable in their surroundings. Behavioral challenges were extremely minimal and quickly resolved in most cases. Although many of the activities in the classroom appeared to be simply play-based, the teachers had clear objectives for all the activities they planned. Many activities had multiple learning objectives. In addition, the objectives were sometimes flexible and varied from child to child, based on their needs at the time.

Dewey (1900) argued that teachers need to take a hands-on approach to education. They should plan careful and appropriate lessons and engage with the children at their level. Children should learn by doing the work themselves and not simply repeating a set of facts. Dewey was a strong critic of the "drill and practice" approach to education. The approaches teachers took in this study very much aligned with what Dewey believed to be the most effective teaching style. The teachers did not allow the children to play by themselves with no direction or interaction; rather, they created a carefully constructed learning environment, rich with hands-on activities and meaningful interactions.

Teachers interacted with the children for a number of reasons throughout the course of the study. Three main themes emerged across these interactions. These themes provide deeper understanding of the context for each interaction.

The first theme related to teachers assisting children with challenging tasks. At times, a task would become overwhelming for a child and they would ask for help or assistance. The teachers were extremely in tune with the students and were usually able

to pick up on this need before it reached a point of frustration for the child. With a teacher's help, children were able to better engage with tasks or activities that would have otherwise been too challenging.

The second theme was related to encouraging engagement. At times during the course of the observations, children seemed disengaged or uninterested in a particular activity, often due to varying factors. Some children displayed difficulty focusing on certain activities, which could be related to their development or maturity. Other children would disengage from an activity if it was too difficult or they did not fully understand the directions. Finally, some children would simply be more focused on something else in the classroom that seemed more interesting at the time. Teacher interactions were an effective tool in increasing student engagement in all three of these scenarios.

The final theme related to teacher interactions involved extending learning. If teachers saw children had mastered one component of an activity, they often looked for ways to extend the children's learning in a more complex task. For example, if a child had mastered writing their first name, the teachers took that as a cue to begin working on their last name. When some students had mastered A–B patterns independently, the teachers used their interactions with the children to introduce and work on A–B–C patterns. The children were able to take their learning further with a teacher than they would have been able to on their own. Teachers used what the children already knew how to do and then built on those skills.

Research Question 2

2. How do preschool children respond to different types of teacher interactions during guided play?

The children were very responsive to all types of teacher interactions during the study. During the interviews, teachers often described children's reactions as "proud" or "excited." Interacting with a teacher during guided play can often extend learning and help children complete tasks that may otherwise have been too challenging (Weisberg et al., 2013). Over the course of the study, three main themes emerged related to how the children responded to teacher interactions.

The first theme related to increased engagement. Interacting with a teacher and working together toward a learning goal often increased the children's engagement in an activity. This was observed across all activity types. If the activity was challenging, the students looked for support from the teacher to engage with the task. If the activity was easy for the child to do independently, they often responded to the teacher's interactions by taking the activity one step further. Even with activities that are traditionally student-guided, such as dramatic play, the children enjoyed the interactions with the teacher and showed increased excitement and engagement.

The second theme related to completion of a task. Often a child's response to an interaction from the teacher was simply the ability to complete a certain task or activity. Sometimes, the learning objective would be challenging for a child to complete on their own. With support from the teacher, children were able to complete these tasks. Sometimes the challenge would not necessarily be the task at hand, but the process of completing the task. For example, when a group of students was having trouble taking turns to complete a large puzzle on the carpet, having a teacher step in and give more direction was beneficial.

The final theme related to the second research question involved mastering a new skill. Several times over the course of the study, a child lacked a certain skill needed to complete a task or activity. This skill could be as simple as holding a pencil or pair of scissors. If the child was unable to master this one skill, they would not be able to do the entire activity in front of them. Specific support from a teacher related to the skill they needed to develop was often quite effective. Sometimes the children needed to be shown one aspect of the skill they were otherwise missing, such as where to put their thumb, and that knowledge was all they needed to master the skill and complete the task at hand.

Research Question 3

3. How can school leaders help preschool teachers use their knowledge of each child's ZPD for a particular activity to make guided play more effective in the classroom setting?

Vygotsky's ZPD played a key role in this study. A child's ZPD for a particular activity is the space between "the most difficult task a child can do alone and the most difficult task a child can do with help" (Vygotsky, 1986, pp. 83). Teachers did not specifically use the term ZPD in the interviews; however, they often talked about what the child knew already and what they thought the child could learn with some support. Working in the child's ZPD often drove the teacher's interactions. In addition, using this understanding can help teachers when planning lessons. School leaders can provide teachers with more training focused around the concept of the ZPD and how it applies to early childhood education.

It is important to balance activities so that only a few are in most of the children's ZPD. In a large class of up to 24 children and only two teachers, it is impractical to plan a

large number of activities requiring teacher support. Children will not be able to master new skills and will quickly become frustrated. It is crucial for teachers to understand their students and plan activities accordingly. This is another area where more training and support from school leaders could be beneficial.

Preschool teachers also need to consider social-emotional development (Hyson, 2003). The children participating in this study were between three and five years old. Many were still developing important social skills and learning to navigate their emotions. Just as they need teacher support with academic concepts, preschool children often need teacher support for behavioral issues, conflicts with peers, and simply navigating certain social situations (Hirsh-Pasek et al., 2009). These socioemotional aspects should also be considered when planning activities. If the class requires a designated teacher to manage social-emotional issues, then only one teacher-guided activity should be planned. This means that in a class of two teachers, one is designated to manage behaviors.

The feedback given to teachers during the interview process after the third observation was not originally part of the research design. Interviews were conducted according to the prewritten script but were somewhat informal to help the teachers feel as comfortable as possible. Extraneous questions and conversations occurred before and after some of the interviews. Because the researcher was also the employer of the teachers being interviewed, intentionally withholding constructive feedback would have presented an ethical dilemma. Also, a qualitative research design provides some flexibility for these types of adjustments during the course of the study (Merriam, 2009).

To fulfill the apparent needs of the teachers and students, significant feedback was given to all teachers after the third observation. This feedback, as well as the observations and interviews that occurred afterwards, proved useful in answering the third research question of the study. The most common feedback shared with the teachers revolved around them planning too many simultaneous activities that needed their support.

Under Title 22 regulations, the teacher to student ratio is 1:12. Guided play often involves intentional 1:1 interactions between a teacher and child. To make guided play a reality in a large group setting, it is necessary to include a portion of activities that can be completely student guided and do not require teacher interaction. It is also necessary to balance activities that need teacher interaction intentionally. This can be done by scaffolding, based on each child's ZPD. Even experienced teachers can benefit from more training related to how to balance activities effectively in the classroom.

Teachers should intentionally balance the number of activities requiring teacher support with activities the children can do independently to keep the entire classroom engaged. Activities that typically required minimal teacher support during the study included dramatic play, building activities, process art, and sensory play. Activities that required teacher support included writing and phonics activities, multi-step art projects, patterning, sorting, and activities or games that required rule following or turn taking.

In a classroom with two teachers, no more than one activity requiring significant support should be planned per teacher. If the children are often still struggling with social and emotional skills, only one activity requiring support should be planned. The second teacher can then be free to manage behaviors and help resolve conflicts as they arise. In a

classroom where only one teacher is present, it may be difficult to implement any activities requiring teacher support and still properly manage behaviors. Thus, school leaders should note that it is usually most beneficial to have two teachers in the classroom on a regular basis, especially with preschool age children who often have limited social and emotional skills and need support navigating relationships with their peers.

Conclusions

Teacher interactions during guided play are extremely important. Guided play is more than merely setting up an environment for the children to play and learn. Planning and setting up activities is only one component of effectively implementing guided play. Preschool students need consistent support from teachers, especially when working on activities that are in their ZPD. Children learn best though hands-on activities that present just the right amount of challenge. Often children need interactions from the teachers to overcome these challenges. It is important for teachers to understand what their students know ahead of time and what they are capable of doing independently.

Using a balance of independent and teacher-guided activities is key to classroom management. Activities that fall in a child's ZPD typically need some level of teacher support or interaction, so it is important for teachers to plan both guided and independent activities. Planning a significant number of activities in which children can engage independently frees teachers to work with the children who need support. The types of activities that seem most effective for independent centers during guided play usually relate to process art, sensory play, blocks or building, and dramatic play. Teachers should then plan to position themselves at centers where they anticipate the children needing help. These centers usually include literacy or mathematics activities. In a preschool

classroom, teachers should consider classroom management and behavioral challenges as well. Providing more training in these areas will help preschool teachers implement guided play more effectively in the classroom.

Recommendations for Future Research

As early childhood education becomes available to a larger population of children, an immediate need exists for more research in this field (Kirp, 2007). California will soon begin expanding access to their public transitional kindergarten program and a bill for universal preschool has more support than ever before. Along with these changes coming, a huge gap remains between developmentally appropriate practices and what can be observed in many public transitional kindergarten programs (Hirsh-Pasek et al., 2009). To best serve the youngest learners, educators need to bridge this gap through intentional research, advocacy, and teacher training.

Very soon the direction of preschool education will be placed in the hands of people who may or may not be trained in early childhood education. Researchers must be able to explain to them why the learning objectives of an activity titled "construction vehicles, foam blocks, and shaving cream" is equally important as an activity titled "journal writing." To do this, researchers need to perform more qualitative studies related to building a bridge between play and academics in preschool classrooms. Administrators also need to train and education their teachers, because they will ultimately be the ones to balance their students' needs each day.

Recommendations for Practice

Preschool children need a balanced approach to education and learning. This approach should be hands-on and grounded in play-based activities whenever possible

(Bruner et al., 1976; Fleer, 2009; Hanline, 2001). Allowing for free play at the beginning, and possibly end, of the school day can be extremely beneficial for a program (Hanline, 1999; Smilansky & Shefatya, 1990). Teachers can support this type of play with simple questions, suggestions, and minimal interruptions. In addition to this free play time, teachers should also provide opportunities for teacher-guided play and learning throughout the rest of the day (Singer et al., 2006). Teacher training and an understanding of each child's ZPD is crucial for being most effective in using this type of play in the preschool classroom.

Educators have reasonable debate around the idea of preschool-aged children being introduced to writing activities or worksheets (Hirsh-Pasek et al., 2004; Hyson, 2003). A body of research has indicated that these types of activities may not be age appropriate for young children (Hirsh-Pasek et al., 2009). Every effort should be made to find hands-on options whenever possible. However, given the current direction of kindergarten education, not introducing the children to these types of activities may be doing them a disservice. As observed in this study, these types of activities can be performed in moderation but need adequate teacher support and often one-on-one interaction.

Closing Remarks

This study provided the researcher and teacher participants with valuable information that will be operationalized in the classroom. The hope is that it will provide other early childhood administrators and educators with important information as well. One important piece of this study was that teachers were extremely willing to accept feedback, reflect, and grow. Even though they were identified by school directors as

being competent in guided play and student interactions, they had the ability to continue to grow and learn. Routine observations and feedback from supervisors and outside individuals should happen regularly, not just during the course of a research study.

Every day, administrators and leaders can learn much by watching the interactions that occur between teachers and children. Administrators and leaders in the field of early childhood education are encouraged to replicate this type of study in their classrooms, even on a smaller scale. This type of qualitative data can bring rich information and new ideas to a program (Merriam, 2009). It also opens communication and collaboration between teachers and leadership.

As preschool becomes accessible to more children in the State of California, educators must collaborate to determine best practices for our littlest learners. It is reasonable to expect that, along with these state-funded changes, will be processes to assess the quality of programs and determine accountability. Although young children are capable of reaching academic goals, they often need undivided support to do so successfully (Hyson, 2003). Much research supports a young child's need to play and explore their environment (Golinkoff & Hirsh-Pasek, 2016). However, more research related to guided play and teacher interactions is needed.

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APPENDIX A

CONSENT FORM FOR TEACHER PARTICIPANTS

Dear Teacher,

You have been selected to take part in a study related to guided play and teacher interactions. The purpose of the study is to gather more information about how children learn through play and hands-on experiences. Your classroom will be observed by myself for one hour per week over the course of four weeks. Data will be collected though video recordings, written observations, and interviews between you and myself.

This study is not an assessment of your abilities as a teacher, but rather an opportunity to explore together how children in your classroom learn. Information gathered during the course of the study will be presented in my final dissertation to the faculty at the University of San Francisco. Your name will not be used and you may request a copy of the dissertation.

Consent to participate in the study is strictly voluntary and your decision to participate or withdraw from the study at any time will have no implications on your employment with Growing Brilliant. Please feel free to email me directly at any time with questions or concerns.

Sincerely,

Lisa Hansen

Doctoral Candidate

University of San Francisco

By signing below you give your permission to participate in the study as outlined above:

_____

Print Name

_____

Signature

_____

Date

APPENDIX B

PARENTAL CONSENT FORM FOR STUDENT PARTICIPANTS

Dear Parent,

As some of you know, I have been working on my doctoral dissertation at the University of San Francisco. Your child's teacher has agreed to participate in a study exploring guided play, teacher interactions, and how children learn best. The classroom will be observed by myself for one hour per week over the course of four weeks. Interactions between the teacher(s) and students will be recorded using a video recording device. I will also be taking notes and writing up the findings in my final dissertation which will be presented to the faculty of the University of San Francisco. Your child's name will not be used and you can request a copy of the final dissertation when it is complete.

Your child's participation is strictly voluntary. If you would prefer that your child not participate in the study, we can arrange for them to visit another classroom during time times I will be conducting observations. You have the right to withdraw your child from the study at any time. Thank you in advance for your cooperation and/or flexibility! Please feel free to contact me directly with any questions or concerns.

Sincerely,

Lisa Hansen

Doctoral Candidate

University of San Francisco

By signing below you give permission for your child to participate in the study as outlined above:

_____

Child's Name Printed

_____ _____

Parent Signature (1) Date

_____ _____

Parent Signature (2) Date

APPENDIX C

TEACHER INTERVIEW QUESTIONS

1. Tell me about a time during the observation where you and a child worked towards a specific learning objective?

2. What made you decide to help the child with this objective?

3. How did the child respond to your interactions?

4. How do you feel that your interactions helped the child's learning?

5. After reflection, is there anything that you would have done differently?

APPENDIX D

SAMPLE INTERVIEW TRANSCRIPT

INT: So tell me about a time during the observation where you and a child worked towards a specific learning objective.

GWEN: Okay. When Jackson and I were sitting there and he just put random numbers together and then we talked about what number that made in the end, and he was able to say, "Oh, wow, that's 101," after he put all those numbers together. Then it stuck with him, and he was even wanting to talk about it in circle and how excited he was, and just learning that that's a really big number and when numbers make up other numbers, and that kind of concept.

INT: Okay. What made you decide to help the child with this objective?

GWEN: He seemed really interested and was just writing numbers down and exploring the different numbers. So I wanted to point out that the single numbers also make bigger numbers and that there's always – you can always do more with them, and to just kind of get him to expand on it instead of just keeping at the basics, one through ten, and start to kind of just emerge into that new concept.

INT: Okay. How did the child respond to your interactions?

GWEN: He seemed really excited, like a light bulb went off in that he understood, oh, wow, that is a really big number and I can put other numbers together to make this number, and what other numbers can we put together to make this one. So he seemed really excited for it.

INT: Okay. How do you feel that your interactions helped the child's learning?

GWEN: I helped – I feel like it just – asking the questions and getting them to think about it helps them to come up with a solution instead of just telling them the right answer. Because then they go through the mental process, you know, instead of them just expecting to get the answer from me, and so to get them to think of it deeper and even take it to places that I never really thought that he would. I was just thinking we were

working on one through ten and then he went to a whole other aspect of it, which kind of made it really cool.

INT: Okay. And then after reflection, is there anything that you would have done differently?

GWEN: Probably had maybe less numbers out in that activity, just to focus on a few. But then I didn't really expect him to do the literacy part of it, but maybe putting letters out there also for those that were more interested in doing the letter recognition.